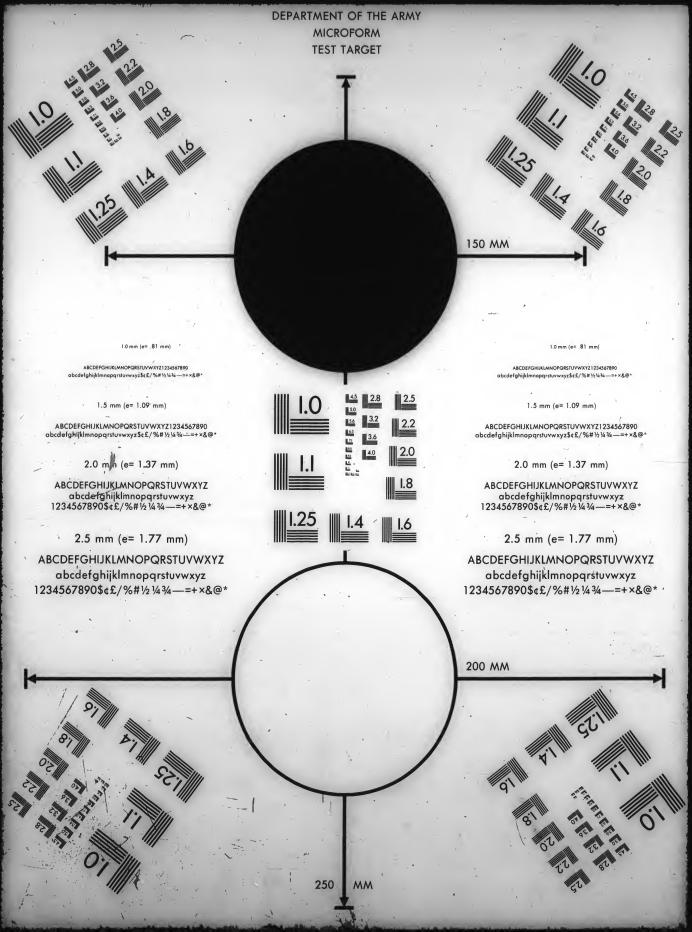
START OF ROLL





MICROFILMED 1997

Auburn University Libraries Auburn, AL 36849

USAIN State and Local Literature Preservation Project: Alabama

Ralph Brown Draughon Library

Funded in part by the

National Endowment for the Humanities

Reproductions may not be made without permission from the Ralph Brown Draughon Library

Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1881

OCLC: 36819601	Rec stat:	n	• •	
Entered: 199704:	Replaced:	19970429	Used:	19970429
Type: a ELv1:	I Srce: d	GPub: s	Ctrl:	Lang: eng
BLvl: s Form:	a Conf: 0	Freq: a	MRec:	Ctry: alu
S/L: 0 Orig:	EntW:	Regl: r	ISSN:	Alph: a
Desc: a SrTp:	Cont:	DtSt: d	Dates: 1873	,1893 ¶
	AAA ¶	16		
▶ 2 007 h ≠b d	e +d b +e f +f u +g	b +h a +i u +	p ¶	
▶ 3 043 n-us-a	al ¶		1.	
▶ 4 090 LD271	≠b .A76 ¶			
▶ 5 090 +b ¶				
▶ 6 049 AAAA		7		1
	ltural and Mechani			
▶ 8 245 10 Catalo	ogue of the State A	gricultural ar	nd Mechanical	College of
Alabama +h [microform				
> 9 246 10 Catalo	ogue of the State A	gricultural ar	nd Mechanical	College,
Alabama Polytechnic				
	and regulations of	the State Agr	cicultural an	d Mechanical
College at Auburn, Al				
▶ 11 246 10 Catalo	og of the State Agr.	icultural and	Mechanical C	ollege of
Alabama ¶				ď
▶ 12 246 10 Catalo	ogue of the State A	gricultural &	Mechanical C	ollege,
Auburn, Alabama 1			:	
	Ala. : +b The Co	llege, ¶		
	; #c 21 cm. ¶			
▶ 15 310 Annual	_			
1 6 362 0 1872-7				
	varies slightly. ¶		. 6	
• • • • • • • • • • • • • • • • • • • •	film. +m 1873-1893.		.a. #c Docume	nt Technology,
*d 1997. *c microfilm			*	
	.873 +c 1893 +d alu			
	sities and college:			
	ltural and Mechanic	cal College of	Alabama +x	Curricula +x
Periodicals. ¶				
	ltural and Mechanic			Catalogue and
circular of the Agric				
> 23 785 00 Agricu	ltural and Mechanic	cal College of	Alabama. #t	Catalogue of

> 24 830 0 USAIN State and Local Literature Preservation Project 1

the Alabama Polytechnic Institute ¶





AU LD271 .A76 1881/82 c.2 CATALOGUE

Q

OF THE-

State Agricultural and Mechanical College



1881-'82,

-AND-

ANNOUNCEMENT

1882-'83.

R. W. BURTON, AUBURN, ALABAMA.

AUBURN UNIVERSITY LIBRARY



AU LD271 .A76 1881/82 c.2

BOARD OF TRUSTEES,

-AND-

Time of Expiration of Office.

His Excellency RUFUS W. COBB, Governor of Alabama, ex officio President.

Hoy. H. C. ARMSTRONG, Superintendent of Education, ex officio.

FIRST DISTRICT:
HON. C. C. LANGDON, MOBILE.
February 28, 1887.

SECOND DISTRICT:

J. W. HARDIE, Esq., Montgomery.

January 4, 1885.

THIRD DISTRICT:

*HON. W. H. BARNES, OPELIKA.

HON. H. D. CLAYTON, CLAYTON.

February 28, 1887.

FOURTH DISTRICT:
HON. JONATHAN HARALSON, SELMA.
January 4, 1883.

FIFTH DISTRICT:
HON. R. F. LIGON, TUSKEGEE.
January 4, 1883.

SIXTH DISTRICT:
HON. JOHN W. BISHOP, TALLADEGA.
January 4, 1883.

SEVENTH DISTRICT: Hon. M. L. STANSEL, CARROLLTON. January 4, 1885.

EIGHTH DISTRICT:
HON. J. N. MALONE, ATHENS.
January 4, 1835.

E. T. GLENN, TREASURER. F. M. REESE, SECRETARY.

REV. I. T. TICHENOR, D. D.,

President and Professor of Moral Philosophy.

Commandant and Professor of Engineering.

J. T. DUNKLIN, A. M., Professor of Ancient Languages.

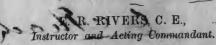
W. C. STUBBS, A. M., Professor of General and Agricultural Chemistry.

> OTIS D. SMITH, A. M., Professor of Mathematics.

Professor of Agriculture.

P. H. MELL, Jr., M. E., Ph. D. Professor of Natural History.

REV. G. W. MAXSON, A. M., M. E., Professor of English Literature.



O C. McGEHEE, B. S., Instructor.

J. H. DRAKE, M. D., Surgeon.

WILLIAM C. STUBBS, A. M., Secretary of Faculty.

REV. G. W. MAXSON, A. M., Librarian.

^{*} The Chairs of Engineering and Agriculture have been temporarily filled during the year by Professors Tichenor, Stubbs, Mell, and Rivers.

AUBURN UNIVERSITY LIBRARY



AU LD271 •A76 1881/82 c•2

FACULTY OFFICERS FOR 1882-'83.

WM. LEROY BROUN, M. A., LL.D., President and Professor of Agriculture.

J. T. DUNKLIN, A. M., LL.D., Professor of Ancient Languages.

W. C. STUBBS, A. M.,

Professor of General and Agricultural Chemistry.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, JR., M. E., Ph. D., Professor of Natural History.

REV. G. W. MAXSON, A. M., M. E.,

Professor of Moral Philosophy and English Literature.

GEN. J. H. LANE, C. E., M. A.,
Commandant and Professor of Engineering.

E. R. RIVERS, C. E.,

Instructor of Ancient and Modern Languages.

O. C. McGEHEE, B. S., Instructor.

J. H. DRAKE, M. D., Surgeon.

WILLIAM C. STUBBS, A. M., Secretary of Faculty.

> E. T. GLENN, Librarian.

MILITARY ORGANIZATION.

Commandant:

MAJ. E. R. RIVERS.

CADET OFFICERS:

Adjutant:

First Lieut. R. F. LIGON.

Sergeant-Major: W. H. CUNNINGHAM. Quarter-Master Sergeant:
J. M. HURT.

Color-Sergeant: C. L. GAY.

Company A.

Captain:

B. H. FITZPATRICK.

First Lieutenant:

A. M. CLEGG.

Second Lieutenant:

W. W. PEARSON.

Company B.

Captain:

BARTOW EBERHART.

First Lieutenant:

HOWARD LAMAR.

Second Lieutenant:

E. N. BROWN.

Company C.

Captain:

W. H. JONES.

First Lieutenant:

P. M. HUTCHINSON.

Second Lieutenant:

G. A. CARDEN.

AUBURN UNIVERSIT LIBRARY



AU LD271 .A76 1881/82 c.2

Alumni of East Alabama College.

1860.

REV. W. F. GLENN, Methodist MinisterNewnan, Georgia.

REV. W. F. GLENN, Methodist Minister	Manual Commis
F. S. JOHNSON. Merchant	Macon, Georgia.
R D LIIMSDEN	Crawfordville, Georgia.
*W C THRASH	Orrville, Alabama.
A. F. WOOLEY, Farmer	Kingston, Georgia.
	III. Boots, are a gran
1861.	
HENRY HARRIS	Sparta, Georgia.
W. M. JONES	Social Circle, Georgia.
SIDNEY LEWIS	Sparta Georgia
SIDNEY LEWIS	T. Crango Goorgia
R. S. McFARLAN, Clerk Superior Court	Littrange, Georgia.
S. W. McMICHAEL, Merchant	Columbus, Georgia.
H P PARK.	Greenville, Georgia.
J. J. F. ROGERS	Perote, Alabama.
1867.	•
J. R. DOWDELL, Lawyer	La Favette, Alabama,
J. R. DOWDELL, Lawyer	Mariaa Missonri
HOWARD HAMILL, Prof. Ancient Languages .	Niexico, Missoufi.
= 1868.	
	D' ! Alabama

1860

1000	•
A. G. DOWDELL, M. D., Teacher	Opelika Alabama.
L. A. DOWDELL, Lawyer	Pilot Point, Texas.
*A. S. DOUGLAS, Minister	Louisville, Alabama.
LEANDER G. JACKSON, Probate Judge	Longview, Texas.
T. J. LAMAR, President Female College	Auburn, Alabama.
CALEB LINDSEY, Lawyer	Mobile, Alabama.
J. R. MOTLEY, Farmer	Tuskegee, Alabama.
JAMES D. MYRICK, Farmer	Midway, Georgia.
R. C. PERSONS, Surgeon, United States Navy	Pensacola, Florida.

The Trustees and Faculty of Agricultural and Mechanical College of Alabama extend to the Alumni of the East Alabama College all the privileges of graduates in the former College. They request the graduates of both Institutions to communicate to the Secretary of the Faculty their occupations, any changes that may take place in their post-office addresses, and any degrees that may be conferred upon them.

^{*} Deceased.

ALUMNI

Agricultural and Mechanical College.

1872.			
R. E. BURT, A. M., Farmer			
R. O. ROUNSAVALL, A. M., Teacher	.Huntsville, Texas.		
W. E. HORNE, C. E.			
L. V. ROSSER, A. B., Lawyer - Judga Sup'r Court.			
REV. E. W. SOLOMON, A. M. Methodist Minister.			
G. C. SPIJENER, A. B., Sheriff Autauga County.			
REV. C. R. WILLIAMSON, A. M., Methodist Min'r.	.Mobile, Alabama		
1873.			
J. L. GOLSON, A. B., Lawyer			
W. T. RUTLEDGE, A. B., Farmer			
P. R. RUTLEDGE, A. B., Farmer	.Crawford, Alabama.		
1874.			
R. K. FITZHUGH, B. S	. Augusta, Arkansas.		
*B. H. JOHNSON, B. E., Lawyer			
W. H. MOORE, A. B., Cotton Broker	Rome, Georgia.		
M. H. MOORE, A. B., Merchant	.Plano, Texas.		
1875.			
FRANK C. DILLARD, B. S., Lawyer	.Sherman, Texas.		
WM M. PERRY, B. S., Teacher	Indian Territory.		
*JOHN A. RATCHFORD, B. S	.LaFayette, Alabama.		
EUGENE R. RIVERS, C. E., Inst'r A. & M. College	.Auburn, Alabama.		
1876.			
REV. M. K. CLEMENTS, B. S. A., Pr'p'l High School	Guntersville, Alabama.		
C. T. HODGE, B. S. A, Teacher	Salem, Alabama.		
S. B. HOLT, B. S. A., Manufacturer	Siluria, Alabama.		
E. M. OLIVER, A. B., Editor and Lawyer	LaFayette, Alabama		
F. D. PEABODY, B. S. A., Lawyer	Columbus, Georgia.		
J. E. RUFFIN, B. S. A., Merchant			
P. H. STOW, B. E., Lawyer			
REESE WILSON, B. S. A., Merchant	. Texas.		
1877.			
	Pilot Point, Texas.		

JOHN M. TRAMMELL, B. E., LaFayette Mer. Mills...Chambers Co., Alabama WILLIAM O. TRAMMELL, B. E., Merchant.......Chambers Co., Alabama

* Deceased.

AUBURN UNIVERSIT LIBRARY



8

AU LD271
•A76
1881/82
c.2

Alabama Agricultural and Mechanical College.

1878.

LEMUEL G. DAWSON, B. E., Farmer SILAS C. DOWDELL, B. S., Farmer TUCKER H. FRAZER, B. E., Barton Academy ROBT. E. HARDAWAY, C. E., Eng'r Mex. C. R. R GEO. H. PRICE, B. E., M. S., Prof. Nash. Fem. Col. *ISAAC A. LANIER, B. E., Teacher LEE S. SCHIEFFELIN, B. E., Merchant	Mobile, Alabama. Mexico. Nashville, Tennessee. Huntsville, Alabama. Nashville, Tennessee.
LEE S. SCHIEFFELIN, B. E., MerchantREUBEN L. THORNTON, B. E., Lawyer & Editor	. Mashamo, rennessee.

1879.

MARK S. ANDREWS, A. B., Banker	.Terrell, Texas.
TOTAL TO DIAKE R S Medical Student	.Diake & Ferry, Alabami.
EDANK D DILLARD R E. Lawver	. Moone, Alabama.
TORILLA C DOWDELL A. B. Merchant	.Larayette, Alabama.
OLIVED C MCCEHEE R S Inst'r A. & M. Col.,	.Auburn, Algbama.
ATITAL D'O'LLARA R E Merchant	.Sandtown, Georgia.
THOMAS M OLIVER B. S. A. Druggist	. Montgomery, Alabama.
TOUN O PINCKARD B. E. Teacher	.Dadeville, Alabama.
J. E. D. SHIPP, A. B., Lawyer	.Cusseta, Georgia.

1880.

The second secon	Brundidge Alahama.
JOHN T. ASHCRAFT, B. E., Teacher	Drundingo, masais
* RENIAMIN F ATKINSON, A. B., Lawyer	. West Point, Georgia.
SAMUEL B. CANTEY, B. E., Lawyer	.Fort Worth, Texas.
SAM'L CALLAWAY, B. E., Eng'r Mex. Cen. R. R.	Mexico.
JOHN S. N. DAVIS, B. E., Nurseryman	Gold Hill, Alabama.
JOHN S. N. DAVIS, B. E., Nuiseryman	Montgomery Alahama.
ALVA FITZPATRICK, B. E., Lawyer	Montgomery, macania
E J GARRISON, A. B., Barton Academy	Mobile, Alabama.
GEORGE R. HALL, B. S. A., Farmer	Midway. Alabama.
HARRISON L. MARTIN, A. B., Lawyer	Abbeville, Alabama.
CHARLES B. McCOY, B. S., Physician	Opelika, Alabama.
ROBT. F. OUSLEY, A. B., Prof. Ancient Languages.	Harnersville, Miss.
ROBT. F. OUSLEY, A. B., Froi. Ancient Languages.	Deseturville Tennessee
HENRY G. PERRY, A. B., Principal High School.	Decaturvine, Tennessee
EDGAR A. PRICE, B. S. A., Lawyer	Nashville, Tennessee.
GEO. W. STEVENS, B. E., Pr'pal Roanoke Inst'e.	Roanoke, Alabama.
JABEZ C. STREET, B. E., Wiley & Co	Atlanta, Georgia.
ROBT. Y. STREET, B. S., Wiley & Co	Atlanta, Georgia.
KODI. I. SIREEI, B. S., Who do Commission	Courtland Alahama.
JAMES J. SYKES, B. S. A., Farmer	Courtianu, Marama
ROSS E. THOMAS, B. E., Merchant	(fadsden, Alabama.
HOMER B. URQUHART, A. B., Bank	Birmingham, Alabama.
BARTOW L. WALKER, B. E., Signal Service	Fort Meyer. Virginia.

1881.

W. U. ACREE, B. S., Prattville AcademyPrattvi	lle, Alabama.
J. CALLAWAY, B. A., Barton AcademyMobile,	
O. H. CRITTENDEN, B. E., Eng'r A. & P. R. R Milton,	

[•] Deceased.

J. H. JETER, B. S. A., FarmerOpelika, Alabama.
J. G. JONES, B. S. A., FarmerMontgomery Co., Ala.
W. H. LAMAR, Jr., B. A., Signal ServiceFort Meyer, Virginia.
J. M. LANGHORNE, B. S. A., Signal Service Fort Meyer, Virginia.
J. T. LETCHER, B. E., Lawyer
A. J. MITCHELL, B. E., Signal ServiceFort Meyer, Virginia.
C. N. OUSLEY, B. A., Prof. Marvin College Waxahatchie, Texas.
B. B. ROSS, B. A., with Flanagan & CoAuburn, Alabama.
W. H. SIMMONS, B. A, Pr'n'l Prattville AcademyPrattville, Alabama.
W. D. TAYLOR, B. E., Eng'r Mex. Central R. RMexico.
J. D. TRAMMELL, B. E., Eng'r International R. R Mexico.
E. I. VAN HOOSE, B. S., Barton Academy, Mobile, Alabama,

AUBURN UNIVERSIT LÍBRARY



AU LD271 .A76 1881/82 c.2

CATALOGUE OF STUDENTS.

(BY CLASSES AND COURSES.)

Sc. stands for Course in Science. Ag. Agriculture. C. E. Civil Engineering. M. E. Mining Engineering, L. Literature.

FIRST CLASS.

Banks, J. J., L	Hurtsboro, Alabama.
Brown, E. N., L	Hurtsboro, Alabama.
CARDEN, G. A., L.	Opelika, Alabama.
CLEGG, A. M., M. E	Columbus, Georgia.
CUNNINGHAM, W. H.; C. E	Wood's Bluff, Alabama.
EBERHART, BARTOW, Ag	Columbus, Georgia
FITZPATRICK, B. H., Ag	Montgomery, Alabama.
HURT, J. M., C. E	
HUTCHINSON, P. M., C. E	
Jones, W. H., Sc	Union Springs, Alabama.
LAWAR, HOWARD, L	
LIGON, R. F., JR., C. E	Tuskegee, Alabama.
PEARSON, W. W., L	Hackneyville, Alabama.
Reid, J. M., C. E	Tampico, Mexico.
STEVENS, M. S., Ag	Rock Mills, Alabama.

SECOND CLASS.

Andrews, W. F., C. E	Opelika, Alabama.
Cox. W. S., C. E	
ELLIS, W. L., JR., C. E	Prattville, Alabama.
GAY, C. L., C. E	Montgomery, Alabama.
HARLAN, A. L., Sc	
HARP, M. L., Sc	
HURT, W. M. L	
Mangum, D. В , Ag	Auburn, Alabama.
MANGUM, T. F., L	Auburn, Alabama.
McIntosh, A. M., Ag	Dadeville, Alabama.
PACE, E. M., Sc	Newton, Alabama.
SAMFORD, N. P. D., L	
SUTTON, R. L., L	Opelika, Alabama.

THIRD CLASS.

BALDWIN, B. J	Union Springs, Alabama.
Bass, C. L	
	LaPlace, Macon Co., Alabama.
	LaPlace, Macon Co., Alabama
CORRY, R. S	

CRITTENDEN, L. F	Notasulga, Alabama.
FRAZER, E. W	Mobile County, Alabama.
GASTON, W. Z	. Hawkinsville, Alabama.
GAY, J. F	
GLENN, E. T., JR	Auburn, Alabama.
HARDIN, T. F.	
HARRELL, E. O	
HILL, M. E	.Newnan, Georgia.
Hutchison, J	.Brundidge, Alabama.
HUTCHINSON, W. L	
HOLLIDAY, P. J	. Washington, Georgia.
Johnston, M. S	. Hamilton, Georgia.
KILLEN, W. J.	.Snowdoun, Alabama.
LANCASTER, H. J.	.Wetumpka, Alabama.
MANGUM, W. W.	.Auburn, Alabama.
Pearson, L. W	
REDD, M. W	
ROBINSON, J. B., JR	. Memphis. Tennessee.
SLAUGHTER, W. F	.Auburn, Alabama.
Sмітн, F. D	.Prattville. Alabama.
Sмітн, М. М	.Prattville, Alabama.
SUTTON, O. M	.Opelika. Alabama.
Tyson, W. S	.Greenville, Alabama.
URQUHART, R. H.	.Auburn, Alabama.
WILLIAMS, W. Z	.Eufaula, Alabama.
Wood, W. D	.Prattville, Alabama.
	4.4

FOURTH CLASS.

rounti c	
ALLEN, J. DALLAS, V. R.	Morgansville, Alabama.
Dallas, V. R	Lee County, Alabama.
FRAZER, P. G	Washington, Georgia
Hoon, W. J. L	Clay County, Alabama.
Horn, J. T	Beville's Store, Alabama.
HUNTER, H. M	Eufaula, Alabama.
JOHNSTON, A. S	Hamilton, Georgia.
McIntyre, E. S	Evergreen, Alabama.
MILTON, W. H	Marianna, Florida.
MONTGOMERY, W. A	Lincolu, Alabama.
Peake, J. B	Farmersville, Alabama.
Pearson, J. E	
PENN, W. T.	Cusseta, Alabama.
PERRY, F. H	Auburn, Alabama.
Ross, C. H	Auburn, Alabama.
SLAUGHTER A. W.	Auburn, Alabama.
Sмітн, J. C	Good Hope, Alabama.
Sмітн, R L	Dadeville, Alabama.
STEWART, W. W	Columbus, Georgia.

AUBURN UNIVERSIT LIBRARY



AU LD271 .A76 1881/82 c.2

12 Alabama Agricultural and Mechanical College.

(Contractor 7	TNotasulga, Alabama.
TRAMMELL,	Auburn Alahama.
TURNER, T.	BAuburn, Alabama.
WARD, J. A	Abbeville, Alabama.

Sub-Section-Fourth Class.

Allison, P. E	Auburn, Alabama.
1 Cl 1	Auburn, Alabama.
ACTITION J H	Tallassee, Alabama.
ATTEREN C. M	LaGrange, Georgia.
RECKER JOE	.Auburn, Alabama.
RENNETT R. L.	Auburn, Alabama.
BLOUNT, J. W	Pensacola, Florida.
Bradford, J. N	Auburn, Alabama.
BOYKIN, R. S	Auburn, Alabama.
Brown, J. P	.York Station, Alabama.
CADE, R. L	Auburn, Alabama.
Campbell, L. D	.Courtland, Alabama.
COPE, E. H	.Indian Creek, Bullock Co., Ala.
DUNKLIN, J. H	Greenville, Alabama.
GAY, W. D	Montgomery, Alabama.
Goodwyn, R. H	Mount Meigs, Alabama.
Goodwin, T. T	Mount Meigs, Alabama.
HARDIN, J. W	Auburn, Alabama.
HARRIS, E. W	Auburn Alabama
HOFFMAN, P. M	Auburn Alabama.
HOFFMAN, W. H	Auburn Alabama.
Hood, J. L	Clay County Alabama.
HUMPHREYS, F. C	Pensacola Florida
HUMPHREYS, W. H	Punsacola Florida
LARKIN, D	Lorkingville Alahama.
LLOYD, E. R	Auburn Alabama
MITCHELL, A. H.	Hatabachubbee Alabama
MITCHELL, T. L.	Hatch chubbee, Mabama.
Moody, A. H	Casttebare Alabama
Persons, A. A.	
PERSONS, J. T.	
Persons, H. S	
REYNOLDS, B. R	
ROYLE, E. P., JR	
SCHOWALTER, M. R	
SHERROD, J. B	
SHERROD, J. H	
THOMAS, J. D	
WEDGEWORTH, W. M	
WILLIAMS, E. M	
ZELLARS, T. P	Palmetto, Georgia.

Special Students.

BLACKWELDER, W. M	Tallapoosa County, Alabama.
Reeves, D. D.	Tallassee, Alabama.
SAUNDERS, H. C	Opelika, Alabama.

Recapitulation.

First Class	
Second Class	
Third Class	tr.
Fourth Class	***************************************
Fourth Class-Sub-Section	
Special Students	

AUBURN UNIVERSIT



AU LD271 .A76 1881/82 c.2

TERMS OF ADMISSION.

Candidates for admission into the Fourth Class must be fourteen years of age, and a proportionate increase of age will be required for admission into the higher classes.

Applicants for admission into the Fourth Class will be required to pass an approved examination in the following subjects:

ENGLISH—Embracing Orthography, Grammar, Elements of Composition, Geography, History of the United States, History of England (Anderson.)

MATHEMATICS—Embracing the whole of Arithmetic (Robinson's), including the Metric System; Elementary Algebra (Robinson's).

In addition to these studies, candidates who propose to take the regular course in Literature, will also be required to exhibit a satisfactory knowledge of the following studies in Ancient Languages:

LATIN—Grammar (Allen & Greenough), Cæsar (4 Books), Virgil (6 Books of the Æneid).

GREEK—Grammar (Goodwin), White's or Boise's First Lessons, Xenophon's Anabasis (2 Books).

Entrance Examinations will be held on Monday and Tuesday preceding the openings in September and February, at which all applicants should be present.

If, upon examination, an applicant should be found deficient in any of the required studies, he shall be assigned to a course of preliminary training in those branches; provided, that in no case, will any applicant be admitted whose attainments in the English branches are not such that he may, with one year's training, be prepared for the studies of the Fourth Class.

Students must enter regularly some one of the prescribed

courses, but they may, in the discretion of the Faculty, with the written approval of the parent or guardian, be assigned to selected studies, provided that in no case, will a student be allowed to have less than fifteen weekly recitations, or equivalent work.

No one will be admitted who has been expelled or dismissed from any other College.

Satisfactory testimonials of good moral character, will be in all cases required.

Students, on their arrival at Auburn, must report immediately to the President and present their testimonials and instructions. After having paid their fees to the Treasurer, they will report to the Examining Committee, by whom, after examination, they will be assigned to appropriate classes. Upon presenting their certificates of examination, and the receipts of the Treasurer, applicants will be matriculated by the Commandant, who will furnish to each one a copy of the Regulations, and assign him to his proper section and company.

No student will be admitted to recitation in any class pre-

Courses of Instruction.

There are four regular Degree Courses in this Institution, designated as follows:

COURSE OF AGRICULTURE.

Degree, Bachelor of Scientific Agriculture; B. S. A.

II. COURSE IN ENGINEERING.

Degree, Bachelor of Engineering; B. E.

III. COURSE IN LITERATURE.

Degree, Bachelor of Arts; A. B.

IV. COURSE IN SCIENCE.

Degree, Bachelor of Science; B. S.

Each of these Courses requires four years for its accomplishment, and to entitle the student to the Degree he must stand an approved Examination in the studies prescribed for the Course. For the first two years the studies in all of the Degree Courses (which are the same as those pursued in the Freshman and Sephomore Classes of other Colleges) are identical, except that students in the Departments of Agriculture, Engineering and Science, may, if they prefer, substitute the Modern Languages (French and German) for Latin and Greek. Having completed the studies prescribed for these two years, the student may select either of the Regular Degree Courses.

I.—Course in Agriculture.

The design of this Course is to furnish the student with a plan of study especially adapted to the wants of those who propose to devote themselves to Agricultural pursuits; not so much by training in the practical processes of the Farm, as

by affording instruction in the principles of correct husbandry, and in those sciences which relate particularly to the cultivation of the soil.

The Course requires four years for its completion, the first two years, however, being devoted to studies which are common to the Literary Course, except that students who propose to take the Course in Agriculture may, if they prefer, substitute the Modern for the Ancient Languages.

Having gone through this course of study, which is thought to be essential to a liberal education for any of the practical pursuits of life, the student is prepared to enter upon the technical studies in the course, which occupy the remaining two years. These technical studies embrace the following subjects:

- 1. Mechanics and Physics, in which the class makes three weekly recitations during the first year.
- 2. Botany, two recitations weekly the Spring terms of the first and second years.
- 3. Descriptive Astronomy and Meteorology, three recitations weekly during the second year.
- 4. Geology and Mineralogy, the first three and the second two recitations weekly during the second year.
- 5. Zoology and Entomology, three recitations, weekly, throughout the second year.
- 6. Agricultural Chemistry, with practical instruction in quantitative and qualitative analysis of soils and fertilizers, to which two hours are devoted daily throughout the first year.
- 7. Vegetable Physiology, embracing the structure and habits of plants, and their relations to the soil and the atmosphere, occupying two recitations weekly throughout the first year.
- 8. Cattle Feeding, embracing the principles of animal nutrition, the chemical and economical value of feeding stuffs; two recitations weekly during the Spring term of the first year.

9. Practical Husbandry, embracing the subjects of soils, their cultivation, fertilization, drainage and irrigation; Farm Crops; Farm Implements and Machinery; Farm Animals; Fruit Culture; Market Gardening; Horticultural and Landscape Gardening; in which instruction is given daily by text books and lectures during the entire course of two years.

For the purpose of illustrating and exemplifying the principles taught in the text books and lectures, the College is furnished with the following appliances:

- 1. An extensive Mineralogical and Geological Cabinet, and Museums of Natural History and Agriculture.
- 2. A commodious Laboratory, supplied with troughs, furnaces, balances, and the necessary chemicals and apparatus for making analyses.
- 3. An Experimental Farm of Twenty Acres, devoted to soil tests of fertilizers and experiments in the cultivation of field crops, grasses, fruits and flowers, under the supervision of the Professor of Agriculture.

In addition to the technical studies embraced in this Course, the Class in Agriculture is required to make three recitations weekly in Political Economy, during the Spring term of the second year; and also to attend lectures weekly upon Constitutional Law and the Law of Contracts, Conveyancing, and Landlord and Tenant, in which it is designed to furnish such instruction as will be of service to the practical agriculturist.

II.—Course in Engineering.

This Course extends the Scientific Course in Applied Mathematics, and embraces full instruction in regard to the construction of common roads, pikes, railroads, bridges, canals, improvements of rivers, harbors, mining, &c.

In aid of the practical studies of the College, and as a means of familiarizing students with the actual details of work, the First and Second Classes in Engineering may, at the discretion of the Professor of Engineering, and under his supervision, make visits of inspection to machine shops, mills, mines,

furnaces, and engineering constructions within convenient reach.

The Senior Class of the Engineering Course, is organized as an Engineering Corps, and goes through all the necessary operations for the construction of a railroad from Auburn to some selected terminus.

Preliminary study of maps.

Reconnoissance.

Running Preliminary lines.

Maps and Memoirs of same.

Final location of road; Grades and Curves.

Final Maps, showing Longitudinal and Cross Sections, Excavations, &c.

The Field Work and Office Work, including Drafting and Calculation, are performed under the direction of the Professor. Each step is accompanied by text book study and lectures. Examinations are made of Engineering works in the vicinity, and written reports upon them (with drafts) are required. Both theory and practice are thoroughly taught.

The work in this Course begins with the first Collegiate term.

The Course in Drawing extends through four years. During the first year the students practice linear and freehand drawing. In the second year the elementary principles of instrument drawing, embracing a course of orthographic and isometrical projections, shades and shadows, structural drawing and topographical delineation, are taught. This course is obligatory on the students of all the Courses, except the Course in Literature.

During the third and fourth years, instruction in drawing is obligatory only on the students in Engineering. In the former year the system of instruction embraces orthographic projections, isometric drawing, shades and shadows, tinting in India ink and colors, the practice of drawing in sketches of tools, the finished work of machines, bridges and other structures. In the last, or fourth year of the Course in

Engineering, the students are taught perspective. They then cease to draw for mere practice, and use their graphical skill in machine construction, in making drawings of works visited in excursions to mines, furnaces, water, gas and railway structures. Plans, profiles and sections of railroad surveys complete the course.

Drawing Instruments.—The instruments used at the College are the Swiss, which are preferred for their general excellence and moderate cost. The instruments, with the materials for geometrical and topographical drawing, cost from ten to twenty-five dollars. The student is advised to defer his purchase of drawing instruments and material until he comes to the College, when he will have the advantage of procuring them under the direction of the Professor of Drawing.

The Drawing Room is fitted up with all necessary arrangements. A full set of geometrical models is provided. A large number of photographs, lithographs and manuscript drawings—English, German and French—have been imported. They illustrate the following subjects: General Descriptive Geometry, Linear Perspective, Shades, Shadows, and Reflections, Masonry and Stone Cutting, Girders and Trusses of Wood and Iron; Furnaces, Boilers, Railroad Shops, Depots, Offices, Machines, and their details, shown in the conventional colors used in France and Germany.

A selection of portfolios in landscape, figure and classic subjects, and casts from the gallery of the Louvre in Paris, is calculated to meet the wants of students desiring to pursue a

full course in freehand drawing.

Students who propose to make Mining a specialty will receive special instructions in the three fundamental branches of the Art—mining, preparation of ores, and their metal-lurgical treatment.

Considerable attention will also be paid to Geology and Mineralogy with Blow pipe analysis, character of veins and methods for successfully searching for all varieties of ore deposits. An ample collection of minerals is provided, comprising all species with which the Mining Engineer should be familiar, and to this, students have constant access. The geology of Alabama, Georgia and North Carolina, where mining is conducted to any extent, is well represented in the Mineralogical Cabinet.

A student who proposes to take the degree of Civil and Mining Engineering must continue a course of study at least one year longer, under a schedule prescribed by the Faculty. He must exhibit satisfactory evidence of his power to apply effectually by actual work the knowledge he has attained.

III.—COURSE IN LITERATURE.

This is the usual A. B. Course of American Colleges, and the plan of study is substantially the same as that required for this Degree in the best literary institutions of the country. It embraces a thorough course of the Latin and Greek Languages, running through the entire four years; the study of English in its linguistic elements, as well as its Literature, including Rhetoric and Logic; History, Ancient and Modern; Philosophy, Mental, Moral and Political; Mathematics, Pure and Applied; and Natural Sciences, including Chemistry, Botany, Astronomy, Geology and Physics.

IV.—Course in Science.

This Course is intended for those who wish to pursue the study of the Physical Sciences in a more extended course than that prescribed in the Literary Course; with the privilege, at the same time, of substituting the Modern for the Ancient Languages.

The subjects embraced are Mechanics and Physics; Botany; Chemistry, including work in the Laboratory in Qualitative and Quantitative Analysis, or an equivalent amount of Latin; Descriptive and Practical Astronomy; Mineralogy; Geology and Meteorology; and Mental and Moral Philosophy.

The purpose is to afford to the student every facility for thorough instruction, in the way of experiment and illustra-

tion, in connection with the text books and daily lectures by the Professors of Chemistry and Natural History.

The Chemical Laboratory is admirably fitted up for work in Analysis. It consists of a Lecture Room, furnished with Counters, Pneumatic Trough, Gasometer and large glass case; a Work Room with twenty-five work tables; a Furnace Room, and a Balance Room. All are supplied with gas and water. Every student pursuing Analytical Chemistry is provided with a separate work table, the necessary chemicals and apparatus, a jet of gas with Bunsen's burners, and enameled water sinks. In the Balance Room are balances made by Oertling of London, and Becker of New York. An annual fee of \$10 is paid by students in the Courses of Agriculture and Science for the use of Chemicals in the Laboratory.

MUSEUM AND MINERALOGICAL CABINET.

The Museum is comprehensive in its scope—embracing many rare and valuable specimens.

By a system of exchange, arranged with most of the prominent Institutions and a number of Scientists in the United States, large additions have been made during the past year to all the branches of the collection.

The minerals have all been carefully arranged and classified according to Dana's System, and a complete catalogue has been prepared of all the specimens in the Museum.

COURSE OF STUDY.

FOR TWO YEARS,

Preparatory to Special Courses in Agriculture, Literature, Science, and Engineering.

(Note.—The figures indicate the number of weekly recitations required in the studies to which they are attached).

FOURTH CLASS.

	First and Second Terms-5 History and Composition. First Term-5 Algebra
MAINEMAILOS	Second Term-5 Geometry.
LANGUAGES	First and Second Terms-5 French, or 5 Latin and 3 Greek.
*DRAWING	First Term-2 Freehand Drawing. Second Term-2 Linear Drawing.
BOOK-KEEPING	First and Second Terms-2 Book-keeping and 3 Com- mercial Arithmetic.
MILITARY	First and Second Terms-6 Drill. THIRD CLASS.
English	First Term-5 Rhetoric and Composition.

Indian	Second Term-2		- F		
MATHEMATICS	First Term-5 S	Solid Geometry,	Mensuration	on, A	lgebra.
	Second Term-5	Trigonometry,	Surveying	and	Level-
	ing.	a street - age star	£3*, *		

*Drawing	First and Second Terms-2 Topographical Drawing.	
NATURAL SCIENCE	Second Term-5 Chemistry (Begins January).	
LANGUAGES	First and Second Terms -5 German, or 5 Latin and 8	3
	Greek.	
	The state of the s	

MILITARY..... First and Second Terms - Drill.

(Note.—Students proposing to pursue the course in Literature, are required to take Latin and Greek; those proposing to pursue the course of Agriculture, Science, or Engineering, are required to take either French and German, or an equivalent in Latin. Monthly Exercises in Composition and Declamation are required of all Students of the Third and Fourth Classes).

^{*}Not required of those Students proposing to take the Course in Literature. †Elective.

COURSE IN AGRICULTURE.

SECOND CLASS.

	* SECOND CLASS.
English	Second Term-3 Logic.
	First and Second Terms-3 Mechanics and Physics. Second Term-2 Botany.
	First and Second Terms—5 Qualitative and Quantitative Analysis, and daily work in Laboratory.
•	First and Second Terms-4 Animal Physiology; Care and Management of Domestic Animals; Soils and Manures.
Law	First and Second Terms-1 Contracts and Conveyances.
MILITARY	First and Second Terms-1 Tactics; Drill.
	FIRST CLASS.
ENGLISH	Second Term-3 Political Economy.
NATURAL SCIENCE .	First and Second Terms-3 Descriptive Astronomy;
. 71	3 Geology; 2 Mineralogy; 3 Meteorology.
NATURAL HISTORY.	First Term-3 Zoology.
	Second Term-3 Entomology, Insects injurious and
	beneficial to vegetation: 2 Botany
CHEMISTRY	First and Second Terms-5 How Crops Grow: How
A	Crops Feed, and Manual of Cattle Feeding.
AGRICULTURE	First and Second Terms-4 Vegetable Physiology: Til-
1	lage: Field Crops: Orchard and Garden Galtery
LAW	First and Second Terms-1 Constitutional and Interna-

COURSE IN ENGINEERING.

tional Law.

MILITARY......First and Second Terms-Drill.

SECOND CLASS.

English	First Term-3 English and American Literature.
	Second Term +3 Logic
MATHEMATICS	First Term-3 Analytical Geometry
	Second Term -3 Differential Colored
NATURAL SCIENCE	First and Second Terms-3 Mechanics and Physics
	Destruct I erm - 9 Roton-
Engineering	. First Term-5 Hydrographical, Topographical, and
	Town Surveying, Theory and Practice
	Second Term-5 Line Surveying: Common Roads;
W11 - (a)	Railroads; Canals; Tunnels: Staking out for Con- struction.
DRAWING	First Term-5 Bridge Drawing.
	Second Term-6 Sketches of Tools, of the Component
	Structures. and of Bridges and other
MILITARY	First and Second Terms-1 Tactics; Drill.

FIRST CLASS.

- MATHEMATICSFirst Term-3 Integral Calculus.

 Second Term-3 Practical Astronomy.
- *NATURAL SCIENCE ... First and Second Terms-3 Descriptive Astronomy; 3 Geology; 2 Botany.
- CIVIL ENGINEERING... First and Second Terms-10 Building Materials; Mortars and Cemerts; Masonry; Wood and Metals; Strength of Materials; Arches; Framing Bridges and Road Making; Mining.
- TOPOGRAPHICAL (First and Second Terms—10 Plans, Profiles, and Sec-Drawing.) tions of Ruilroad Surveys.
 - MILITARY First and Second Terms-Drill.

COURSE IN LITERATURE.

SECOND CLASS.

- English and American Literature.
 - Second Term-3 Logic.
- MATHEMATICS First Term-3 Analytical Geometry.
- Second Term-4 Latin; 5 Greek.

 NATURAL SCIENCE ... First and Second Terms-3 Mechanics and Physics.
- MILITARY...... First and Second Terms-1 Tactics; Drill.

FIRST CLASS.

- ENGLISH First Term-5 Mental and Moral Philosophy.
 - Second Term-3 Political Economy.
- LANGUAGES First Term-4 Latin; 4 Greek.
 - Second Term -5 Latin; 5 Greek.
- NATURAL SCIENCE First and Second Terms-3 Descriptive Astronomy; 3

COURSE IN SCIENCE.

SECOND CLASS.

- ENGLISH..... First Term-3 English and American Literature.
 - Second Term-3 Logic.
- MATHEMATICS First Term-3 Analytical Geometry.
- Second Term-3 Differential Calculus.
- NATURAL SCIENCE ... First and Second Terms-3 Mechanics and Physics.
- Second Term-2 Botany.

 †CHEMISTRY......First Term-5 Qualitative and Quantitative Analysis.

*Those Students who propose to pursue a course of study leading to Mining may select, instead of some of the subjects belonging purely to Civil Engineering, Mineralogy, Economic Geology, Mining Operations, Analytical Chemistry and Work in the Laboratory.

†Optional with an equivalent course in Latin, Mental and Moral Philosophy.

FIRST CLASS.

English	Second Term -3 Political Economy.
MATHEMATICS	First Term-3 Integral Calculus.
	Second Term - 3 Practical Astronomy.
NATURAL SCIENCE	. First and Second Terms-3 Descriptive Astronomy; 2
	Mineralogy: 3 Geology; 3 Meteorology; 2 Botany.
LABORATORY	First and Second Terms-10 Work in Laboratory.
MILITARY	First and Second Terms - Drill.

Monthly exercises in Declaration and Composition are required of all students during the first and second years, and the higher classes in all the courses deliver three original orations during the year.

TEXT BOOKS.

FOURTH CLASS.

Robinson's Complete Algebra, Weutworth's Geometry, Bloss' Ancient History, Essentials of English Grammar (Whitney) French: Otto's French Grammar and Reader, Chrestomathie Francaise, Gase's Dictionary. Davidson's Linear Drawing, White's Art Studies, Bryant and Stratton's Book-Keeping, Bryant and Stratton's Commercial Arithmetic, Upton's Infantry Tactics, Allen and Greenough's or Chase and Stuart's Latin Texts, Cicero's Orations, Livy, Xenophon's Anabasis (Goodwin), White's Greek Lessons, Mythology, Latin Composition (Jones'.)

THIRD CLASS.

Wentworth's Geometry, Olney's Trigouometry, Loomis' Analytical Geometry (new edition), Davidson's Projections and Model Drawing, Davies Surveying and Mensuration, Bloxham's Chemistry, Otto Joyne's German Reader, Schiller's Wilhelm Tell, Adler's German Dictionary, Hart's Composition and Rhetoric, Selections from English Authors, Horace, Herodotus, Ilomer (Boise or Sidgwick), Latin and Greek Composition (Jones'.)

SECOND CLASS

Loomis' Analytical Geometry (new edition), Loomis' Differential Calculus (new edition), Ganot's Natural Philosophy, Gray's Botany, Apgar's Plant Analysis, Church's Laboratory Guide, Caldwell's Agricultural Analysis, American Farm Book, Jarvis' Physiology, Armsby's Cattle Feeding, Smith's Linear Perspective, Henck's Field Book, Barry's Railway Appliances, Hudson's Shakespeare, Shaw's History of English Literature, Logic, Coppee, Welcker's Military Lessons, Tacitus' Germania and Agricola, Terence, Allen's Latin Composition, Demosthenes, Alcestis, Jones' Greek Composition.

FIRST CLASS.

Loomis' Integral Calculus, Mahan's Engineering, Mahan's Industrial Drawing, Lockyer's Astronomy, Dana's Mineralogy, Dana's Geology, Loomis' Meteorology, Hickock's Moral Science, Walker's Political Economy, Hender-

son's Gardening for Profit, How Crops Grow, How Crops Feed, Tenney's Elements of Zoology, Entomology (Lectures), Mott's Manual of Chemistry, Wohler's Mineral Analysis. Rickett's Assaying, Barry's Fruit Garden, Henderson's Floriculture, Kemp's Landscape Gardening, United States Artillery Tactics. Juvenal, Plautus, Cicero, Latin Literature (Bender) and Composition, Prometheus, Œdipus' Tyrannus, Greek Literature (Jebb) and Composition.

REFERENCE BOOKS.

Dana's System of Mineralogy, LeConte's Geology, Loomis' Meteorology, Ganot's Natural Philosophy, Brush's Determinative Mineralogy, Fresenius' Qualitative and Quantitative Analysis, Plattner's Blow Pipe Analysis, Cutter's Comparative Physiology, Smith's and Enthoffer's Topography, Rankine's Engineering and Applied Mechanics, Stoney on Strains, Wood's Roofs and Bridges, Merrill on Bridges, Warren's Machine Drawing, Dempsey on Drainage, French on Farm Draining, Schmitz's Student's Classical Atlas, Church's Descriptive Geometry and Shades and Shadows, Peck's Mechanics, Wiesbbach's Mechanics, Mahan's Stone Cutting, Dubois' Graphical Statics, Simus on Levelling, Ernst's Military Engineering, Anthon's Classical Dictionary, Smith's Roman and Grecian Antiquities, Madvig's Latin Grammar, Goodwin's Syntax of the Moods and Tenses, and Curtius' Greek Grammar.

Degrees and Post Graduate Courses.

The degrees of Bachelor of Arts, Bachelor of Agriculture, Bachelor of Science, and Bachelor of Engineering, will be granted only to those who have passed satisfactory examinations in their respective courses. The completion of the Post Graduate Course of one year, will entitle the graduate of Engineering to the degree of Civil and Mining Engineer; and the graduate in Agriculture, Literature and Science, to the degree of Master in that course.

Certificates of Proficiency will be granted Cadets upon completion of a special course of study.

All degrees of regular courses must be conferred upon recommendation of the Faculty, approved by the Board of Trustees.

Bad character, or college delinquency of any kind, shall be good reason for exclusion from a degree.

Each Graduate shall prepare and submit to the Faculty, a thesis on some subject of immediate relation to the studies of his course, and read or deliver the same on Commencement day, if so directed.

Applicants for degrees and certificates shall notify the Faculty at least one term before Commencement.

No Cadet of the College will be admitted to any degree unless he shall have exhibited to the President of the College a certificate from the Treasurer that his College dues are all paid, and shall have performed the exercises assigned by the Faculty for Commencement.

Special Information.

Department of Military Science and Tactics.

By the act of Congress for the endowment of Agricultural and Mcchanical Colleges, in prescribing the required studies, the words "including military tactics" are used. The act is designed to be faithfully carried out, by imparting to each student, not physically incapacitated to bear arms, practical instruction in the school of the soldier, of the company, and of the battalion. The duties of guards, outpost and picket service, are practically taught. The College is provided, by the State, with breech-loading cadet rifles, swords, and accoutrements.

The following uniform has been prescribed for dress, viz.: Frock of Cadet grey, three rows of College buttons; grey pants and cap; trimmings black. A very neat and serviceable dress suit can be obtained here, not to exceed \$25, and a fatigue suit, not to exceed \$18; sufficient, with proper care, for one year's service. This is less expensive than the usual clothing. All students are required to wear this uniform at all times during the term.

The drills are short, and the military duty involves no hardship. The military drill is health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the Cadet is manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill and deportment. Each Company is officered by one Captain, one 1st Lieutenant, one 2nd Lieutenant, with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the Faculty on nomination of

Commandant, and are continuous unless forfeited by misconduct.

Free Tuition.

The Trustees have authorized the Faculty to admit all Cadets free of tuition. This is not limited to residents of this State. No charge is made for instruction. An incidental fee of seven and a half dollars per term is made for servants' attendance in building, fuel, ordinary repairs, and use of instruments.

A fee of two and a half dollars per term is paid to the Surgeon by each Cadet for medical services. Upon graduation a fee of five dollars will be required for a diploma. No other College fees are required.

Session Records and Circulars.

Daily records of the various exercises of the classes are kept by the officers of instruction in a form adapted to permanent preservation. From this record a circular or statement is sent to the parents or guardian every two months.

Examinations.

There shall be a written or oral examination of the studies passed over at the end of each term.

Special examinations shall only be held by order of the Faculty.

A general yearly average of 70 (the maximum mark being 100) in scholarship will be required to pass a student from any class to the next higher, and if a mark less than 60 is attained in any study, he shall, in addition, be required to pass another examination in that study at the beginning of the ensuing session, before being allowed to pass up; and if found deficient on account of neglect of study, he may be dismissed.

It is particularly required that every student who enters the College shall remain through the examination at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examination, except in extreme cases.

Examinations for Degrees or Certificates of Proficiency embrace in their scope the entire subject of study in the course.

Discipline.

Military Science and Tactics are required to be taught in this Institution, both by law of Congress and by act of the State Legislature. The discipline is modeled after that of the best military schools. The government of the College is administered by the President, Commandant and Faculty, in accordance with the Code of Laws and Regulations enacted by the Trustees and published; each student upon matriculation being furnished with a copy.

The strictest attention to study, and the most exact punctuality in attendance on recitations, and all other duties, will be made the condition of every student's continuance at the

College.

Students are prohibited from having in their possession ammunition, weapons, or arms not issued for the performance of military duty.

Religious Services.

Religious services are held every morning in the Chapel. The students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday. Opportunities are also offered for attending Bible Classes every Sunday.

By statute of the State the sale of spirituous liquors and keeping of gaming saloons of every kind within five miles of

Auburn, are forbidden.

The College will be carefully preserved from the control or domination of any party or sect in religion or politics.

Location and Building.

The College is situated in the town of Auburn, sixty miles from Montgomery, directly on the line of the Western Railroad.

The region is high and healthful—821 feet above tide water; being more elevated than Montgomery by 659 feet, or than Talladega by 200 feet.

The building is large and commodious, and is well furnished

with rooms for college use.

Societies.

There are two Literary Societies—the Wirt and the Websterian-connected with the College. Each has a commodious hall handsomely fitted up, a library of standard and miscellaneous works, and a reading room. Their weekly exercises add to the facilities afforded by the College for practice in composition, elocution and discussion.

Society of Alumni.

The annual Alumni Oration, by a member of the Society, is delivered in the Chapel, Monday evening of Commencement week.

Young Men's Christian Association.

This Association comprises the students who are members of churches. Its object is to promote the religious character and usefulness of those connected with it. Weekly meetings are held, and public addresses occasionally delivered.

Boarding.

Students, after selecting their boarding-houses, will not be permitted to make changes without obtaining permission of

the Faculty, having first given two weeks' notice.

The Faculty will feel authorized to remove students from boarding houses when it becomes manifest that they are failing in their duties from improper associations, or for any other reason demanding such removal.

Parents and guardians are advised to send all money for payment of tuition and board to the Treasurer of the College,

with instructions for its appropriation.

Expenses.

Tuition free to all Cadets in or out of the State.	
Incidental fee, per term, in advance\$7	50
Library fee 2	00
Surgeon fee	50
Board, in private families, per month\$12 to 15	00

Academic Year.

The academic year, which is divided into two equal terms, commences on the last Wednesday in September, and ends on the last Wednesday in June following, which is Commencement day. The second term begins on the second Wednesday in February.

No intermission at Christmas, except for one day; and parents are earnestly requested not to grant their sons permission to go home at that season, except in cases of pressing importance, as their absence seriously disarranges the exercises of the classes, and is very disadvantageous to the young men themselves.

DEGREES CONFERRED.

Session 1881-82.

BACHELOR OF ARTS.

Brown, E. N	Hurtsboro, Alabama.
	Opelika, Alabama.
LAMAR, HOWARD	Auburn, Alabama.
PEARSON, W. W	Hackneyville, Alabama.
	LOR OF AGRICULTURE.
BACHELOR	OF CIVIL ENGINEERING.
HURT, J. MLIGON, R. F., JR	
BACHELOR	OF MINING ENGINEERING.
CLEGG, A. M	Columbus, Georgia.
BAC	HELOR OF SCIENCE.
JONES, W. H	Union Springs, Alabama.
	CTOR OF DIVINITY.
REV. T. F. MANGUM	Auburn, Alabama.
D	OCTOR OF LAWS.
Hon. John A. Foster Prof. James F. Park	Clayton, Alabama. Tuskegee, Alabama.
	PRIZES.
W. D. Wood, for Excellence W. H. MILTON, for Excellence B. J. BALDWIN, for Excellence W. W. MANGERS, for Excellence	te in Chemistry

CONTRIBUTIONS

TO THE

Mineralogical and Zoological Museum

During Session of 1881-'82.

The following persons have made valuable additions to the various branches of the Museum:

J. N. Bradford, W. D. Taylor, Walter Hoffman, Paul Hoffman, Mrs. O. D. Smith, Prof. O. D. Smith, Rev. E. Y. Van Hoose, Otis Smith, Jr., Harry Smith, Miss Pauline Dillard, Bartow Eberhart, Mrs. Allen, Prof. G. W. Maxson, Mrs. G. W. Maxson, Edgar Maxson, J. H. McCary, Prof. J. T. Dunklin, Joe Hollifield, F. Humphreys, Mrs. Humphreys, J. T. Romine, R. L. Fah, J. M. Reid, Miss Maud Glenn, J. Hutchison, R. G. Southall, Jr., J. W. Blount, J. M. Hurt, Howard Lamar, Prof. W. C. Stubbs, W. Z. Williams, Master Persons, J. H. Ashurst, L. A. Trumbo, Charles Glenn, Miss Mary E. Reese, Dr. Jackson.

Dr. R. C. Persons, U. S. N., valuable specimens of deep sea soundings.

Mrs. James Schuyles, San Mateo County, California.

Mrs. A. E. Bush, fine Botanical specimens from California.

Prof. Jacques de Morgan, of the Paris School of Mines, sent 4,813 specimens of Tertiary Fossils from the Paris Basin.

184 specimens of Woods from the Census Bureau.

The following specimens have been contributed to the Industrial Collection by Manufacturers, and others, throughout the United States:

A Miner's Lamp by Leonard Bros., Scranton, Pa.

Specimens from Jenkins' Patent Sheet Packing Company, New York.

Specimens from Porter Iron Roofing Company, Chicago, Ill.

Metallic Shingles and Corrugated Sheet Iron Siding, Anglo American Roofing Co., New York.

Specimens from Phosphor Bronze Smelting Company, Philadelphia, Pa.

Illustrated Plates of Screws, American Screw Co., Providence, R. I. Specimens from Harwood Chair Seat Co., Boston, Mass.

Felt Ceiling and Roofing, W. J. Fav, Camden, N. J.

Specimens from National Barbed Wire Fence Co., New York.

Specimens from Hawkeye Steel Barbed Wire Fence Co., Burlington, Iowa.

Samples from Cincinnati Barbed Wire Fence Co., Cincinnati, O. Low's Art Tiles, Wellington & Burrage, Boston, Mass.

Specimens from American Solid Leather Button Company, Provi-

dence, R. I.

Specimens of Nuts, Washers, Chain-links, Bolts, Boiler, and Cooper Rivets, &c.; Hoopes & Townsend, Philadelphia, Pa.

Specimens from Robert Aitchison Perforated Metal Company,

Chicago, Ill.

Solid Drawn Steel Tube, Philip S. Justice & Co., Philadelphia, Pa. Machinery Wiper Cloths, Brown Manufacturing Company, Providence, R. I.

Morton's Sash Chains, Thomas Morton, New York.

Specimens of Round and Bar Iron, and Fish Bar and Railroad Iron; also, samples illustrating fibre and strength of iron; Lookout Rolling Mills, Chattanooga, Tenn.

List of Contributors to Agricultural Department.

TO AGRICULTURAL MUSEUM:

Landreth & Sons	Philadelphia, Penn.
Peter Henderson & Co	New York, N. Y.
Thorburn & Co	New York, N. Y.
Director General H. I. Kimball	
Kansas Exhibition	
South Carolina Exhibition	Atlanta Cotton Exposition.
North Carolina Exhibition	Atlanta Cotton Exposition.
Florida Exhibition	
And Many Private Exhibitors	
Manley & Ditter atminit	Montgomery, Ala.
Jes E Strom	Bullock, Co., "
A. B. Buchanan	
Mrs E A Howell	Smith's Station,
Wm (! Bee & Co	
Dr. R. H. Bragaw	Auburn, Ala.
Messrs J. A. Holifield & Co.,	
Messrs J. A. Holifield & Co.,	
O D Grout	
Montgomery Oil Works	ytontgomery,
Central Oil Works	
Mr. J. C. Moore	Auburn,
Mr. J. T. Harris	
Mr. Lewis Foster	
Mr. Alex. Frazer	
Capt. A. A. Allison	
Mr A D Mabilian our	
Mr. B. H. Reynolds	
TO FARM.	
	Charleston & C
William C. Bee & Co	Solma Ala
Central Oil Mills	Ala

William C. Bee & Co	Charleston, S. C.
T. C. Webb	Talladega, Ala.
T. C. Webb	Dallas County, Ala.
McKennon	

CALENDAR FOR 1882-'83.

Entrance Examinations Monday and Tuesday, September 25th and 26th.

First Term begins Wednesday, September 27th. Second Term begins February 12th, 1883.

SUNDAY, JUNE 24.

Commencement Sermon.

MONDAY, JUNE 25.

Prize Declamation.

Meeting of Board of Trustees.

Dress Parade.

Alumni Adress.

TUESDAY, JUNE 26.

WEDNESDAY, JUNE 27.

Dress Parade. Levee. GAYLAMOUNT PAMPHLET BINDER

Manufactured by GAYLORD BROS. Inc. Syracuse, N.Y. Stockton, Calif. Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1882

```
OCLC: 36819601
                            Rec stat:
              19970429
                                                         Used:
  Entered:
                            Replaced:
                                          19970429
                                                                   19970429
              ELvl: I Srce: d GPub: s
Type: a
                                                       Ctrl:
                                                                  Lang: eng
  BLvl: s
             Form: a
                                         Freq: a
                                                                    Ctry: alu
                            Conf: 0
                                                       MRec:
  S/L: 0 Orig: EntW: Regl: r ISSN:
Desc: a SrTp: Cont: DtSt: d Dates
1 040 AAA +c AAA ¶
2 007 h +b c +d b +e f +f u +g b +h a +i u +j p ¶
3 043 n-us-al ¶
                                                       ISSN:
                                                                    Alph:
                                                       Dates: 1873,1893 ¶
    3 043 n-us-al ¶
4 090 LD271 +b .A76 ¶
5 090 +b ¶
    6 049
               AAAA ¶
    7 110 2 Agricultural and Mechanical College of Alabama. ¶
    8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
    9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
▶ 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama 1
 12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama ¶
13 260 Auburn, Ala. : +b The College, ¶
  14 300
               21 v. ; +c 21 cm. ¶
15 310
               Annual 1
 16 362 0 1872-73-1892-93. ¶
 17 500
               Title varies slightly. 1
 18 533
               Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
#d 1997. #c microfilm reels : negative ; 35 mm. ¶
               d +b 1873 +c 1893 +d alu +e u +f u +g a ¶
19 539
20 650 0 Universities and colleges +z Alabama +x Periodicals. ¶
▶ 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
> 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
```

> 23 785 00 Agricultural and Mechanical College of Alabama. +t Catalogue of

▶ 24 830 0 USAIN State and Local Literature Preservation Project ¶

the Alabama Polytechnic Institute ¶

ATABALA POLYTECHNIC INSTITUTE CATALOGUE
1882-83

AU LD271 .A76 1882/83 c.2

AUBURN UNIVERSITY LIBRARY



AU LD271 .A76 1882/83 c.2

This book must not be taken from the Library building.

CAT.2-

CATALOGUE

OF THE

State Agricultural and Mechanical College

 \mathbf{OF}

ALABAMA,

1882-'83.

AND

ANNOUNCEMENT,

1883-'84.

ALA

R. W. BURTON, ALABAMA.

Board of Trustees,

AND

Time of Expiration of Office.

HIS EXCELLENCY, RUFUS W. COBB, Governor of Alubamu, ex officio President.

Hon. H. C. ARMSTRONG, Superintendent of Education, ex officio.

FIRST DISTRICT: .

Hon. C. C. LANGDON, Mobile. February 28, 1887.

SECOND DISTRICT:

J. W. HARDIE, Esq., Montgomery, January 4, 1885.

THIRD DISTRICT:

Hon. W. H. BARNES, OPELIKA. Hon. H. D. CLAYTON, CLAYTON. February 28, 1887.

FOURTH DISTRICT:

Hon. JONATHAN HARALSON, SELMA. January 4, 1889.

FIFTH DISTRICT:

Hon. R. F. LIGON, TUSKEGEE. January 4, 1889.

SIXTH DISTRICT:

Hon. JOHN W. BISHOP, TALLADEGA, January 4, 1889.

SEVENTH DISTRICT:

Hon. M. L. STANSEL, Carrollton. January 4, 1885.

EIGHTH DISTRICT:

Hon. J. N. MALONE, ATHENS. January 4, 1885.

E. T. GLENN, TREASURER.

F. M. REESE, SECRETARY.

1982/83 BARKSDALE

FACULTY AND OFFICERS

FOR 1882-'83.

WM. LEROY BROUN, M. A., LL.D.,

President.

J. T. DUNKLIN, A. M., LL.D., Professor of Ancient Languages.

W. C. STUBBS, A. M.,

Professor of General and Agricultural Chemistry.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, Jr., M. E., PH. D., Professor of Natural History.

REV. G. W. MAXSON, A. M., M. E.,

Professor of Moral Philosophy and English Literature.

GEN. J. H. LANE, C. E., M. A.,

Professor of Civil Engineering and Commandant.

Professor of Agriculture.

C. C. THACH, B. E.,
Instructor of Ancient and Modern Languages.

T. H. FRAZER, B. E.,

Instructor.

J. H. DRAKE, M. D., Surgeon.

WILLIAM C. STUBBS.

Recording Secretary.

P. H. MELL, Jr., Corresponding Secretary.

E. T. GLENN, Librarian.

MILITARY ORGANIZATION.

WM. LEROY BROUN, M. A., LL.D., President. GEN. JAMES H. LANE, Commandant. J. H. DRAKE, M. D., Surgeon.

CADET OFFICERS.

Staff.

W. S. COX, Adjutant. • W. J. KILLEN, Sergeant Major.
B. H. BOYD, Color Sergeant.

Company A.

Captain, C. L. GAY. .

1st Lieut., A. L. HARLAN.

2d Lieut., E. M. PACE.

1st Sergt., W. L. HUTCHINSON.

2d Sergt., R. S. CORRY.

3d Sergt., D. D. McLEOD.

Company B.

Captain, T. F. MANGUM.

18t Lieut., R. L. SUTTON.

2d Lieut., W. L. Ellis, Jr.

1st Sergt., J. B. Robinson, Jr.

2d Sergt., W. D. Wood.

3d Sergt., L. F. CRITTENDEN.

Company C.

Captain, A. M. McIntosh.

1st Lieut., D. B. MANGUM.

2d Lieut., M. L. HARP.

1st Sergt., M. E. HILL.

2d Sergt., ZELL GASTON.

3d Sergt., T. R. McCarty.

ALUMNI.

1860.

1800.	
REV. W. F. GLENN	Newnan, Georgia.
F. S. JOHNSON	Macon, Georgia.
R. D. LUMSDEN	Crawfordville, Georgia.
*W. C. THRASH	Orrville, Alabama.
A. F. WOOLEY	Kingston, Georgia.
1861.	
HENRY HARRIS.	Spurts Georgia
W. M. JONES	Social Circle Georgia
SIDNEY LEWIS	
R. S. McFARLAN.	
S. W. McMICHAEL	Columbus, Georgia.
H. P. PARK:	
J. J. F. ROGERS.	Perote, Alabama.
1867.	ş'*
J. R. DOWDELL	
HOWARD HAMILL	Mexico, Missouri.
1868.	Late Wannell
*W. W. MOORE	Birmingham, Alabama.
REV. W. T. PATILLO	Oak Bowery, Alabama.
1869.	
A. G. DOWDELL.	Opelika, Alabama.
L. A. DOWDELL.	
*A. S. DOUGLAS	Louisville, Alabama.
*A. S. DOUGLAS	. Longview, Texas.
T. J. LAMAR	
CALEB LINDSEY	Mobile, Alabama.
J. R. MOTLEY	Tuskegee, Alabama.
JAMES D MYRICK	Midway, Alabama.
R. C. PERSONS.	Pensacola, Florida.
The classes of 1860, 1861, 1867, 1868, 1869 gra	duated in the East Alabam

College.

1872.

R. E. BURT, A. M.	Salem, Alabama.
R. O. ROUNSAVALL, A. M.	Waco, Texas.
W. E. HORNE, C. E	Tampa, Florida.
L. V. ROSSER, A. B	Colorado.
REV. E. W. SOLOMON, A. M.	Auburn, Alabama.
G. C. SPIGENER, A. B.	Prattville, Alabama.
REV. C. R. WILLIAMSON, A. M	Mobile, Alabama.
1873.	
J. L. GOLSON, A B	New Orleans, Louisiana.
W. T. RUTLEDGE, A. B.	Crawford Alabama.
P. R. RUTLEDGE, A. B	Crawford, Alabama.
1874.	A Adams
B. K. FITZHUGH, B. S	Augusta, Arkansas.
*B. H. JOHNSON, B. E	Montevello, Alabama.
W. H. MOORE, A. B	Auburn, Alabama.
M. H. MOORE, A. B	Plano, Texas.
1875.	
FRANK C. DILLARD, B S	
WM. M. PERRY, B S	Indian Territory.
•JOHN A. RATCHFORD, B. S	LaFayette, Alabama.
EUGENE R. RIVERS, C. E	Tallahassee. Florida.
1876.	0.707
REV. M. K. CLEMENTS, B. S. A.	Guntersville, Alabama.
C. T. HODGE, B. S. A	
8. B HOLT, B. S. A	
E. M. OLIVER, A. B.	LaFayette, Alabama.
F. D. PEABODY, B. S. A	
J. E. RUFFIN, B. S. A	Rockford, Alabama.
P. H. STOW, B. E	
REESE WILSON, B. S. A	Waco, Texas.
1877.	
REV. SAMUEL C. RIDDLE, A. B	Wills Point, Texas.
CHARLES C. THACH, B. E	
JOHN M. TRAMMELL, B. E.	
WILLIAM O. TRAMMELL, B. E	Chambers Co., Alabama
1878.	and the same of th
	Ware Alahama
LEMUEL G. DAWSON, B. E. SILAS C. DOWDELL, B. E	Point Counc. Lanisiana
TUCKER H. FRAZER, B. E	Aulum Alabama
ROBERT E. HARDAWAY, C. E.	Movico
GEORGE H. PRICE, B. E., M. S.	Nechville Tong
*ISAAC A. LANIER, B. E.	
LEE S. SCHIEFFELIN, B. E.	Huntsville, Alabama.
REUBEN L. THORNTON, B. E.	washville, Teunessee.
*Deceased	Tuscaloosa, Alabama.
Doctoriou.	,

1000	з
1879	۰

1919.	
MARK S. ANDREWS, A. B	Terrell, Texas.
WYATT H. BLAKE, B. S	Blake's Ferry, Alabama.
FRANK B. DILLARD, B. E	
JOSHUA S. DOWDELL, A. B	
OLIVER C. McGEHEE, B. S	
ALLEN B. O'HARA, B. E	
THOMAS M. OLIVER, B S. A	Opel:ka, Alabama.
JOHN O. PINCKARD, B. E	Dale county, Alabama.
J. E. D. SHIPP, A. B	Cusseta, Georgia.
1880.	
JOHN T. ASHCRAFT, B. E	Brundidge, Alabama.
*BENJAMIN F. ATKINSON, A. B	West Point, Georgia.
SAMUEL B. CANTEY, B. E	Fort Worth, Texas.
SAMUEL CALLAWAY, B. E	Snowdoun, Alabama.
JOHN S. N. DAVIS, B. E	Gold Hill, Alabama.
ALVA FITZPATRICK, B. E	Montgomery, Alabama.
E. J. GARRISON, A. B	Lineville, Alabama.
GEORGE R. HALL, B. S. A	Midway, Alabama.
HARRISON L. MARTIN, A. B	Abbeville, Alabama.
CHARLES B. McCOY, B. S	Opelika, Alabama.
ROBERT F. OUSLEY, A. B	Harpersville, Mississippi.
HENRY G. PERRY, A. B	Decaturville, Tennessee.
EDGAR A. PRICE, B. S. A	Nashville, Tennessee.
GEORGE W. STEVENS, B. E	Roanoke, Alabama.
JABEZ C. STREET, B. E	Atlanta, Georgia.
ROBERT Y STREET, B. S	Atlanta, Georgia.
JAMES J. SYKES, B. S. A	Courtland, Alabama.
ROSS E. THOMAS, B. E.	Gadsden, Alabama.
HOMER B. URQUHART, A. B.	Birmingham, Alabama.
BARTOW L. WALKER, B. E	Signal Service.
1881	
W IT ACREE B S'	Verbena, Alabama.
J. CALLAWAY, B. A	Snowdoun, Alabama.
O H CRITTENDEN, B. E	Mississippi.
I H JETER B. S. A	Opelika, Alabama.
J G JONES, B. S. A	Montgomery county, Ala.
W H LAMAR, JR., B. A	Signal Service.
J M LANGHORNE, B. S. A	Signal Service.
J T LETCHER, B. E	Dadeville, Alabama.
A T MITCHELL B. E	Mobile, Alabama.
O N. OUSLEY, B. A	Waxahatchie, Texas.
R R ROSS B. A.	Mexico.
W. H. SIMMONS, B. A	Montgomery, Alabama.
W. D. TAYLOR, B. E	Mexico.
J D TRAMMELL, B. E	Mexico.
E. I. VAN HOOSE, B. S.	Mexico.

^{*}Deceased.

1882.

E. N. BROWN, B. A	Hurtsboro, Alabama.
G. A. CARDEN, B. A	Colorado.
A. M. CLEGG, B. M. E	Columbus, Georgia.
W. H. CUNNINGHAM, B. E	
BARTOW EBERHART, B. S. A	
B. H. FITZPATRICK, B. S. A	Montgomery, Alabama.
J. M. HURT, B. E	Geneva, Alabama.
W. H. JONES, B. S	Union Springs, Alabama.
HOWARD LAMAR, B. A	
R. F. LIGON, JR., B. E	
W. W. PEARSON, B. A	
J. M. REID, B. E.	
7	<i>f</i> .

Degrees, Honors and Distinctions

Conferred Session 1882-'83.

DISTINGUISHED STUDENTS.

The four students of each class in the different departments, who secure the highest grades, are distinguished for excellence in scholarship, and are awarded Honor Certificates.

FOURTH CLASS.

ENGLISH.

- 1. A. F. WHITFIELD,
- 2. DAVID LARKIN,
- 3. T. P. ZELLARS,
- 4. J. T. McCrory.

LATIN.

- 1. J. C. CARMICHAEL,
- 2. DAVID LARKIN,
- 3. R. L. SMITH,
- 4. A. A. PERSONS.

MATHEMATICS.

- 1. A. F. WHITFIELD,
- 2. J. C. CARMICHAEL,
- 3. DAVID LARKIN,
- 4. T. P. ZELLARS.

FRENCH.

- 1. A. F. WHITFIELD,
- 2. T. P. ZELLARS.

DRAWING.

A. F. WHITFIELD.

THIRD CLASS.

ENGLISH.

- 1. R. H. THACH,
- 2. J. C. CARMICHAEL,
- 8. W. H. MILTON,
- 4. E. M. GREENE.

LATIN.

- 1. R. H. THACH, '
- 2. C. H. Ross.

MATHEMATICS.

- 1. R. H. THACH,
- 2. W. H. MILTON,
- 3. R. L. COLLIEB,
- 4. F. C. DUKE.

GREEK.

R. H. THACH.

GERMAN.

- 1. W. H. MILTON,
- 2. J. ALLEN.

DRAWING.

- 1. W. H. MILTON.
- 2. E. T. GLENN, JR.,
- 3. R. L. COLLIER,
- 4. C. H. Ross.

CHEMISTRY.

- 1. R. H. THACH,
- 2. L. E. CARTLEDGE,
- 3. C. H. Ross,
- 4. W. H. MILTON.

SECOND CLASS.

MATHEMATICS. ENGLISH. 1. W. L. HUTCHINSON, 1. W. L. HUICHINSON, 2. W. D. Wood. 2. C. D. HURT, 3 J. M. LOCKHART, 4. B. H. Borb. PHYSICS. LATIN. 1. W. D. Wood, 1. J. M. LOCKHART, 2. W. L. HUTCHINSON, 2. C D. HUBT, 3. J. M. LOCKHART. 3. D. D. McLEOD. CHEMISTRY. NATURAL HISTORY. 1. L. E. CARTLEDGE, 1. W. L. HUTCHINSON, 2 W. L. HUTCHINSON. 2. W. D. WOOD, 3. ZELL GASTON. DRAWING.

ENGINEERING.

1. W. D. WOOD, 2. R. S. CORBY,

3. ZELL GASTON.

4. T. F. HARDIN.

TACTICS.

1. W. D. Wood,

2. R. S. CORRY.

1. W. L. HUTCHINSON, 2. J. B. ROBINSON, JR., 3. W. D. WOOD.

T. F. MANGUM, R. L. SUTTON, A. M. McIntosh,
W. H. Bruce,
M. L. Harp, Jr., N. P. D. SAMFORD. BACHELOR OF SCIENCE. BACHELOR OF ENGINEERING. E. M. PACE.

A. L. HARLAN.

BACHELOR OF ARTS. BACHELOR OF SCIENTIFIC AGRI CULTURE.

D. B. MANGUM.

W. S. Cox, C. L. GAY, W. L. ELLIS.

CIVIL ENGINEERS. O. H. CRITTENDEN, B. E.

J. D. TRAMMELL, B. E.

HONORARY DEGREES.

The state of the s	
MASTER OF ARTS.	
MAJ. E. R. RIVERS, Principal Florida Western University	Tallahassee, Fla.
DOCTOR OF DIVINITY.	
REV. R. B. CRAWFORD	Mobile, Ala.
REV. FREDERICK HOWARD, Southwestern University	Jackson, Tenn.
REV. HENRY CLAY MORRISON.	Louisville, Ky.
DOCTOR OF LAWS.	
BURWELL B. LEWIS, President University of Alabama REV. I. T. TICHENOR, D. D.	Tuscaloosa, Ala. Atlanta, Ga.

CATALOGUE OF STUDENTS

FOR THE SESSION 1882-'83.

ABBREVIATIONS.

50	AgAgriculture.
LitLiterature.	EngEngineering.
gn C Special Course.	
Gen. CGeneral Course for Stu	dents of Third and Fourth Classes.

GRADUATE STUDENTS.

0.1122		
Name. Crittenden, O. H	ississippi	Eng.
Official deligion, O. 11.	A a a a a a a	Eng.
Fitzpatrick, Benjamin HarrisonM	onigomery	TO
Trammell, J. D	exico	Eng.

UNDERGRADUATES.

FIRST CLASS.

and the second s		Lit
Bruce, William Herschel	. Chambers county	1410.
Cox, Willie Stakely	Georgia	Eng.
Cox, Willie Stakely	A division accorded	Eng.
Ellis, Washington LaFayette	.Autauga county	Eng
Com Obarles Linn	Montgomery country	
Harlan, Aaron LaFayette	Tallangosa county	Sc.
Harlan, Aaron Larayette	. Tanapoola country	Se.
II Managlus La Fayatte dr	. (Heorgia	
Manual Rokur	. Pike county	
Mangum, Theophilus Fields, Jr	Piles county	Lit.
Mangum, Theophilus Fields, Jr	.I the country	Ar
as T . A . A . Monacillus	Tallaboosa county	
D Barred Milleon	Henena county	
Samford, Norris Preston Dowdell	Tie country	Lit.
Samford, Norris Preston Dowdell	. Lee county	T 3#
Sutton, Robert Lee,	Lee county	1116.
	- ar - aa	**

SECOND CLASS.

	and the second second	Eng.
Baldwin, Benjamin James	Montgomery county	T :4
TI . TI-nherall	* Macon county	
	Macon county	
Boyd, LeRoy	Butler county	Eng.
Corry, Robert Samuel	Butter county	Fna
T. T. Fnonle	Macon County	
- TI IWahh	Monte county	
Fraser, Edward Webb	Damboum county	. Eng.
Gaston, Zell	Barbour county	Lit
Gay John Floyd	Montgomery county	1110-
Gay, John I loja		

Name.	Residence.	Course.
Hardin, Tabor Fleming	Lee county	Eng.
Hill, Malvern Erastus	Georgia	Lit.
Hurt, Charles Davis	Russell county	Lit.
Hutchinson, Washington LaFayett	e., Georgia	Sc.
Killen, William John	Montgomery county	Eng.
Lancaster, Henry Josephus	Elmore county	Lit.
Lockbart, John William	Chambers county	Lit.
Mangum, William Wightman		
McCarty, Thomas Rivers		
McLeod, Daniel Douglas		
*Redd, Marion Woodville	Georgia	Eng.
Robinson, John Beverly, Jr	Tennessee	Sc.
Sutton, Otis Malvin	Lee county	Lit.
Urquhart, Richard Harris	Barbour county	Eng.
Wood, William Daniel	Autauga county	Eng.
THIR	D CT.ASS	
Allen, James	Montgomery county	
Andrews, William Thomas		
Barnes, John Rawles		
Cartledge, Lee Early		
Collier Robert Edward Lee	Lee county	Gon C
Collier, Robert Edward Lee Duke, Francis Columbus	Georgia	Gon C
Glenn, Emory Thomas, Jr	Lee county	So C
Greene, James McKeene	I as county	Cop. C.
Griffin, Willie Scott	Lee county	Gen. C.
Holley, A. W.	Hannet country	Gen. C.
McIntyre, Erastus Stonume	Consent county	Gen. C.
Milton, William Hall	Ellerida	Gen. C.
Penn, Walton Thomas	Chambers sounds	Gen. C.
Perry, Frank Howard		Gen. C.
Ross, Charles Hunter	Lee county	Gen. C.
Royle, Edward Power	Lee county	Gen. C.
Samford, William Hodges	Datias county	Sp. C.
Smith, James Clark	Lee county	Gen. C.
Stawart William Wasser	Limore county	Gen. C.
Stewart, William Weaver	Lee county	Sp. C.
Thach, Robert Henry		Gen. C.
Trammell, Thomas	Lee county	Gen. C.
Turner, Thomas Bryant	Lee county	Gen. C.
Williams, Daniel Bullard	Lee county	Gen. C.
FOURT	H CLASS.	
Abraham, Edward	Montgomery county	Sec. A
Allen, Zacharian Issiam	Marenaa animto	// 4
Allison, Gilmer Alexander.	Lee county	
Allison, Paul Elmore	. Lee county	66 A
*Deceased.		

Name.	Residence.
Armstrong, Henry Clay, Jr	. Macon county Sec. B
Arnold, David Sterra	. Montgomery county " B
Ashurst, James Henderson	Tallapoosa county " A
Askew, Wilburn Alexander	Chambers county " B
Autrey, Charles Mallary	Georgia " A
Bedell, Howard Alburn	Lee county " B
Bennet, Robert Love	.Lee county " A
Blount, James Washington	Florida, " A
Boykin, Robert Stafford	Lee county "A
Bradford, John Nunn	
Cade, Robert Lee	Lee county " B
Capps, Luther Martin	Henry county " A
Carmichael, John Coleman	Dallas county " A
Carter, Julius Cæsar	Montgomery county " A
Carter, John Tecumseh	
Carter, Robert Lee	Montgomery county " A
Crawford, Abednego Jackson	Lee county " B
Crawford, William Henry	
Davis, William Easley	Lee county " A
Dozier, Nathan Owen	Tallapoosa county " A
Drake, John Hodges, Jr	Lee county " B
Freeman, Henry Wynn	Tallapoosa county
Frizzle, William Clark	Bullock county " B
Gay, Edward Wright	Moneyomery county
Goodwyn, Robert Howell	Montgomery county " A
Goodwyn, Thomas Taylor	Montgomery county " A
Grantham, Robert E. Lee	Jackson county " B
Harris, Eugene Willis	Lee county "B
Hightower, Edward Woodam	Lee county " A
Hoffman Paul Mark	Lee county " A
Hollingsworth Edward Tracev	Etowah county " A
Honson Robert Lee	Florida B
Honson Sidney Price	Florida B
Lamar George Holt	Lee county B
Larkin David	Jackson county A
Lightfoot Robert Edward	Macon county
Lloyd Edward Redd	Lee county A
Long Thomas Jefferson	Barbour county
Mahone, Emmett Moore	
McAuley, Sheridan	Mobile
McCrorer James Thomas.	Georgia
Ma Dhargan Terrie McCall.	Lownae county
Witchall Aften Hill	Russell county
Mitchell, Tennent Lomax	Russell county
Mandy Albort Honry	Jackson county
Pace, M. Downer	Lee county

Name.	Residence.	•	,
Persons, Augustus ArchilusLe		laa	
Persons, James TurnerLe	e county	66	
Persons, Henry StanfordLe	a county	66	
Reynolds, Bryant R	ortgan and according		-
Rundell, John WatsonLee	migomery county	66	
Sahel Alex	e county	66	E.
Sabel, Alex	ntgomery county	66	A
Samford, Thomas DrakeLee	county	66	A
Sauder, Albert	cas	66	E
Sauder, Oscar	cas	66	B
Scott, Thomas Lee	imbers country	6	A
Schowalter, Mack Reynolds	bile country	6	A
Moraleter, Artemus Patterson	atamemi commen	6	A
Laurence Avery	country		-
min, robert Billups.	country		B
Cissier, Henry	county		A
Vhitfield, Augustus FoscueMar	as county	6	A
Villiams, Elias MiltonElm	engo county		A
Villiamson, Henry Pritchard	ore county		A
Villiamson, Henry Pritchard Geor	rgia		В
ellars, Thomas PeterGeor	gia	В	A
First Class	FION.	1	
First Class Second Class Third Class		11	
Third ClassFourth Class			
Fourth Class	23		٠
Post Graduates			
Total	3		
	130		



ANNOUNCEMENT,

1883-'84.



Announcement for 1883-'84.

FACULTY:

Col. DAVID F. BOYD,

President, and Professor of Natural Philosophy and Astronomy.

J. T. DUNKLIN, A. M., LL. D., Professor of Latin Language.

W. C. STUBBS, A. M., Professor of General and Agricultural Chemistry.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, JR., M. E., PH. D., Professor of Natural History.

REV. G. W. MAXSON, A. M., M. E., Professor of English Language and Literature.

GEN. J. H. LANE, C. E., A. M.,
Professor of Civil and Mining Engineering.

J. S. NEWMAN,

Professor of Agriculture, and Director of the Experiment Station.

WM. LEROY BROUN, JR., P. Sc., Assistant Professor Chemistry.

> C. C. THACH, B. E., Instructor in Languages.

T. H. FRAZER, B. E.,
Instructor, and Acting Commandant.

J. H. DRAKE, M. D., Surgeon.

W. C. STUBBS, Recording Secretary.

P. H. MELL, JR., Corresponding Secretary.

> E. T. GLENN, Librarian.

TERMS OF ADMISSION.

Candidates for admission into the Fourth Class must be of good moral character and not less than fourteen years of age, and will be required to pass an approved examination in the following subjects:

English—Embracing Orthography, Grammar, Elements of Composi-

tion, Geography, History of the United States.

MATHEMATICS—Embracing the whole of Arithmetic, including the Metric System; Elementary Algebra; Geometrical Drawing, as in Kitchener's Geometrical Note Book.

LATIN—Grammar (Allen & Greenough), Cæsar (3 books), Virgil (3 books of the Æneid). Optional.

Entrance Examinations will be held on Monday and Tuesday preceding the opening in September, at which all applicants should be present.

If, upon examination, an applicant should be found deficient in any of the required studies, he shall be assigned to a course of preliminary training in those branches; provided, that in no case will any applicant be admitted whose attainments in the English branches are not such that he may, with one year's training, be prepared for the studies of the Fourth Class.

Students are advised to enter regularly some one of the prescribed courses, but they may, at the discretion of the Faculty, with the written approval of the parent or guardian, be assigned to selected studies; provided, that in no case will a student be allowed to have less than twenty weekly recitations, and one of his studies must be Agriculture.

Students, on their arrival at Auburn, must report immediately to the

President, and present their testimonials and instructions.

After having paid their fees to the Treasurer and matriculated, they will report to the Examining Committee, by whom they will be assigned to appropriate classes. The Commandant will furnish each student with a copy of the Regulations, and assign him to his proper section and company.

No student will be admitted to recitation in any class previous to

matriculation.

Courses of Instruction.

There are two regular Degree Courses in this Institution, designated as follows:

COURSE IN AGRICULTURE AND CHEMISTRY.

COURSE IN MECHANICS AND ENGINEERING.

Each of these courses requires four years for its accomplishment, and entitles the student to the Degree of Bachelor of Science. For the first two years the studies in both Degree Courses are identical. Having completed the studies prescribed for these two years, the student may select either of the regular Degree Courses.

GENERAL COURSE OF STUDY,

FOR TWO YEARS,

Preparatory to the Courses in "Agriculture and Chemistry," and "Mechanics and Engineering."

(Note.—The figures indicate the number of weekly recitations required in the studies to which they are attached.)

FOUR	RTH CLASS.
1st Term.	2nd Term.
3 English.	3 English.
2 History of United States.	2 History of United States.
3 Freehand and Linear Drawing	g. 3 Freehand and Linear Drawing.
*5 Element'y Mechanics & Physic	es. *5 Botany.
5 Mathematics.	5 Mathematics.
*2 Agriculture.	*2 Agriculture.
2 Book-keeping.	2 Book-keeping.
Daily Drill.	Daily Drill.
THI	RD CLASS.
1st Term.	2nd Term.
5 English.	5 English.
*5 Mathematics.	5 Mathematics

5 English.
5 English.
5 Mathematics.
5 Mathematics.
5 Mathematics.
5 Chemistry.
7 Drawing.
7 Agriculture.
7 Book-keeping.
8 Daily Drill.
7 Daily Drill.

^{*}Practical instruction given in these studies in Field and Laboratories.

I.-Course in Agriculture and Chemistry.

The design of this Course is to furnish the student with a plan of study especially adapted to the wants of those who propose to devote themselves to Agricultural or Chemical pursuits, both by practical training in Laboratories and on Farm, and by instruction in the principles of correct husbandry, and in those sciences which relate to Chemistry and Agriculture. This course requires four years for its completion, embracing the two years' General Course and the following subjects:

SECOND CLASS.

		1st Term.		and Term.
	3	English.	3	English.
	*5	Mechanics and Physics.	*5	Mechanics and Physics.
	*5	Analytical Chemistry.	*5	Analytical Chemistry.
	*3	Agriculture.	*3	Agriculture.
•	*3	Systematic & Structural Botany.	*3	Systematic and Structural Botany
	1	Tactics.	1	Tactics.
		Daily Work in Laboratories.		Daily Work in Laboratories.
		Daily Drill.		Daily Drill.

FIRS	ST CLASS.
1st Term.	2nd Term.
2 Logic.	2 Political Economy.
3 Astronomy.	3 Physical Geography.
3 Geology.	*3 Mineralogy.
3 Zoology.	*3 Entomology.
4 Agricultural Chemistry.	*4 Agricultural Chemistry.
2 Agriculture.	*2 Agriculture.
3 Analytical Chemistry.	*3 Analytical Chemistry.
1 Tactics.	1 Tactics.
Daily Work in Laboratories.	Daily Work in Laboratories.
Daily Drill.	Daily Drill.
	ate and Engineering

II.-Course in Mechanics and Engineering.

This embraces the two years' General Course, and the following subjects:

SECOND CLASS.

Date	
1st Term.	2nd Term.
3 English.	3 English.
*5. Mechanics and Physics.	*5 Mechanics and Physics.
5 Mathematics.	5 Mathematics.
*5 Engineering.	*5 Engineering.
3 Drawing.	3 Drawing.
1 Tactics.	1 Tactics.
Daily Drill.	Daily Drill.
	Commence of the second

^{*}Practical instruction given in these studies in Field and Laboratories.

FIRST CLASS.

		FIRST CHASS.
	1st Term.	2nd Term.
2	Logic.	2 Political Economy.
3	Astronomy.	3 Physical Geography.
	Geology.	. *3 Mineralogy.
	Mathematics.	*3 Mechanics.
*5	Engineering.	*5 Engineering.
	Drawing.	5 Drawing.
1	Tactics.	1 Tactics.
	Daily Drill.	Daily Drill.

. Special Two Years' Course in Agriculture.

FIRST YEAR.

MATHEMATICS	First	Term-5	Algebra.		
	Secon	d Term-5	Geometry.		
BOOK-KEEPING	First	Term-2 B	look-Keepin	ng.	
AGRICULTURE	First	and Second	l Terms-2	Agriculture.	
CHEMISTRY	First	and Second	Terms -5	Chemistry.	7 0
NATURAL SCIENCE.	First	and Second	l Terms—5	Mechanics,	Physics, and
DRAWING	Secun	d Term-3	Drawing.		
		SECOND	YEAR.		
MATHEMATICS	ve	ying.			ry and 5 Sur-
AGRICULTURE	First	and Second	Terms-5	Agriculture.	
CHEMISTRY	First	and Sec ma	Terms-4	Agricultural	Chemistry.
NATURAL PHILOSOPI	ay. First	and Second	l Terms-5	Physics.	
NATURAL HISTORY	First	Term-3 G	eology; 3	Zoology: 3	Botany.

Special Commercial Course.

FIRST YEAR.

BOOK-KEEPING First and Second Terms - 3 Single Entry; Elements
of Double Entry; Farm, Mechanics, Retail Mer-
chant's Account; Balance Sheets; Statements:
Bills; Receipts; Notes; Drafts; Exchange in
Ordinary Business.
ABITHMETIC First and Second Terms-5 Common and Decimal
Fractions; Percentage; Interest; Discount; Prac-

tice in short and rapid methods of Computation.

*Practical instruction given in these studies in Field and Laboratories.

ALGEBRA & GEOMETRY. First and	Second	Terms-5	According	to	student's
advance	ement.				

English	First and Second Terms-5 History; Grammar; Com-
	position; Practice in simple Business Forms and
	Correspondence.

PENMANSHIP First and	Second Terms-5 Penmanship.	
DRAWING First and	Second Terms-5 Drawing.	
TELEGRAPHY First and	Second Terms-5 Hours' Practice	

SECOND YEAR.

BOOK-KEEPING	First and Second Terms-5 Double Entry; Wholesale,
	Shipping and Commission Business; Banking,
1- 1-	Railroad, &c. Practice in Business Forms; Ac-
TOTAL SECTION	count Sales; Letters Credit; Bank Drafts; Ex-
	change; Certified Checks; Certificate of Deposit;
	Forms of Endorsement, &c.

MATHEMATICS	First and Second	Terms-	5 Plane G	eometry, Plane
				according to
	advancement.			

ENGLISH	First and	Second	Terms-3	Rhetoric;	Composition	÷
-				; Contracts		

COMMER'L ARITHMETIC	First and Second Terms-3	Practice in Interest; Dis-
- 1 1 1 1 1 1 1 1	count; Storage; Closin	g Books; Settling Partner-
	ship and Estates, &c.	

	Danip dende ander		
PENMANSHIP	First and Second	d Terms-Practice	according to pro-
	ficiency.		

TELEGRAPHY..... First and Second Terms - Five Hours' Practice.

For those students who desire to pursue the studies of Latin, French and German, the following classes have been established:

- 4 Classes in Latin.
- 2 Classes in French.
- 2 Classes in German.

To enter the lowest class in Latin the applicant must have a good knowledge of Latin Grammar, and have read three Books in Cæsar, or its equivalent.

French and German are begun here.

These studies are not required in regular degree courses—but upon their completion, certificates of proficiency will be given in each.

Moral and Mental Science are also optional, but will be taught when required.

Students of the Second Class of last year will be permitted to pursue their respective courses to graduation, the ensuing session.

SPECIAL INFORMATION.

Departments of Instruction.

PHYSICS AND ASTRONOMY

The instruction is given by regular recitations from text-books, combined with lectures, illustrated by experiments. The first part of the Course is occupied with Elementary Rational Mechanics, treated graphically, avoiding, as far as possible, complex mathematical symbols.

This is followed by a full discussion of Molecular Mechanics. While due prominence is given to principles, constant reference is made to the Applications of Science.

In the First Class, the subjects studied are Astronomy and Mechanics. In the study of Mechanics in this class, Mathematical Analysis is used.

TEXT-BOOKS-Atkinson's Ganot, White's Astronomy, Peck's Mechanics.

LATIN LANGUAGE AND LITERATURE.

PROFESSOR DUNKLIN.

The subject taught in this Department is the Latin Language and Literature.

LATIN.—The modes of instruction are by translation from the Latin texts into English, and vice versa, orally and in writing.

A systematic course of exercises, illustrative of the principles of Latin Etymology and Syntax, are carried on, in connection with the reading of the authors prescribed.

The progress of the student is valued not so much by the number of books read as by hig ability to read Latin, and explain the principles of interpretation and construction.

A course in the History, Literature and Antiquities of Rome, as given in connection with the study of the Latin anthors.

TEXT-BOOKS.

FOURTH CLASS.—Cicero's Orations, Livy, Virgil, Composition, Mythology, Ancient Geography. THIRD CLASS.—Horace, Odes, Satires, Epistles, Composition (Jones), History (Leighton). SECOND CLASS.—Tacitus Germania and Agricola, Cicero de Officiis, Latin Composition (Allen & Greenough).

First Class.—Terence, Juvenal, Cicero de Oratore, Literature, Composition.

REFERENCE BOOKS.

White's Junior Student's Lexicon, Harper's Latin Lexicon, Smith's Classical Dictionary and Antiquities, Zumpt's and Madvig's Latin Grammars, Momsen's History of Rome, Brown's Classical Literature, Ginn & Heath's Classical Atlas.

MODERN LANGUAGES.

INSTRUCTOR THACH.

Courses in German and French are given to such students as may desire them
Each requires two years for its completion. Like Latin, these courses are optional, and may be taken at such times as may meet the convenience of the students.

CHEMISTRY.

PROFESSOR STUBBS.

ASSISTANT, PROFESSOR BROUN.

There are three Courses in this Department—

I. A General Course for all students.

II. A Scientific Course.

III. An Agricultural Course.

I .- GENERAL COURSE.

Consists of a series of daily lectures and recitations in Inorganic and Organic Chemistry, fully illustrated by experiments. Chemical principles are thoroughly explained, together with their application to the various arts and industries. Special attention given to the Composition of Soils, Fertilizers, Metallic Ores and Technical Products. All the students of the Third Class pursue this Course.

TEXT-BOOK.—Bloxam's Chemistry with Professor's Notes.

II.—SCIENTIFIC COURSE.

Students enter upon this Course after completing the General Course of the Third Class. The entire second year is devoted to Agricultural Analysis—the first half to Qualitative and the second half to Quantitative Analyses.

The entire third year is devoted to Qualitative and Quantitative Analyses of Minerals, Ores, Waters, &c. Having finished the General Course, the student is assigned to Work Table, with Gas and Water, the necessary reagents, &c., and required to work at least two hours per day through the remaining years.

TEXT-BOOKS.—Church's Laboratory Guide, Caldwell's Agricultural Analysis, Mott's Manual of

III.-AGRICULTURAL COURSE.

Consists of three years: 1st. General Chemistry. 2nd, Agricultural Analysis, 3rd, Agricul-

The first and second years are the same as Scientific Course, and same text-books used.

In the third year the students pursue Chemistry in its special application to Agriculture.

TEXT-BOOKS.—How Crops Grow (Johnson), How Crops Feed (Johnson).

MATHEMATICS.

PROFESSOR SMITH.

The general course for the first two years embraces, the first year, Algebra and Geometry, six books; second year, Solid and Spherical Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration, and Simple Railway Curves.

Two objects are sought to be attained—lst. Mental discipline; 2nd. A thorough knowledge of

the practical application of principles. Theoretical and practical instruction is given the Third Class, in Farm, Town and Government Land Surveying, Dividing Land, Mapping, Plotting and Computation of Areas; in Section, Cross-Section Leveling, Setting Slope Stakes, Computation of Earth Work; in Running out Sim-

ple Curves; also, in the Theory, Adjustment and use of Instruments. The Class, in sections of six or eight, devote three afternoons a week, during the second term, to Field Practice, with Compass, Transit, Level, Chain and Rod. Maps, Plans and Profiles of Field Work are required in addition to regular work in Drawing. Mensuration includes an extended course in the Measurement of Heights and Distances, Plane, Rectilinear and Curvilinear Figures, Surfaces and Volumes. Halstead's Metrical Geometry is made the basis of

instruction in this subject.

The completion of this Course, common to all students, lays the foundation for the Pure and Applied Mathematics of the Mechanical and Engineering Course, and qualifies those who discontinue the subject at this point to go into the field and shop, and do good and useful work.

Analytical Geometry and Calculus are pursued in the Engineering Course. Especial attention is given to their practical applications. During the entire fourse instruction in text-books is supplemented by lectures.

Solutions of original practical problems are required of the student, to make him familiar with the application of principles, to test his knowledge, and make him self-reliant and-inde-

N. B .- Special attention is called to imperfect preparation, for admission to the Fourth Class. in Arithmetic and Algebra. It is so common as to prove a serious obstacle to progress in this Department. The importance of thorough preparation cannot well be overestimated.

TEXT-BOOKS.

Algebra, Wentworth's Geometry, Olney's Trigonometry, Davies' Surveying, Halstead's Metrical Geometry, Loomis' Analytical Geometry (new edition), Loomis' Calculus (new edition)

NATURAL HISTORY.

PROFESSOR MELL.

GEOLOGY.—This subject is studied in the Fall Term of the last year.

Special attention is given to the Geology of Alabama. The Course is given by text-books and Lectures, illustrated by means of Diagrams, Maps and various Rocks, Fossiliferous and Non-Fossiliferous, to be found in the Geological Cabinet. Attention is given to the nature and origin of Ore deposits, Mineral Springs, and origin and Geological relations of Soils.

MINERALOGY.—This topic is studied in the Spring Term of the last year. The Course is devoted to a general analysis of Crystallization, illustrated by Glass and Wood Models; and Blowpipe analysis of all the common Minerals that form the bases of our Soils.

ZOOLOGY. -Only those students pursuing the Agricultural Course are required to take this subject.

A systematic arrangement of the Animal kingdom, in accordance with natural affinities, is made a special feature of the Course.

ENTOMOLOGY.—This is also a portion of the Agricultural Course, and is taken up after the completion of Zoology. Particular attention is given to Insects injurious to Vegetation, their habits, and the methods best adapted for checking their ravages.

BOTANY.-The students of the Fourth Class begin the study of Botany, and continue throughout the term. Analytical work is made an important feature of the Course. The Class is provided with Plants from the neighboring fields, and taught how to determine their specific names. This work is sufficiently exhaustive to enable the student, after completing the Course, to name, unassisted, any of the ordinary Weeds and Grasses that he will encounter in the old fields of this section.

In the second year of the Course in Agriculture and Chemistry, three hours per week are devoted to Systematic and Structural Botany, and to advanced Laboratory work with the microscope, in the preparation of specimens showing plant structure.

PHYSICAL GEOGRAPHY.—This is studied three hours per week in Second Term of First Class-Special attention is given under this head to Meteorology

TELEGRAPHY.—Those students who take the Special Commercial Course devote one hour per day to the practice of Telegraphy. They are made familiar with the erection and maintenance of Lines. Construction of Batteries, Signaling, &c. Upon completion of Course, they will be prepared to take charge of offices.

TEXT-BOOKS.

LeConte's Geology, Dana's Geology, Dana's Manual of Mineralogy, Brush's Determinate Mineralogy and Blowpipe, Tenny's Zoology, Brooks' Hand Book of Invertebrate Zoology, Harris' Insects Injurious to Vegetation, Packard's Insects, Bessy's Botany, Gray's Botany, Apgar's Plant Analysis, Chapman's Flora of Southern States, Smith's Manual of Telegraphy.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR MAXSON.

This Department embraces the following subjects:

I. English.—The History, grammatical structure and usage of the English Language, Rhetoric, Composition, Elecution, History of English Literature. The study of Rhetoric and Composition is continued throughout the first and second years and frequent written exercises required. Public exercises in Declamation are held on each Friday evening. Three original orations are required of each student of the First and Second Classes during the session.

Monthly examinations are required of all students. The Second Class study the History of English Literature, writing frequent biographical sketches of eminent authors, and criticisms on their works.

II. HISTORY.—History of the United States, History of England.

III. Logic and Political Economy-two recitations weekly throughout year.

IV. Mental and Moral Science (optional) are taught to those students who may desire to pursue these branches.

TEXT-BOOKS.

Hart's English Grammar, Hart's First Lessons in Composition, Hart's Rhetoric and Composition, Russell's American Elocution, Holmes' History of the United States, Anderson's History of England, Shaw's New History of English Literature, Coppee's Elements of Logic, Hickok's Mental Science, Hickok's Moral Science, Walker's Science of Wealth.

CIVIL ENGINEERING.

PROFESSOR LANE.

The special studies in this Department begin in the Second Class, and are as follows: SECOND CLASS .- Railroad Curves, Ordinates, Turnouts, Crossings, Leveling, Gradients, Setting Slope Stakes, Excavations, Embankments and Railway Appliances.

FIRST CLASS.—Building Materials, Strength of Materials, Strains, Mortars and Cements, Masonry, Foundations on Land and in Water, Framing, Roofs, Arches, Bridges, Topographical Surveying, Common Roads, Pikes and Railroads, Canals, River and Sea Coast Improvements.

Theory and practice are combined in both classes.

TEXT-BOOKS.

SECOND CLASS.—Henck's Field Book, Gillespie's Roads and Railroads, Barry's Railway Appliances.

First Class.—Mahau's Civil Engineering, and Allan's Strength of Beams under Transverse Loads (or their equivalent), with Lectures.

BOOKS OF REFERENCE.

Rankin's Engineering and Applied Mechanics, Stoney on Strains, Wood's Roofs and Bridges, Merrill on Bridges, Vose's Manual for Railroad Engineers.

DRAWING.

Drawing, in the Third and Fourth Classes, is obligatory on the students of both Courses. In the First and Second Classes, only the students in Mechanics and Engineering are required to

The Fourth Class students practice Linear and Free Hand Drawing. In the Third Class the elementary principles of Orthographic and Isometrical Projections, Shades and Shadows, and Model Drawing, are taught.

In the Second Class, the instruction embraces Orthographic Projections, Isometric Drawing, Shades and Shadows, Tinting in India Ink and Colors, Sketches of Tools and Machines, Plans, Elevations and Cross Sections of Buildings, and Perspective.

The First Class are taught Perspective and Topographical Drawing. They also make Drawings of Machines, Roofs, Bridges, &c. Plans, Profiles and Sections of Railroad Surveys complete the instruction in this Department.

TEXT-BOOKS.

FOURTH CLASS.—Davidson's Linear Drawing, White's Art Studies.

THIRD CLASS .- Davidson's Projection and Model Drawing.

SECOND CLASS .- Minifie's Mechanical Drawing.

FIRST CLASS.—Mahan's Industrial Drawing, Smith's Linear Perspective.

BOOKS OF REFERENCE.

Smith & Enthoffer's Topography, Warren's Machine Drawing, Church's Descriptive Geometry and Shades and Shadows, Mahan's Stereotomy.

AGRICULTURE.

PROFESSOR J. S. NEWMAN.

There are two Courses in Agriculture, one extending through four years, embracing a liberal education for any of the practical pursuits of life, together with thorough instruction in those sciences which underlie Agriculture. In this Course Laboratory work, in Analyses of Soils, Fertilizers, Feedstuffs, &c., constitute an important feature. The first two years of this Course are devoted to studies common to both. The third year is occupied in this Department with Farm Management, Soils and Manures, Care of Stock, Growing of Crops, Animal Physiology, and Cattle Feeding.

The fourth year is devoted to Vegetable Physiology, Field Crops, Orchards and Gardens, and Landscape Gardening.

TEXT-BOOKS.

Allen Farm Book, Jurvis' Physiology, Armsby's Cattle Feeding, Olemen's Truck Farming for the South, Barry's Fruit Culture, Henderson's Gardening for Profit, Kemp's Landscape Gardening.

SHORT COURSE IN AGRICULTURE.

This Course extends over two years, and dispenses with much of the preliminary instruction of the first two years, common to both Courses. It also abridges the Laboratory work. This Course is intended to meet the wants of a large number of young men who propose to devote themselves to Agricultural pursuits and have neither time nor means to take the regular Course. Thorough instruction in practical Agriculture is given. The study of all the sciences relating to Agriculture receive same attention as in General Course. Mathematics pursued through Surveying, thus enabling the student not only to survey his land, but by knowledge of Leveling, to construct terraces and ditches. In short, this Course embraces all the technical studies of the General Course.

On its completion a student is given a Certificate of Proficiency in Agriculture, and such a certificate makes him an Alumnus of this Institution.

STATE AGRICULTURAL EXPERIMENT STATION.

A late act of Legislature provides "That the Trustees shall establish and maintain an Agricultural Experiment Station, where careful experiments shall be made in Scientific Agriculture, results of which, together with all other needed information, shall be furnished the Commissioner of Agriculture for publication in his monthly bulletins and annual reports".

Under this act the Trustees, at their last meeting, organized "The Experiment Station," by purchasing additional lands and buildings, and appointing Mr. J. S. Newman, of Georgia Agricultural Department, as Director. Liberal appropriations were made also for its support, and active work will be begun at once. Besides the large number of experiments now under trial, additional ones in all the departments of agriculture will be carefully and systematically made. The results of these experiments will be published monthly in bulletins by Commissioner of Agriculture, and all persons desiring to receive these publications will be acccommodated by furnishing their names, with post-offices, to the Director of the Station. or Commissioner of Agriculture, Auburn, Alu.

MILITARY SCIENCE AND TACTICS.

COL BOYD, PRESIDENT.

INSTRUCTOR FRAZER, COMMANDANT.

Military Science and Tactics are required to be taught in this Institution by law. This law is faithfully carried out, by imparting to each student, not physically incapacituted to bear arms, practical instruction in the School of the Soldier, of the Company, and of the Battalion; also, in Guard Mounting, Inspections, Dress Parade, Reviews, &c. The College is provided, by the State, with breech-loading Cadet muskets, swords and accourrements.

The following uniform has been prescribed for dress, viz.: Sack coat of West Point Cadet grey; grey pants, vest and cap; trimmings black. A very neat and serviceable dress suit can

be obtained here at about \$16. This is less expensive then the usual clothing. All students are required to wear this uniform at all times during the term.

The Drills are short, and the military duty involves no hardship. The Military Drill is a health-giving exercise, and its good effects in the development of the physique and improvement of the carriage of the Cadet are manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, one lst Lieutenant, and one 2nd Lieutenant, with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the Faculty, on nomination of the Commandant, and are continuous unless forfeited by absence or misconduct.

No military duty is required of the privates of the First Class, except to Drill with the Battaliou.

The First and Second Classes recite once a week in Military Tactics.

POST-GRADUATE DEGREES.

There are two Post-Graduate Degrees-

MASTER OF SCIENCE. CIVIL ENGINEER.

Any graduate of this College, who shall, after graduation, actively engage, for at least three years, in literary or scientific work in the line of his profession, and who may, by an examination prescribed by the Faculty, give satisfactory evidence of sufficient advancement, shall be entitled to a Post-Graduate Degree. The requisite course of study and the nature of the examination may be obtained by correspondence with the Faculty.

Applicants for Post-Graduate Degrees must matriculate and deposit with the Treasurer the amounts of their Diploma fees. They shall also write and present to the Faculty satisfactory theses upon some subject pertaining to their professions.

Resident graduates may prosecute the studies in any Department of the College without payment of regular fees.

CERTIFICATES OF PROFICIENCY AND DISTINCTION.

CERTIFICATES OF PROFICIENCY

Will be awarded to those students who satisfactorily complete the two years' Agricultural or Commercial Course.

CERTIFICATES OF DISTINCTION

Will be awarded to the first four students in the different subjects of each class, provided their grade is above 90 per cent., and they have satisfactorily passed all the regular examinations of that session.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction, in a form adapted to permanent preservation.

From this record a circular or statement is sent to the parent or guardian quarterly.

EXAMINATIONS.

At the end of each term there shall be written or oral examinations, or both, on the studies passed over during that term.

Special examinations shall only be held by order of the Faculty.

Students falling below the minimum grade at the final examinations can be promoted to the next higher class only on satisfactory examinations at the opening of next session.

It is particularly required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the Examination, except in extreme cases.

At stated intervals during the year, all students, except those of the First Class, are required to stand written examinations on Geography

and English.

Examinations for Degrees or Certificates of Proficiency embrace, in their scope, the entire subject of study in the Course.

MUSEUM OF NATURAL HISTORY AND GEOLOGY.

Many valuable additions have been made to the various branches of this Museum within the past few years.

Contributions have been received from different States of the Union, from England, Italy, Prance and the Bermuda Islands

The Geology of Alabama is well illustrated with minerals, fossiliferous and non-fossiliferous rocks from the different formations of the State. The Museum is divided into the following departments: Mineralogical, Conchological, Geological, Zoological and Botanical. Each department is systematically arranged and catalogued for study and display.

The entire collection of the Museum, added to the private Cabinet belonging to the Professor of Natural History, numbers more than 26,000 specimens.

MUSEUM OF MECHANIC ARTS.

Some progress has been made in establishing a Museum of Mechanic Arts. Already there has been collected a number of the products of manufacture, giving excellent illustrations of various branches of industry. It is proposed to make this an important feature in the College, by exhibiting, as far as possible, the various processes and products of manufacture.

MUSEUM OF AGRICULTURE.

The Agricultural Museum is intended to illustrate, as far as possible, the agricultural products of this and other countries. It now contains nearly 1,000 specimens, obtained by donations and by a system of exchanges with other Agricultural Colleges, illustrating varieties of Soil, Cotton. Wheat, Oats, Corn, Peas, Grasses, &c.

CHEMICAL LABORATORY.

The Chemical Laboratory is admirably fitted up for work in analysis. It consists of a Lecture Room, furnished with counters, pneumatic trough, gasometer and large glass case; a Work Room, with twenty-five tables; a Furnace Room, and a Balance Room. All are supplied with gas and water. Every student pursuing Analytical Chemistry is provided with a separate work table, the necessary chemicals and apparatus, a jet of gas with Bunsen's burners, and enameled water sinks. In the Balance Room are balances made by Certling, of London, and Becker, of New York. An annual fee of \$10 is paid by students in the Courses of Agriculture and Science for the use of Chemicals in the Laboratory.

LIBRARY.

A room in the College building is appropriated to the Library, but the number of books at present is not large. A portion of the recent appropriation made by the State Legislature will be used in the purchase of books. For this purpose there is also paid a small annual fee by each student.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the Faculty.

DISCIPLINE.

The government of the College is administered by the President and Faculty, in accordance with the Code of Laws and Regulations enacted by the Trustees, and furnished to each student upon matriculation.

The strictest attention to study, and the most exact punctuality in attendance on recitations, and all other duties, will be made the condition of every student's continuance at the College.

Students are prohibited from having in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICES.

Religious services are held every morning in the Chapel.

The students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday. Opportunities are also offered for attending Bible Classes every Sunday.

LOCATION AND BUILDING.

The College is situated in the town of Auburn, sixty miles from Montgomery, directly on the line of the Western Railroad.

The region is high and healthful—821 feet above tide water.

The College building is an excellent brick edifice, with four stories, containing, in all, thirty-eight rooms, including two well furnished society halls, lecture rooms and offices, with Chemical Laboratory, Cabinets and Agricultural Museum.

By statute of the State, the sale of spirituous liquors and keeping of gaming saloons of every kind, within five miles of Auburn, are forbidden.

APPROPRIATIONS BY THE STATE LEGISLATURE.

The last Legislature of the State appropriated the sum of \$30,000 to this College, to be expended in buildings, repairs, the purchase of apparatus for the scientific departments, &c. Also, for the purpose of establishing an Experimental Station, to conduct experiments and illustrate improved methods in agriculture, and to have such chemical analyses of commercial fertilizers made as may be required, there was appropriated to this College a portion of the amount accruing from the special tax on all fertilizers sold in the State.

The Department of Agriculture, recently established, is by law located at Auburn. The office of the Commissioner will be in the College building.

LITERARY SOCIETIES.

There are two Literary Societies—the Wirt and Websterian—connected with the College. These Societies, by order of the Board of Trustees, hold their meetings each Saturday morning during the session. Each has a commodious hall, handsomely fitted up, a library of standard and miscellaneous works, and a reading room. Their weekly exercises add to the facilities afforded by the College for practice in composition, elocution and discussion.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22nd of February, and also on Monday and Tuesday evenings during Commencement week. They elect, annually, with the approval of the Faculty, an orator to represent them at the close of the year.

ARBOR DAY.

The 22nd of February is designated, by order of the Trustees, Arbor Day. It is a holiday, on which students are encouraged, with ceremonial celebrations, to take part in planting trees on the College grounds.

SOCIETY OF ALUMNI.

The annual Alumni Oration, by a member of the Society, is delivered in the Chapel, Wednesday afternoon of Commencement week. T. J. Lamar, President; C. C. Thach, Treasurer and Secretary; C. C. Thach, Orator for 1883.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association comprises the students who are members of churches. Its object is to promote the religious character and usefulness of those connected with it. Weekly meetings are held, and public addresses occasionally delivered. A. M. McIntosh, President; and J. C. Carmichael, Secretary.

BOARDING.

Students, after selecting their boarding-houses, will not be permitted to make changes without obtaining permission of the Faculty, having first given two weeks' notice.

The Faculty will feel authorized to remove students from boarding-houses when it becomes manifest that they are failing in their duties from improper associations, or for any other reason requiring such removal.

EXPENSES

TUITION FREE TO ALL CADETS, IN OR OUT OF THE STATE.

Incidental fee, per term, in advance	50
Library fee	00
Surgeon's fee	50
Board, in private families, per month	00
Diploma fee, upon graduation 5	00

FUNDS OF STUDENTS.

The Faculty earnestly request parents and guardians to deposit with the Treasurer of the College all funds designed for sons or wards, whether for regular charges of College fees and board, or any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay for all expenses incurred by students, including board, uniform, books, &c., only when approved by the President. A monthly statement of the receipts and expenditures will be forwarded to parents and guardians. The Faculty cannot control expenses of students, and should not be considered responsible for them unless parents conform to this rule.

ACADEMIC YEAR.

The Academic Year, which is divided into two equal terms, commences on the last Wednesday in September, and ends on the last Wednesday in June following, which is Commencement day. The second term begins on the second Wednesday in February.

No intermission at Christmas, except for one day; and parents are earnestly requested not to grant their sons permission to go home at that season, except in cases of pressing importance, as their absence seriously disarranges the exercises of the classes, and is very disadvantageous to the young men themselves.

CONTRIBUTIONS TO THE MUSEUM.

The following persons have made valuable additions to the various branches of the Museum: Dr. I. T. Tichenor, Mrs. J. S. Dill, Miss Russ, Mrs. W. C. Stubbs, J. M. Blount, Mrs. Douglas, C M. Awtry, Otis Smith, Mrs. J. T. Dunklin, M. E. Hill, Prof. W. C. Stubbs, Mrs. Howell, Prof. G. W. Maxson, Mrs. Maxson, E. W. Frazer. R. L. Bennett, Dr. R. Persons, D. B. Mangum, Mrs. Trammell, H. S. Persons, Mrs. Lipscomb, F. M. Reese, J. Rundel, Rev. B. F. Riley, Miss M. Reese, Mrs. O. D. Smith, Jimmie Mason, V. Frankfurter, J. Y. Trammell, Mrs. Boykin, A. F. Whitfield, Frank Frazer, Howard Lamar, Rev. W. M. Blackwelder, J. Persons, Bryant C. Harvey, J. N. Bradford, Prof. C. Thach, Mrs. W. B. Frazer, A. M. McIntosh, J. T. McCrorey.

The following persons have contributed by exchanging with the Museum:

W. M. Crowfoot Beccles, Suffolk, England; Miss Annie M. Penniston, Bermuda Islands; C. A. Johnson, Grand Rapids, Michigan; Mrs. James Schuyler, Half Moon, San Mateo county, California; John W. Hood, San Francisco, California; J. T. Romine, Harveysburg, Ohio; Prof. F. Z. Harvey, Industrial University, Arkansas; Miss Sarah P. Monks, Cold Springs, New York; F. E. Monteverde, San Francisco, New York.

SPECIAL NOTICE.

The Board of Trustees, at their recent meeting in June, having decided to devote their attention hereafter almost exclusively to the leading object of this College, viz.: to teach those branches of learning pertaining to Agriculture and the Mechanic Arts, the public are respectfully informed that the Courses of Study have been remodeled to better carry out that idea.

The aim of the Institution now is, to give a good scientific and industrial education. A special Professor of Agriculture has been added to the Faculty; the State Agricultural Experiment Station has been established at the College, and the Legislature has recently made liberal appropriations to better fit up the Farm, and supply Scientific Apparatus, Books, &c. Besides, the State Commissioner of Agriculture has his office here.

In this day of the telegraph and telephone, the steamship and lightning express, the world moves briskly in thought and action; and education, to be useful, must be scientific and practical.

A new departure has been taken. The College is now in full sympathy with the purpose for which it was founded by Federal and State law: to give a liberal education to the industrial classes. It is a real Scientific and Industrial School. As such, it desires the confidence and support of the people of Alabama, and respectfully asks their patronage.

DAVID F. BOYD, President.

Auburn, Ala., July 23, 1883.

,GAYLAMOUNT PAMPHLET BINDER Manufactured by GAYLORD BROS. Inc. Syracuse, N.Y. Stockton, Ca'if.

Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1883

												-	
	OCLC	: 3	6819	601		Rec s	stat:	n					
	Ente	red:		19970429		Repla	aced:	19970	1429	Used	:	1997042	9
-	Type	: a		ELv1:	I	Srce:	d	GPub:	8	Ctrl:		Lang:	eng
	BLvl	: 8		Form:	a	Conf:	0	Freq:	a	MRec:		Ctry:	alu
	S/L:	0		Orig:		EntW:		Regl:	r	ISSN:		Alph:	a
	Desc	: a		SrTp:		Cont:		DtSt:	d	Dates:	1873,	1893 ¶	
•	1	040		AAA +c	AAA ¶								
-	2	007		h +b c	#d b #	te f #1	t u +g	b +h a	#i u #	j p ¶			
-	3	043		n-us-al	. 1			4					
•	4	090		LD271 +	b .A76	5 1							
•	5	090		+b ¶									
•	6	049		AAAA ¶									
•	7	110	2	Agricul	tural	and Me	chanic	al Coll	ege of	Alabama	. 1		
•	8	245	10	Catalog	rue of	the St	ate A	ricultu	ral an	d Mechan	ical	College	of
A.	labama	a #h	[mi	croform]									
•		246				the St	ate Ac	ricultu	ral an	d Mechan	ical	College	,
A.	labama	a Po	lyte	chnic In				*			ę		
•	10	246	10	Rules a	nd rec	qulatic	ns of	the Sta	te Agr	icultura	1 and	Mechan:	ical
Co	ollege			urn, Ala									
	11			•			e Agri	cultura	l and	Mechanic	al Co	llege o	£
	Labama							3100					4
•	12	246	10	Catalog	ue of	the St	ate Ac	ricultu	ral &	Mechanic	al Co	llege,	·
A	uburn	Ala	abam	_									
	13			Auburn,	Ala.	: +b 1	he Col	lege, 1					
•	14	300		21 v. ;					100				
		310		Annual									
•	16	362	0	1872-73	-1892-	-93. ¶							
•		500					ly. ¶						
	18	533						+b Mobi	le, Ala	a. +c Do	cumen	t Techno	ology,
+0	1 1997	7. +0	e mi	crofilm									
•	19	539		d +b 18						1 f			
	20	650	0							x Period:	icals	. 1	
	21	610								Alabama			x + x
Pe	riodi	cals	s. ¶										
•	22	780	00	Agricul	tural	and Me	chanic	al Coll	ege of	Alabama	. #t	Catalog	e and
ci										f Alabama			
										Alabama		Catalog	e of
				1								3	

▶ 24 830 0 USAIN State and Local Literature Preservation Project ¶

the Alabama Polytechnic Institute ¶

1883-1887 7 L TOTE L L TOTE

AU LD271 .A76 1883/84 c.2

AUBURN UNIVERSITY LIBRARY



AU LD271 .A76 1983/84 c.2

NON CIRCULATING

CATALOGUE

OF THE

State Agricultural and Mechanical College

OF

ALABAMA,

1883-'84,

AND

ANNOUNCEMENT.

1834-185

BOARD OF TRUSTEES, TIME OF EXPIRATION OF OFFICE.

HIS EXCELLENCY, E. A. O'NEAL, Governor of Alabama, ex officio President. HON. H. C. ARMSTRONG, Superintendent of Education, ex officio.

FIRST DISTRICT:

Hon. C. C. LANGDON, Mobile. February 28, 1887.

SECOND DISTRICT:

J. W. HARDIE, Esq., Montgomery. January 4, 1885.

THIRD DISTRICT:

HON. W. H. BARNES, OPELIKA. HON. H. D. CLAYTON, CLAYTON. February 28, 1887.

FOURTH DISTRICT:

Hon. JONATHAN HARALSON, SELMA. January 4, 1889.

FIFTH DISTRICT:

Hon. R. F. LIGON, TUSKEGEE. January 4, 1889.

SIXTH DISTRICT:

Hon. JOHN W. BISHOP, TALLADEGA.

January 4, 1889.

SEVENTH DISTRICT:

Hon. M. L. STANSEL, CARROLLTON. January 4, 1885.

EIGHTH DISTRICT:

Hon. J. N. MALONE, ATHENS. January 4, 1885.

E. T. GLENN, TREASURER. F. M. REESE, SECRETARY.

AU 10271 . A76 1883/84

AV

BARKSDALE

FE 26 84

Faculty and Officers for 1883-'84.

FACULTY:

Col. DAVID F. BOYD,

President, and Professor of Natural Philosophy and Astronomy.

J. T. DUNKLIN, A. M., LL. D., Professor of Latin Language.

W. C. STUBBS, A. M.,
Professor of General and Agricultural Chemistry.

OTIS D. SMITH, A. M., Professor of Mathematics. P. H. MELL, JR., M. E., Ph. D., Professor of Natural History.

REV. G. W. MAXSON. A. M. M. E., Professor of English Language and Literature.

GEN. J. H. LANE, C. E., A. M., Professor of Civil and Mining Engineering.

J. S. NEWMAN,

Professor of Agriculture, and Director of the Experiment Station.

LEROY BROUN, JR., B. SC., Assistant Professor Chemistry.

C. C. THACH, B. E., Instructor in Languages.

T. H. FRAZER, B. E.,
Instructor, and Acting Commandant

J. H. DRAKE, M. D., Surgeon.

C. C. THACH, "
Recording Secretary.

P. H. MELL, Jr., Corresponding Secretary.

E. T. GLENN, Librarian.

MILITARY ORGANIZATION, 1883-'84.

Col. D. F. BOYD, President. Maj. T. H. FRAZER, Communicant. J. H. DRAKE, M. D., Surgeon.

CADET OFFICERS.

Staff.

F. C. DUKE, Adintant. DAVE LARKIN, Color Sergeant.

Company A.

Captoin, W. L. HUTCHINSON.

1st Lieut., W. D. WOOD.

2d Lieut., T. F. HARDIN.

1st Sergt., R. E. L. COLLIER.

2d Sergt., W. T. PENN.

3d Sergt., A. F. WHITFIELD

1st Corp., C. L. NEWMAN.

R. H. THACH, Sergeant Major, T. P. ZELLARS, Ordnance Sergeant.

Company B.

Captain J. B. Robinson, Jr. 1st Lieut., B. H. Boyd. 2d Lieut., J. W. Lockhart. 1st Sergt., J. M. Allen. 2l Sergt., E. S. McIntyre. 3-l Sergt., L. F. Howell. 1st Corp., S. C. Pitts.

Company C.

Captain R. S. CORRY.

1st Lieut., D. D. McLeod.

2d Lieut., L. R. Boyd.

1st Sergt., Thos. Trammell.

2d Sergt., W. T. Andrews.

3d Sergt., B. S. Burton.

1st Corp., L. W. Spratling.

ALUMNI.

MSC DESCRIPTION AND A PARTY OF A

REV. W. F. GLENN R. S. JOHNSON R. D. JUMSON R. S. Georgia HENRY HARRIS W. M. JONNS R. S. Social Circle, Georgia R. S. MePARLAN R. S. MePARLAN R. S. Merarlan R. Georgia R. S. Merarlan R. Georgia R. Columbus, Georgia Rev. W. T. PARK R. Greenville, Georgia Rev. W. Moore Rev. W. Moore Rev. W. T. Pattlal R. Lafragette, Alabama A. G. DOWDELL R. D. Merarlan R. R. DOWDELL R. S. DOUGLAS Louisville, Alabama R. A. G. DOWDELL R. A. DOWDELL R. R. Motterey Rev. W. Monterey Rev. W. Monterey Rev. W. Monterey Rev.		1860.	140 W/ Q
SW. C. THRASH A. F. WOOLEY B. CATHEL, Alabama, Kingston, Georgia. HENRY HARRIS W. M. JONES S. Social Circle, Georgia, SIDNEY LEWIS S. Social Circle, Georgia, SPATA, Georgia, R. S. M. GEARLAN L. J. GEORGIA R. S. M. GEARLAN L. J. GEORGIA H. P. PARK L. Columbus, Georgia H. P. PARK J. J. F. ROGERS Perote, Alabama L. J. J. F. ROGERS L. J. J. F. ROGERS L. J. J. F. ROGERS L. J. J. F. ROWDELL L. J. J. F. ROWDELL L. J.			
A. F. WOOLEY HENRY HARRIS W. M. JONES Sparta, Georgia, R. S. McFARLAN R. S. McFARLAN M. LAGrange, Georgia, R. C. Perote, Alabama, Rev. W. McOre 1867. J. R. DOWDELL J. R. DOWDELL J. J. F. ROGERS Birmincham, Alabama, A. G. DOWDELL J. A. DOWDELL J. Monterov, McKleo, A. G. DOWDELL J. A. DOWDELL J. Monterov, McKleo, A. G. DOWDELL J. J. LAN JONES J. J. L. GOLSON, A. B. J. J. GOLSON, A. B. J. J. L. GOLSON, A. B. J. J. J. J. L. GOLSON, A. B. J. J. J. L. GOLSON, A. B. J. J. J. J. L. GOLSON, A. B. J. J			
HENRY HARRIS W. M. JONES SOCIAL CIrcle, Georgia, R. S. McFARLAN LIGHT ARRIS W. M. JONES SOCIAL CIRCLE, Georgia, R. S. McFARLAN LIAGTRAGE, Georgia, S. W. McMICHAEL Columbus, Georgia, S. W. McMICHAEL Columbus, Georgia, L. J. F. ROGERS. Perote, Alabama. J. R. DOWDELL L. J. F. ROGERS. Perote, Alabama. W. W. MOORE REV. W. T. PATILLO LINEVILLE, Alabama. A. G. DOWDELL L. A. DOWDELL L. L. A. DOWDELL L. L. A. DOWDELL L. L. A. DOWDELL L. L. DOUGLAS L. L	A. F. WOOLEY	***************************************	Kingston Georgie
SCIAL CITCLE, GEORGIA, R. S. MCFARLAN. R. S. M. McMICHAEL L. Columbus, Georgia, Gorgia, L. P. PARK. J. J. F. ROGERS IS67. J. R. DOWDELL HOWARD HAMILL Seeven and Jacksonville, Illinois, Lineville, Alabama, Jacksonville, Illinois, Lineville, Alabama, Jacksonville, Illinois, L. A. DOWDELL A. G. DOWDELL A. S. DOU'GLAS Birmincham, Alabama, Lineville, Alabama, Lavine, Monterev, Mexico, Jouisville, Alabama, Leanner, Mexico, L. A. DOWDELL A. S. DOU'GLAS Birmincham, Alabama, Lavine, Monterev, Mexico, Monterev, Mexico, L. A. DOWDELL A. S. DOU'GLAS Birmincham, Alabama, Lavine, Monterev, Mexico, Monterev, Mexico, L. A. DOWDELL A. G. DOWDELL A. G. DOWDELL A. G. DOWDELL A. DOWD			
S. W. MicMicHaell Columbus, Georgia, H. P. Park Greenville, Georgia, H. P. Park Greenville, Georgia, J. J. F. ROGERS Perote, Alabama, Perote, Alabama, J. J. F. ROGERS Perote, Alabama, Jacksonville, Illinois, W. W. MOORE Birmineham, Alabama, Jacksonville, Illinois, W. W. MOORE Birmineham, Alabama, Jacksonville, Alabama, J. A. DOWDELL Down Monterev, Mexico, J. J. J. R. DOWDELL Monterev, Mexico, J. J. J. A. DOWDELL Monterev, Mexico, J. J. J. A. DOWDELL Monterev, Mexico, J. J. J. A. DOWDELL Monterev, Mexico, J.	SIDNEY LEWIS	************************	Social Circle, Georgia,
J. R. DOWDELL HOWARD HAMILL J. R. DOWDELL HOWARD HAMILL 1868. A. G. DOWDELL L. A. D	S. W. McMICHAEL	•••••••	
J. R. DOWDELL HOWARD HAMILL Jacksonville, Illinois W. W. MOORE REV. W. T. PATILLO 1869. A. G. DOWDELL L. A. Montervy Moxico R. L. Albama L. L	J. J. F. ROGERS	• • • • • • • • • • • • • • • • • • • •	
REV. W. T. PATILLO 1869. A. G. DOWDELL L. A. DOWDELL L. Monterev. Mexico. *A. S. DOUGLAS L. LOUSTINE, Alabama, L. A. Morrev. Mexico. *A. S. DOUGLAS L. LOUSTINE, Alabama, CALER LINDSEY L. LAM VR. CALER LINDSEY Mobile, Alabama, J. R. MOTLEY Tuskege, Alabama, J. R. C. PERSONS Tuskege, Alabama, J. Midway, Georgia, V. Mi		1867.	construction to the same a main of .
REV. W. T. PATILLO 1869. A. G. DOWDELL L. A. DOWDELL L. Monterev. Mexico. *A. S. DOUGLAS L. LOUSTINE, Alabama, L. A. Morrev. Mexico. *A. S. DOUGLAS L. LOUSTINE, Alabama, CALER LINDSEY L. LAM VR. CALER LINDSEY Mobile, Alabama, J. R. MOTLEY Tuskege, Alabama, J. R. C. PERSONS Tuskege, Alabama, J. Midway, Georgia, V. Mi	J. R. DOWDELL. HOWARD HAMILL	••••••	JaFayette, Alabama, Jacksonville, Illinois,
A. G. DOWDELL L. A. DOWDELL L. A. DOWDELL L. A. DOWDELL Monterey, Mexico, NA. S. DOUGLAS LOUISVINE, Alabama, LEANDER G. JACKSON LOUISVINE, Alabama, LEANDER G. JACKSON LOUISVINE, Alabama, L. A. LOUISVINE, Alabama, CALEB LINDSEY Mobile, Alabama, J. R. MOTLEY Taskegee, Alabama, J. R. MOTLEY Taskegee, Alabama, J. R. C. PERSONS United States Navy, The classes of 1860, 1861, 1867, 1868, 1869 graduated in the East Alabama College. R. E. BURT, A. M. R. O. ROUNSAVALL, A. M. Salem, Alabama, W. E. HORNE, C. E. L. V. ROSSER, A. B. Colorado, Rev. E. W. SOI OMON, A. M. G. C. SPIGENER, A. B. Prattville, Alabama, Rev. C. R. WILLIAMSON, A. M. GICHVILL, Alabama, D. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. Crawford, Alabama, W. T. RUTLEDGE, A. B. Crawford, Alabama, W. H. MOORE, A. B. Montevalle, Alabama, W. H. MOORE, A. B. LISTA. ERANK C. DILLARD, R. S. LOUISVILLARD, R. S. LOUISVILLARD, R. S	AW W MOODE	1868.	
LEANDER G. JACKSON LONGVIEW, TEXAS T. J. LAM AR CALER LINDSEY Mobile, Alabama, J. R. MOTLEY Taskegee, Alabama, J. R. MOTLEY Taskegee, Alabama, JAMES D. MYRICK Midway, Georgia, R. C. PERSONS United States Navy, The classes of 1860, 1861, 1867, 1868, 1869 graduated in the East Alabama, College. 1872. R. E. BURT, A. M. Salem, Alabama, R. O. ROUNSAVALL, A. M. W. E. HORNE, C. F. J. Tampa, Florida, L. V. ROSSER, A. B. Colorado, REV. E. W. SOI OMON, A. M. G. C. SPIGENER, A. B. Prattylle, Alabama, REV. C. R. WILLIAMSON, A. M. J. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. P. Crawford, Alabama, P. R. RUTLEDGE, A. B. Salem, Alabama, Glenville, Alabama, Colorado, Rev. E. W. SOI OMON, A. M. Gienville, Alabama, Alabama, Rev. C. R. WILLIAMSON, A. M. Salem, Alabama, Colorado, Rev. E. W. SOI OMON, A. M. Gienville, Alabama, Alabama, D. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. Salem, Alabama, Alabama, Alabama, D. Crawford, Alabama, Rev. C. R. WILLIAMSON, R. E. Salem, Alabama, Alabama, D. Crawford, Alabama, Rev. C. R. W. J.	REV. W. T. PATILLO	***************************************	Birmingham, Alabama. Lineville, Alabama.
LEANDER G. JACKSON LONGVIEW, TEXAS T. J. LAM AR CALER LINDSEY Mobile, Alabama, J. R. MOTLEY Taskegee, Alabama, J. R. MOTLEY Taskegee, Alabama, JAMES D. MYRICK Midway, Georgia, R. C. PERSONS United States Navy, The classes of 1860, 1861, 1867, 1868, 1869 graduated in the East Alabama, College. 1872. R. E. BURT, A. M. Salem, Alabama, R. O. ROUNSAVALL, A. M. W. E. HORNE, C. F. J. Tampa, Florida, L. V. ROSSER, A. B. Colorado, REV. E. W. SOI OMON, A. M. G. C. SPIGENER, A. B. Prattylle, Alabama, REV. C. R. WILLIAMSON, A. M. J. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. P. Crawford, Alabama, P. R. RUTLEDGE, A. B. Salem, Alabama, Glenville, Alabama, Colorado, Rev. E. W. SOI OMON, A. M. Gienville, Alabama, Alabama, Rev. C. R. WILLIAMSON, A. M. Salem, Alabama, Colorado, Rev. E. W. SOI OMON, A. M. Gienville, Alabama, Alabama, D. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. Salem, Alabama, Alabama, Alabama, D. Crawford, Alabama, Rev. C. R. WILLIAMSON, R. E. Salem, Alabama, Alabama, D. Crawford, Alabama, Rev. C. R. W. J.		1869.	H 13
CALEB LINDSEY Mobile, Alabama. J. R. MOTLEY Tuskegee, Alabama. JAMES D. MYRICK Midway, Georgia R. C. PERSONS United States Navy. The classes of 1860, 1861, 1867, 1868, 1869 graduated in the East Alabama College. R. E. BURT, A. M. Salem, Alabama R. O. ROUNSAVALL, A. M. W. E. HORNE, C. E. L. V. ROSSER, A. B. Colorado. Rev. E. W. SOI OMON, A. M. G. C. SPIGENER, A. B. Prittyille, Alabama, Rev. C. R. WILLIAMSON, A. M. J. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. Crawford, Alabama. P. R. RUTLEDGE, A. B. Crawford, Alabama. R. K. FITZHUGH, B. S. Shirm alabama. M. H. MOORE, A. B. Montevalle, Alabama. W. H. MOORE, A. B. Montevalle, Alabama.	A. G. DOWDELL. L. A. DOWDELL. A. S. DOUGLAS	••••	
JAMES D. MYRICK R. C. PERSONS The classes of 1860, 1861, 1867, 1868, 1869 graduated in the East Alabama College. 1872. R. E. BURT, A. M. R. O. ROUNSAVALL, A. M. W. E. HORNE, C. E. L. V. ROSSER, A. B. G. C. SPIGENER, A. B. G. C. SPIGENER, A. B. REV. C. R. WILLIAMSON, A. M. J. L. GOLSON, A. B. W. T. RUTLEDGE, A. B. P. R. RUTLEDGE, A. B. R. K. FITZHUGH, B. S. B. Montevalle, Alabama, 1874. R. K. FITZHUGH, B. S. B. Montevalle, Alabama, W. H. MOORE, A. B. Montevalle, Alabama, W. H. MOORE, A. B. Montevalle, Alabama, W. H. MOORE, A. B. Montevalle, Alabama, W. H. MOORE, A. B. Montevalle, Alabama, W. H. MOORE, A. B. Montevalle, Alabama, W. H. MOORE, A. B. FRANK C. DILLARD, R. S.	I. J. LANIXII		Auburn Alabasia
The classes of 1860, 1861, 1867, 1868, 1869 graduated in the East Alabama College. 1872. R. E. BURT. A. M. Salem. Alabama. R. O. ROUNSAVALL, A. M. Hintsville, Texas. W. E. HORNE, C. E. Tampa. Florida. L. V. ROSSER, A. B. Colorado. Auburn. Alabama. G. C. SPIGENER, A. B. Prattville, Alabama. G. C. SPIGENER, A. B. Prattville, Alabama. Gienville, Alabama. J. L. GOLSON, A. B. Crawford, Alabama. W. T. RUTLEDGE, A. B. Crawford, Alabama. P. R. RUTLEDGE, A. B. Crawford, Alabama. R. K. FITZHUGH, B. S. Montevalle, Alabama. W. H. MOORE, A. B. Montevalle, Alabama.	I R MOTLEY	***************************************	Mobile, Alabama.
R. E. BURT. A. M. R. O. ROUNSAVALL, A. M. W. E. HORNE, C. F. L. V. ROSSER. A. B. REV. E. W. SOI OMON. A. M. G. C. SPIGENER. A. B. REV. C. R. WILLIAMSON, A. M. J. L. GOLSON. A. B. W. T. RUTLEDGE. A. R. P. R. Crawford. Alabama. R. K. FITZHUGH. B. S. B. J. J. H. JOHNSON. R. E. Montevallo. Alabama. 1874. R. K. FITZHUGH. B. S. B. J. J. H. JOHNSON. R. E. Montevallo. Alabama. W. H. MOORE. A. B. J. J	The classes of 1860, 1861, 1867, 1868, 1869 gradu	sated in the Ea	st Alahama College
L. V. ROSSER, A. B. Colorado. Rev. E. W. SOI OMON, A. M. Auburn, Alabama. G. C. SPIGENER, A. B. Prattville, Alabama. Rev. C. R. WILLIAMSON, A. M. Glenville, Alabama. J. L. GOLSON, A. B. New Orleans, Louisian W. T. RUTLEDGE, A. B. Crawford, Alabama. P. R. RUTLEDGE, A. B. Crawford, Alabama. R. K. FITZHUGH, B. S. Aligusta, Arkansas, B. H. JOHNSON, R. E. Montevallo, Alabama. W. H. MOORE, A. B. Montevallo, Alabama. W. H. MOORE, A. B. Alabama. 1875.	The state of the s	1872.	Automa onege.
L. V. ROSSER, A. B. Colorado. Rev. E. W. SOI OMON, A. M. Auburn, Alabama. G. C. SPIGENER, A. B. Prattville, Alabama. Rev. C. R. WILLIAMSON, A. M. Glenville, Alabama. J. L. GOLSON, A. B. New Orleans, Louisian W. T. RUTLEDGE, A. B. Crawford, Alabama. P. R. RUTLEDGE, A. B. Crawford, Alabama. R. K. FITZHUGH, B. S. Aligusta, Arkansas, B. H. JOHNSON, R. E. Montevallo, Alabama. W. H. MOORE, A. B. Montevallo, Alabama. W. H. MOORE, A. B. Alabama. 1875.	R. E. BURT. A. M.	************	
REV. E. W. SOI OMON, A. M	W. P. HORNE, C. F.		
J. L. GOLSON, A. B. W. T. RUTLEDGE, A. R. P. R. RUTLEDGE, A. B. Crawford, Alabama, M. H. Johnson, R. E. Montevalle, Alabama, W. H. MOORE, A. B. Labama, W. H. MOORE, A. B. Labama, Labama, W. H. MOORE, A. B. Labama, W. H. MOORE, A. B. Labama, L	PET E W COLOMON A M		A sellarmen Alabama a .
J. L. GOLSON, A. B. W. T. RUTLEDGE, A. R. P. R. RUTLEDGE, A. B. Crawford, Alabama, M. H. Johnson, R. E. Montevalle, Alabama, W. H. MOORE, A. B. Labama, W. H. MOORE, A. B. Labama, Labama, W. H. MOORE, A. B. Labama, W. H. MOORE, A. B. Labama, L	REV. C. R. WILLIAMSON, A. M.		Glenville, Alabama.
R. K. FITZHUGH, B. S. Algusto, Arkansas, P. H. JOHNSON, R. E. Montevallo, Alabama, W. H. MOORE, A. B. Alabama, M. H. MOORE, A. B. Plano, Texas		1080	
R. K. FITZHUGH, B. S. Algusto, Arkansas, P. H. JOHNSON, R. E. Montevallo, Alabama, W. H. MOORE, A. B. Alabama, M. H. MOORE, A. B. Plano, Texas	J. L. GOLSON, A. B		New Orleans, Louislana
R. K. FITZHUGH, B. S. Algusto, Arkansas, P. H. JOHNSON, R. E. Montevallo, Alabama, W. H. MOORE, A. B. Alabama, M. H. MOORE, A. B. Plano, Texas	P. R. RUTLEDGE, A. B	1074	Crawford, Alabama.
*B. H. JOHNSON, B. E. Montevallo, Alabama. W. H. MOORE, A. B. Alabama. W. H. MOORE, A. B. Plano, Texas. FRANK C. DILLARD, B. S.	R. K. FITZHUGH R. S.	ACT FR.	Allousta Arkanene
FRANK C DILLARD R S	OR II JOHNSON R E.		Montevallo Alabama
FRANK C DILLARD R S	M. H. MOORE, A. B.		The Plane, Texas // (1)
W.M. M. PERRY, B. S.	FPANK C DILLARD R S	1875.	Shirmin Toxos
	ewn, M. Perry, B. S.		Columbus, Georgia,

*Peceased.

1876.	the exact
REV. M. K. CLEMENTS. B. S. A.	Collinsville, Alabama.
C. T. HODGE, B. S. A.	Opelika.
S. B. HOLT, B. S. A	
E. M. OLIVER, A. B.	LaFayette "
E. M. OLIVER, A. B. F. D. PEABODY, B. S. A.	Columbus, Georgia.
J. E. RHFFIN, B. S. A.	Rockford, Alabama.
P. H. STOW, B. E	Opelika, Alabama.
REESE WILSON, B. S. A.	Centre, Texas.
1877.	
REV. SAMUEL C. RIDDLE, A. B.	Wills Point, Texas.
CHARLES C. THACH, B. E	Auburn, Alabama.
JOHN M. TRAMMELL, B. E.	Chambers County, A
WILLIAM O TRAMMELL B E.	Chambers County,

1878.

. a. a.

1879.

	MARK S. ANDREWS, A. B
	WYATT H. BLAKE, B. S
	FRANK B. DILLARD, B. E
	JOSHUA S. DOWDELL, A. B.
	OLIVER C. McGEHEE, B. S.
١	ALLEN B. O'HARA, B. E.
	THOMAS M. OLIVER, B. S. A
	JOHN O. PINCKARD, B. E
	J. E. D. SHIPP, A. B.

1880.

JOHN T. ASHCRAFT, B. E.	
*BENJAMIN F. ATKINSON, A	. В.
*SAMUEL B. CANTEY, B. E.	
SAMUEL CALLAWAY, P. E.	
JOHN S. N. DAVIS, B. E.	
ALVA FITZPATRIČK, B. E.	
E. J. GARRISON, A. B.	A.T.
GEORGE R. HALL, B. S. A.	
HARRISON L. MARTIN, A. H	3
CHARLES B. McCOY, B. S.	
ROBERT F. OUSLEY, A. B.	
HENRY G. PERRY. A, B.	
EDGAR A PRICE, B. S. A.	
GEORGE W. STEVENS, B. E.	•
JABEZ C. STREET, B. E	
ROBERT Y. STREET, B. S	
JAMES J. SYKES, B. S. A.	

Chambers County, Ala. Chambers County, "
Ware, Alabama.

Ware, Alabama.
Point Coupe, Louisiana.
Auburn, Alabama:
Tuscaloosa,
Nashville, Tennessee.
Huntsville, Alabama.
Nashville, Tennessee.
Tuscaloosa, Alabama.

Greenville, Texas.
Blakes' Ferry, Alabama.
Whistler
LaFayette
Eelectic
Sandtown, Georgia.
Opelika, Alabama.
Clayhatchee,
Cusseta, Georgia.

Brundige, Alabama. West Point, Georgia. Fort Mitchell, Alabama. Montgomery Gold Hill Montgomery Lineville Midway Elba Opelika Harpersville, Mississippi. Auburn, Alabama. Nashville, Tennessee. Roanoke, Alabama. Bluff's Springs, " Atlanta, Georgia. Courtland, Alabama.

Deceased.

ROSS E THOMAS, B. E. HOMER B. URQUHART, A. B.	Gadsden, Alabama.
BARTOW L. WALKER, B. E.	Birmingham "Signal Service.
	Olgilai bei vice.
. 1881.	100 - 100 -
W. U. ACREE, B. S	Verbena, Alabama.
J. CALLAWAY, B. A O. H. CRITTENDEN, C. E	Montgomery, "
O. H. CRITTENDEN, C. E	Baton Rouge, Louisiana.
J. H. JETER, B. S. A.	Opelika, Alabama.
J. G. JONES, B. S. A. W. H. LAMAR, Jr., B. A	Barachias, "
W. H. LAMAR, Jr., B. A	Washington, D. C.
J. M. LANGHORNE, B. S. A.	Philadelphia, Penn.
J. T. LETCHER, B. E	Texas.
A. J. MITCHELL, B. E.	Cedar Keys, Florida.
C. N. OUSLEY, B. A.	Waxahatchie, Texas.
B. B. ROSS, B. A.	Auburn, Alabama.
W. H. SIMMONS, B. A.	Newton, "
W. D. TAYLOR, B. E	Edicetic,
J. D. TRAMMELL, B. E	Columbus, Georgia.
E. I. VAN HOOSÉ, B. S.	Mexico.
1882.	
E N BROWN, B A	Union Springs, Alabama,
G A CARDEN, B A	Colorado
G A CARDEN, B A A M CLEGG, B M E	Memphis, Tennessee
W H CUNNINGHAM, B E	Wood's Bluff, Alabama
BARTOW EBERHART, B S A	Columbus, Georgia
B H FITZPATRICK, B S A	
J M HURT, B E	
WHJONES, BS	Union Springs, "
HOWARD LAMAR, B A	Hamilton, Georgia Tuskegee, Alabama
R F LIGON, JR, B E	
W W PEARSON, B A	
JMREID, BE	Thot I omit, Texas
1883.	New Allena
W H BRUCE, B A	
WS COX, BE	LaGrange, Georgia
W LELLIS BE C L GAY, BE	Prattville, Alabama
C L GAY, BE	Montgomery
A L HARLAN, B S	Dadeville
M LHARP, JR, BSA	Colmo Alebama
1) R MANGILM B S A	bellila, Zhabama
T F MANGUM, BA	Dedeville "
A M McIntosh, B S A E MPACE, B A	Independence Texas
N P D SAMFORD, B A	Auburn Alabama
R L SUTTON, B A	Fast Point Maine
R L SUTTON, B A	· · · · · · · · · · · · · · · · · · ·

A Distinctions Degrees, Honors Conferred Session 1883-'84.

DISTINGUISHED STUDENTS.

The four students of each class in the different departments, who secure the highest grades above 90, are distinguished for excellence in scholarship, and are awarded HONOR CERTIFICATES.

FOURTH CLAS
MATHEMATICS.
1. A. J. Bloch,
2. G. II. Lamar,
H. C. Armstrong, jr.,
4. L. W. Wilkinson.
DRAWING.
1. J. S. Reese,
2. R. L. Bennett.
3. G. H. Lamar,
4. E. K. Gordon.

MATHEMATICS. 1. A. F. Whitfield. 2. S. C. Pitts, 3. L. F. Howell, 4. B. S. Burton, DRAWING. 1. A. F. Whitfield, 2. S. C. Pitts, 3. L. W. Spratling, 4. L. F. Howell.

LATIN, R. H. Thach, ENGINEERING. 1. R. H. Thach, 2. R. E. Collier, 3. W. T. Andrews,

ASTRONOMY,
2. J. W. Lockhart,
1. W. D. Wood,
3. F. C. Duke,
GEOLOGY.
1. W. L. Hutchinson,
2. J. W. Lockhart,
3. W. D. Wood,
4. D. D. McLeod,
MATHEMATICS,
(W. L. Hutchinson) W. L. Hutchinson, W. D. Wood.

THIRD CLASS.

1. A. F. Whitfield, 2. A. J. Bloch, 3. L. W. Wilkinson, 4. C. W. Simmons. A. G. W. Simmons.
AGRICULTURE.
1. A. F. Whitfield,
2. W. T. Penn,
3. C. L. Newman,
4. B. S. Burton, SECCNE CLASS

MATHEMATICS.
R. H. Thach.
DRAWING.
1. R. H. Thach,
2. R. E. Collier.
PHYSICS. R. H. Thach.

FIRST CLASS.

LATIN.

1. J. W. Lockhart,

W. C. Whitaker,

D. D. McLeod.
METEOROLOGY.

W. L. Hutchinson,

J. W. Lockhart,

W. D. Wood,

F. C. Duke.
DRAWING.

W. D. Wood,

R. S. Corry. ENGINEERING.

GREEK.
1. J. W. Lockhart.
2. W. C. Whitaker,
3. D. D. McLeod;
5. ENGILISH.
1. W. L. Hutchinson,
2. W. D. Wood,
3. D. D. McLeod,
4. J. W. Lockhart.
MECHANICS.
1. W. D. Wood GREEK. W. D. Wood, W. L. Hutchinson.

PHYSICS.

FRENCH.

LATIN.

ENGLISH.

TACTICS. R. H.Thach, 2. R. E. Collier, 3. W. T. Penn, 4. W. T. Andrews.

2. A. J. Alexander. 3. E. T. Hollingsworth, 4. V. Allen. LATIN.

1. V. Allen, 5. P. M. Hoffman

PHYSIOLOGY.

1. A. F. Whitfield,
2. L. W. Wilkinson,
6. S. C. Pitts,
4. L. F. Howell,
CHEMISTRY.
1. A. F. Whitfield.
2. L. W. Wilkinson,
LATIN

A. J. Bloch.

R. B. Smith.

W. T. Penn

1. J. S. Reese.

W. D. Wood, R. S. Corry. CHEMISTRY. W. L. Hutchinson. TACTICS.

1. W. L. Hutchinson, J. B. Robinson, Jr. 2. R. S. Corry, 3. J. W. Lockhart.

BACHELOR OF ARTS.

B. H. Boyd, L. R. Boyd, F. C. Duke, J. W. Lockhart, D. D. McLeod, W. C. Whitaker.

BACHELOR OF ENGINEERING.

GRADUATES

BACHELOR OF SCIENCE. W. L. Hutchinson, J. B. Robinson, Jr.

CATALOGUE OF STUDENTS. FOR THE SESSION 1883-'84.

ABBREVIATIONS.

Sc	Science.	Ap	Agriculture.
Lit.		Eng	Engineering.
Sp.C	Special Con	rse.	
			and Founth Classes

UNDERGRADUATES.

FIRST CLASS.

Name.	Residence.	Course.
Boyd, Benjamin Hartwell	Macon county	Tit
Boyd. Lekoy	Macon county	T.it
Corry, Robert Samuel	Butler county .	Eng.
Duke, Francis Columbus	Georgia	Lit
Hardin, Tabor Fleming	Lee county	Eno.
Hutchinson, Washington Lafavette	Georgia	Sc.
Lockhart. John William	Chambers county	Lit
McLeod, Daniel Douglas	Barbour county	Lit
Robinson, John Beverly Jr	Tennessee.	Sc.
Whitaker, Walter Claiborne	Macon county	Lit
Wood, William Daniel	Autauga county	Eng. =

~	THE CALLED .	
Allen, James		Eng.
Andrews, William Thomas	Barbour county	Eng.
Collier, Robert Edward Lee	Lee County	Eng.
McIntyre. Erastus Stonume	Conecuh county	Eng.
Penn. Walter Thomas		
Thatch, Robert Henry	Limestone county	Eng.
Trammell, Thomas	Lee county	Ag.
Williams, Daniel Bullard	Lee county	Sp. C.

THIRD CLASS.			
Allison, Gilmer Alexander	Lee county	Gen. C.	
Autrey, Charles Mallary	Georgia	Gen. C	
Bloch, Albert Jonathan	Louisiana	Gen C.	
Boozer, Henry West	Georgia	Gen. C.	
Boykin, Robert Stafford	Lce county	Sp. C.	
Burton, Benjamin Sullivan	Georgia	Gen. C.	
Burton, Benjamin Sullivan Bullard, Charles Clarence	Chambers county	Sp. C.	
Capps, Luther Martin	Henry county	Gen. C.	
Carter, Julius Ceasar	Montgomery county	Gen. C.	
Daughtry, Claude Isadore	Lee county	Gen. C	
Davis, William Easley	Lee county	Gen. C.	
Hightower, Edward Woodam	.Lee county	Sp. C.	
Hodge, Charles Wesley	Randolph county	Gen. C.	
Hoffman, Paul Mark	.Lee county	Gen. C.	
Horn. Eli	.Clay county	Gen. C.	
Howell Lawson Franklin	Georgia	Gen. C.	
Hutchinson, Thomas P	Georgia	Sp. C.	
Larkin, David	"Jackson county	Gen. C.	
Lloyd, Edward Read	.Lee county	Sp. C.	
McCrory, James Thomas	.Georgia	Gen. C.	
Newman Clifford Lewis	Lee county	Gen. C.	
Page M Downer	Lee county	Gen. C.	
Paschal Florence Flonza	.Etowah county		
Persons, Augustus Archilus	.Lec county	Gen. C.	
Phillips, Berrien Troupe	Lee county	Sp. C.	
Pitts, Sterling Chambers	.Russell county	Gen. C.	
Phillips, Berrien Troupe	.Montgomery county	sp. C.	
Shavor Artomiis Patterson	. MOHEZOHIEFY COULLY	account Cite of to	
Scott, Thomas Lee	Chambers county	Gen. C.	
Simmons, Charles Woodward	Dale county	Gen. C.	
Simmons, Robert Jasper Hogue	Dale count	Gen. C.	
Smith, Robert Billups	Lee county	Sp. C.	
Spratling, Leckinski Ware	Lee county	Crell. C.	
Tate, James Ulmer	Dallas county	Gell. C.	
Tillman, Henry Young	Cleorgia	Con C	
Varner, Charles Monroe	Chambers county	Gon C	
Weaver, Dudley Saunders	Marongo county	Gon C	
Whitfield, Augustus Foscue	Dala county	Gon C	
Wilkinson, Levi Washington	Comple	Gon C	
Zellars. Thomas Peter	COLLIE	GCII. C.	

	The second second		
	FOURTH	CLASS.	
	Alexander, Arthur John	Mobile countyGen.	C
	Armstrong Hopey Class In	Lee countySp.	0
	Barnes, William Deans	Florida Sp.	C
	Barclay, Alexander Campbell.	Lawrence countyGen.	C
	Beddell, Howard Alburn	Lee countyGen.	C
	Bond Edmund Color	Lee countyGen,	.C
	Bradford, John Nunn	Lee county Sp.	C
	Chapman, George Clarence	Wilcox county	C
	Chapman, John William	Wilcox countySp.	C
	Coleman Ranbon Edward	Perry countySp.	C
	Crawford, Abednego Jackson	Lee county Gen.	C
	Drake, John Hodges Jr	Lee countyGen.	C
	Frizzle, William Clarke	Bullock countyGen.	C
	Gordon, Elgee Kingsbury	Louisiana (len	C
	Gresham, James Clifford	Lowndes countyGen.	C
	Gresham, James Clifford	Lee countySp.	C
	Holland, Orlando Monroe	Lee countyGen.	C
	Holland, Orlando Monroe	Etowah county	C
	Huguley, George Abner	GeorgiaSp.	C
-	Jones Thomas Hugh	Dallas countyGen.	C
	Lamar, George Holt	Lee county	C
	McAuley, Sheridan	MobileGen.	C
-	Jones, Thomas Hugh Lamar, George Holt. McAuley. Sheridan Neal, Fictcher A. Newman, Wilson Herbirk	Lee countySp.	C
	Oates, James Jethro	Mobile Gan	C
	Persons, Henry Stanford	Lee county	C
	Resea James Turner	Lee countyGen.	C
i	Sander Albert	rioridaGen.	C
-	Sauder, Oscar	Texas	C
	schowalter, Mack Reynolds	Mobile county	
1	Vaughn, William Watkins	ce countyGen.	6
*	Vaughn, William Watkins	Dallas county	6
. 1	Vaughn, William Watkins	Dallas county	0000
,	Vaughn, William Watkins	Pollar county Gen.	6
,	Vaughn, William Watkins	Pollar county Gen.	6
	Vaughn, William Watkins	Dellas county Sp. Georgia Gen. riculture. OUTRH CLASS. Lee county	
1	Vaughn, William Watkins I Wooley, Andrew Feaster	Jefferson county	
	Vaughn, William Watkins I Wooley, Andrew Feaster	Dallas county Sp. Georgia Gen. riculture. OUTRH CLASS. Lee county Jefferson county Lee county Lee county	
	Vaughn, William Watkins I Wooley, Andrew Feaster	Dallas county Sp. Georgia Gen. riculture. OUTRH CLASS. Lee county Jefferson county Lee county Lee county	
	Vaughn, William Watkins	Jefferson county Lee county Lee county Montgomery county Montgomery county Lee county Lee county	
	Vaughn, William Watkins	Dallas county Sp. Jeorgia Gen. COUTRH CLASS. Lee county Lee county Lee county Montgomery county Lee county Lee county	
	Vaughn, William Watkins	Dallas county	
	Vaughn, William Watkins	Dallas county Sp. Jeorgia Gen. Floulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Madison county Lee county Montgomery county Montgomery county	7.
	Vaughn, William Watkins I Wooley, Andrew Feaster	Dallas county Sp. Georgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Madison county Lee county Montgomery county Lee county	77.
	Vaughn, William Watkins	Dallas county Sp. Jeorgia Gen. Floulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Madison county Montgomery county Lee county Lee county Montgomery county Lee county	
	Vaughn, William Watkins Wooley, Andrew Feaster	Dallas county Sp. Georgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Madison county Montgomery county Lee county	
	Vaughn, William Watkins	Dallas county	77.77.77.77.77.77.77.77.77.77.77.77.77.
	Vaughn, William Watkins Wooley, Andrew Feaster	Dallas county Sp. Georgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Madison county Montgomery county Lee county Lee county Montgomery county Lee county	77.77.77.77.77.77.77.77.77.77.77.77.77.
	Vaughn, William Watkins	Dallas county Sp. Jeorgia Gen. riculture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county	· · · · · · · · · · · · · · · · · · ·
	Vaughn, William Watkins Wooley, Andrew Feaster	Dallas county Sp. Jeorgia Gen. Flour CLASS. Lee county Lee county Lee county Lee county Montgomery county Lee county Montgomery county Lee county Mobile county	· · · · · · · · · · · · · · · · · · ·
	Vaughn, William Watkins	Dallas county Sp. Jeorgia Gen. riculture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county	77.77.77.77.77.77.77.77.77.77.77.77.77.
	Vaughn, William Watkins Wooley, Andrew Feaster. *Regular in special two years course in Ag SUB SECTION F Allison, Charles. Armstrong, Samuel Jones. Boyd, Thomas Jackson. Broun, George Fleming. Carter, John Tecumseh. Castlin, William Henry. Cooper, J H. Douwis, Nick C. Dumas, Albert C. Dunklin, Joe. Jlenn, Charles Bowles. Jreene, Za'h. Jackson, William Carson. Lee, George Forbes. Lefebere, John Leyy, Lionel Clarence. Lloyd, Andrew Manley. Mason, James Monroe. Matson, James Monroe. Matson Matso	Dallas county Sp. Jeorgia Gen. Floulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Lee county Lee county Montgomery county Lee county Lee county Montgomery county Lee county Lee county Lee county Montgomery county Lee county	· · · · · · · · · · · · · · · · · · ·
	Vaughn, William Watkins Wooley, Andrew Feaster. *Regular in special two years course in Ag SUB SECTION F Allison, Charles. Armstrong, Samuel Jones. Boyd, Thomas Jackson. Broun, George Fleming. Carter, John Tecumseh. Castlin, William Henry. Cooper, J H. Douwis, Nick C. Dumas, Albert C. Dunklin, Joe. Jlenn, Charles Bowles. Jreene, Za'h. Jackson, William Carson. Lee, George Forbes. Lefebere, John Leyy, Lionel Clarence. Lloyd, Andrew Manley. Mason, James Monroe. Matson, James Monroe. Matson Matso	Dallas county Sp. Jeorgia Gen. Floulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Lee county Lee county Montgomery county Lee county Lee county Montgomery county Lee county Lee county Lee county Montgomery county Lee county	· · · · · · · · · · · · · · · · · · ·
	Vaughn, William Watkins Wooley, Andrew Feaster. *Regular in special two years course in Ag SUB SECTION F Allison, Charles. Armstrong, Samuel Jones. Boyd, Thomas Jackson Broun, George Fleming. Carter, John Tecumseh Castlin, William Henry. Cooper, J H. Dounds, Nick C. Dumas, Albert C. Dunklin, Joe. Jlenn, Charles Bowles. Freene, Za'h. Jackson, William Carson. Lee, George Forbes. Lefebere, John Levy, Lionel Clarence. Lloyd, Andrew Manley. Jason, James Monroe. Jason, James Monroe. Jason, James Monroe. John Claborn. Dliver, Arthur Wesley. Dliver, Claude Lee. Leesee, Richard Pope. mith. Otis Oliver. Jephens, Albert Franklin Joomer, Alexander Galt. Jorbet Longie Luchlyn.	Dallas county Sp. Jeorgia Gen. Floulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county	
	Vaughn, William Watkins Wooley, Andrew Feaster. *Regular in special two years course in Ag SUB SECTION F Allison, Charles. Armstrong, Samuel Jones. Boyd, Thomas Jackson Broun, George Fleming. Carter, John Tecumseh Castlin, William Henry. Cooper, J H. Dounds, Nick C. Dumas, Albert C. Dunklin, Joe. Jlenn, Charles Bowles. Freene, Za'h. Jackson, William Carson. Lee, George Forbes. Lefebere, John Levy, Lionel Clarence. Lloyd, Andrew Manley. Jason, James Monroe. Jason, James Monroe. Jason, James Monroe. John Claborn. Dliver, Arthur Wesley. Dliver, Claude Lee. Leesee, Richard Pope. mith. Otis Oliver. Jephens, Albert Franklin Joomer, Alexander Galt. Jorbet Longie Luchlyn.	Dallas county Sp. Jeorgia Gen. Floulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county Montgomery county Lee county	
	Vaughn, William Watkins Wooley, Andrew Feaster. **Regular in special two years course in Agreement of the country of the cou	Dallas county Sp. Jeorgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Madison county Lee county Montgomery county Lee county Russell county Russell county	
	Vaughn, William Watkins Wooley, Andrew Feaster *Regular in special two years course in Ag SUB SECTION F Allison, Charles Armstrong, Samuel Jones Boyd, Thomas Jackson Broun, George Fleming Larter, John Teeumsch Lastlin, William Henry Cooper, J H Davis, Nick C Dumas, Albert C Dunklin, Joe Henn, Charles Bowles Freenc, Za-h ackson, William Carson Lee, George Forbes Lefebere, John Ley, Lionel Clarence Lloyd, Andrew Manley Mason, James Monroe Butes, John Claborn Dliver, Arthur Wesley Illver, Claude Lee teesee, Richard Pope mith, Otis Oliver tephens, Albert Franklin Toomer, Alexander Galt Orbet, Lounie Luellyn Villiamson, Henry Pritchard RECAPITI First Class	Dallas county Sp. Jeorgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Madison county Lee county Montgomery county Lee county Lee county Montgomery county Lee county Mobble county Lee county Lee county Lee county Barbour county Lee county Russell county Russell county Georgie	
	Vaughn, William Watkins Wooley, Andrew Fenster. *Regular in special two years course in Ag SUB SECTION F Allison. Charles Armstrong, Samuel Jones Boyd, Thomas Jackson Broun, George Fleming Carter, John Tecumseh Lastlin, William Henry Cooper, J H. Donyis, Nick C. Dumas, Albert C. Dunklin, Joe. Henn, Charles Bowles Freenc, Za-h Jackson, William Carson Lee, George Forbes Lefebere, John Levy, Lionel Clarence Lloyd, Andrew Manley Mason, James Monroe Mates, John Claborn Milliver, Claude Lee Reese, Richard Pope mith. Otis Oliver tephens, Albert Franklin Coomer, Alexander Galt Torbet, Lonnie Luellyn Williamson, Henry Pritchard RECAPITI First Class Second Class	Dallas county Sp. Jeorgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county Madison county Lee county Montgomery county Lee county Montgomery county Lee county Moutgomery county Lee county Moutgomery county Lee county	
	Vaughn, William Watkins Wooley, Andrew Feaster. **Regular in special two years course in Agreed SUB SECTION Fallison. Charles Armstrong, Samuel Jones Boyd, Thomas Jackson Broun, George Fleming Carter. John Tecumsch Lastlin, William Henry Cooper, J H. Davis. Nick C Dumas, Albert C Dunklin, Joe Henn, Charles Bowles Freenc, Za-h Lackson, William Carson Lee, George Forbes Lefebere, John Ley, Lionel Clarence Lloyd, Andrew Manley Mason, James Monroe Mates, John Claborn Dilver, Arthur Wesley Dilver, Claude Lee Reese, Richard Pope mith. Otis Oliver tephens, Albert Franklin Coomer, Alexander Galt Drbet, Lonnie Luellyn Villiamson, Henry Pritchard RECAPITU First Class Second Class Third Class Second Class Third Class	Dallas county Sp. Jeorgia Gen. Ficulture. OUTRH CLASS. Lee county Lee county Montgomery county Madison county Lee county Lee county Montgomery county Lee county Barbour county Russell county Georgie JLATION.	
	Vaughn, William Watkins Wooley, Andrew Fenster. *Regular in special two years course in Ag SUB SECTION F Allison. Charles Armstrong, Samuel Jones Boyd, Thomas Jackson Broun, George Fleming Carter, John Tecumseh Lastlin, William Henry Cooper, J H. Donyis, Nick C. Dumas, Albert C. Dunklin, Joe. Henn, Charles Bowles Freenc, Za-h Jackson, William Carson Lee, George Forbes Lefebere, John Levy, Lionel Clarence Lloyd, Andrew Manley Mason, James Monroe Mates, John Claborn Milliver, Claude Lee Reese, Richard Pope mith. Otis Oliver tephens, Albert Franklin Coomer, Alexander Galt Torbet, Lonnie Luellyn Williamson, Henry Pritchard RECAPITI First Class Second Class	Dallas county Sp. Jeorgia Gen. riculture. OUTRH CLASS. Lee county Lee county Montgomery county Lee county	

...126

*ANNOUNCEMENT *

1884-'85

FACULTY AND OFFICERS

FOR 1884-'85.

WM. LEROY BROUN, M. A., LL. D., President,

J. T. DUNKLIN, A. M., LL. D., Professor of Latin Language and History.

W. C. STUBBS, A. M.,

Professor of General and Agricultural Chemistry.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, JR., M. E., PH. D., Professor of Natural History and Geology.

REV. G. W. MAXSON. A. M., M. E., Professor of English and Principal of Grammar School.

GEN. J. H. LANE, C. E., A. M.,
Professor of Civil Engineering and Drawing.

J. S. NEWMAN,
Professor of Agriculture, and Director of the Experiment Station.

C. C. THACH, B. E.,
Professor of Modern Languages and English Literature.

Major T. H. Frazer, B. E., Commandant and Instructor in Mathematics and Languages.

> W. L. HUTCHINSON, B. S., Assistant in Laboratory.

W. U. ACREE, B. S., Assistant in Laboratory.

J. H. DRAKE, M. D., Surgeon.

C. C. THACH,
Recording Secretary.

P. H. MELL, JR., Corresponding Secretary.

> E. T. GLENN, Librarian.

TERMS OF ADMISSION.

Candidates for admission into the Fourth Class must be of good moral character and not less than fourteen years of age, and will be required to pass an approved examination in the following subjects: Geography, History of the United States.

Exclish,—I. An examination upon sentences containing incorrect English.

2. A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar, and division into paragraphs. The subject of composition for 1885-85 will be taken from one of the following works, Scott's Lady of the Lake, or Ivanhoe, David Copperfield.

MATHEMATICS.—The whole of Arithmetic, Algebra to Quadratic Equations, as in Olney's Complete Algebra; Geometrical Drawing, as in Kitchener's Geometrical Note Book. Especial attention is called to imperfect preparation in Arithmetic and Algebra.

For admission to the Latin-Science Course, a satisfactory examination will be required in the following additional subjects—Latin Grammar (Allen & Greenough), Latin Lessons (Leighton's), Ceasar (4 Books.)

Entrance examinations will be held on Monday and Tuesday preceding the opening in September.

Entrance examinations will be held on Monday and Tuesday preceding the opening in September,

at which all applicants should be present.

If, upon examination, an applicant should be found deficient in any of the required studies, he will be assigned to a course of preliminary training in the Grammar School; provided, that in no case will an applicant be admitted whose attainments in the English branches are not such that he may, with one year's training, be prepared for the studies of the Fourth Class.

Students are advised to enter regularly some one of the prescribed courses, but they may, at the discretion of the Faculty, with the written approval of the parent or guardian, be assigned to selected studies; provided, that in no case will a student be allowed to have less than fifteen weekly recitations or equivalent work.

tions, or equivalent work.

Students, on their arrival at Auburn, must report immediately to the President, and present their testimonials and instructions.

After having paid their fees to the Treasurer and matriculated, they will report to the Examining Committee, by whom they will be assigned to appropriate classes. The Commandant will furnish each student with a copy of the Regulations, and assign him to his proper section and company.

No student will be admitted to recitation in any class previous to matriculation.

GRAMMAR SCHOOL.

For students who are not prepared for the regular College classes the Preparatory department is regularly organized under the direction of an experienced Professor. These students are subject to the discipline and regulations of the College.

SPECIAL STUDENTS.

Students who are not candidates for a degree will be permitted to take, with the advice of the Faculty, such subjects as they may prefer, and for which they may be qualified. An opportunity will be offered to study Greek, though this is not required for any degree, provided there is no conflict with the prescribed schedule of recitations. The amount of Greek taught will be about equivalent to what is found in McClintoh's 1st and 2nd Books.

DRAWING.

All students in the College, or the Grammar school, are required to take for two years a regular course in drawing.

COURSES OF INSTRUCTION.

There are three regular Courses of study each leading to the degree of Bachelor of Science.

FOURTH CLASS:

I.—COURSE IN AGRICULTURE AND CHEMISTRY. II.—COURSE IN MECHANICS AND ENGINEERING. III.—LATIN-SCIENCE COURSE.

*I.—Course in Agriculture and Chemistry. The design of this course is to furnish a plan of study, which includes theoretical and practical instruction in the principles of correct husbandry and in those sciences which relate to Chemistry and Agriculture, and will be especially adapted to those who propose to devote themselves to Agricultural or Chemical pursuits. This course requires four years for its completion and embraces the following subjects.

I .- Course in Agriculture and Chemistry.

THIRD CLASS.

	RTH CLASS:		AD CLASS.
1st Term.	2nd Term,	1st Term.	2nd Term.
3 English.	3 English.	3 English.	3 English.
2 History.	2 History.	2 History.	2 History.
5 Mathematics.	5 Mathematics.	3 Mathematics.	5 Mathematics.
o mathematics.	o Mathematics,		
5 Elementary Physics.	3 Physics. 2 Nat. History		3 Chemistry.
5 Drawing.			5. Drawing. [ry.
Drill.	Drill.	3 Agriculture.	3 Agriculture, 2 Nat. Histo-
		Drill.	Drill
	OND CLASS.		ST CLASS.
· 1st Term.	2nd Term.	1st Term.	2nd Term.
3 English.	3 English.	2 English Literature.	2 Political Economy.
3 Physics.	3 Physics.	3 Mechanics.	3 Astronomy.
4 Chemistry.	4 Chemistry.	3 Natural History.	3 Natural History.
2 Agriculture.	2 Agriculture.	2 Agriculture	2 Agriculture.
2 Natural Historx.	2 Natural History.		4 Industrial Chemistry.
1 Tactics.	1 Tactics.	1 Tactics.	1 Tactics.
5 Drawing.	5 Drawing.	Laboratory work.	Laboratory work.
. Laboratory work.	Laboratory work.		
Drill.	Drill.		
Dilli.			
	II.—Course in Mech	anics and Engineering	g,
This course on brees	es the following subjects:		,
Enanth along and A	is the lonowing subjects.		
FOURTH CIESS AND L	hird class pursue the sar	ne studies as in course i.	Land of the control o
	OND CLASS.		ST CLASS.
18t Term.	2nd Term.	1st Term	2nd Term,
(a) 3 English.	(a) 3 English.	(a) 2 Eng. Literature.	(a) 2 Political Economy.
3 Physics.	3 Physics.	3 Mechanies.	3 Astronomy.
5 Mathematics,	5 Mathematics.	2 Natural History.	O Notural History
		2 Mathamatica	2 Natural History.
5 Engineering.	5 Engineering.	3 Mathematics.	3 Mathematics.
5 Drawing.	5 Drawing.	5 Engineering.	5 Engineering.
" I Tactics.	1 Tactics.	5 Drawing.	5 Drawing.
o I Drili.	Drill.	1 Tactics.	1 Tactics.
· NOTE French or Go	erman may be substituted i	orsubjects marked (a)	
		Science Course,	
	III.—Latin	Science Course,	
This embraces the fo	III.—Latin	Science Course,	en of see
This embraces the for	III.—Latin sollowing subjects: RTH CLASS.	Science Course,	RD CLASS.
This embraces the fe	III.—Latin sollowing subjects: RTH CLASS. 2nd Term.	Science Course, THII	RD CLASS.
This embraces the form, 1st Term, 3 English.	III.—Latin sollowina subjects: RTH CLASS. 2nd Term.	Science Course, THII 1st Term. 5 Latin.	RD CLASS.
This embraces the form. 3 English. 2 History.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History.	Science Course, THII 1st Term. 5 Latin. 2 History.	RD CLASS. 5 Latin. 2 History, (optional)
This embraces the four states of	HH.—Latin subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin.	Science Course, THII 1st Term. 5 Latin. 2 History.	2 History. (optional)
This embraces the four states of	HH.—Latin subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin.	THIN 1st Term. 5 Latin. 2 History. 5 Mathematics.	2 History. (optional) 5 Mathematics.
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics.	Science Course, THII 1st Term. 5 Latin. 2 History.	2 History. (optional) 5 Mathematics. 3 Chemistry.
This embraces the for FOU lst Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 6 Drawing.	THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry.	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History.
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics.	THIF 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture.	2 History, (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture.
This embraces the for FOU lst Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 6 Drawing.	THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing.	2 History. (optional) 5 Mathematics. 2 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing.
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill.	HI.—Latin sollowing subjects: RTH CLASS. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill.	THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill.	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill.
This embraces the four strem. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 6 Drawing.	THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill.	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill.
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill.	HI.—Latin sollowing subjects: RTH CLASS. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill.	THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill.	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS.
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 2nd Term	Science Course, THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. 5T CLASS.
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English	HI.—Latin sollowing subjects: RTH CLASS. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 2nd Term 3 English	Science Course, THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy
This embraces the four strem. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics	HI.—Latin sollowing subjects: RTH CLASS. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 3 English 3 Physics	Science Course, 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2 Political Economy 3 Astronomy
This embraces the form. 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics. 5 Mathematics.	HI.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 3 English 3 Physics 5 Mathematics	Science Course, 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. 5T CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Nat History
This embraces the for FOUL 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics. 5 Mathematics. 3 Latin.	III.—Latin sollowing subjects: RTH CLASS. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin	THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Natt History 5 French
This embraces the four st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics. 5 Mathematics. 3 Latin. 2 Botany (optional).	HI.—Latin : collowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional)	Science Course, THIF 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. 5T CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German
This embraces the for FOUL 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics. 5 Mathematics. 3 Latin. 2 Botany (optional). 4 Chemistry.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. IND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry	Science Course, THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German 1 Tactics
This embraces the frou st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO 1st Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. IND CLASS. 2nd Term. 2nd Term.	Science Course, THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German 1 Tactics
This embraces the frou st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO 1st Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. IND CLASS. 2nd Term. 2nd Term.	Science Course, THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. 5T CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German
This embraces the four st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics. 5 Mathematics. 3 Latin. 2 Botany (optional). 4 Chemistry. 5 Drawing. 1 Tactics.	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. ND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing 1 Tactics	Science Course, THII 1st Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German 1 Tactics
This embraces the frou st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO 1st Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing 1 Tactics Drill	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. AND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing 1 Tactics Drill	Ist Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics Laboratory work opt'l	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German 1 Tactics Laboratory work opt'l
This embraces the for FOUL 1st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO. 1st Term. 3 English. 3 Physics. 5 Mathematics. 3 Latin. 2 Botany (optional). 4 Chemistry. 5 Drawing. 1 Tactics. Drill. (Note,—The figures in Four 1st Term.).	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. AND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing 1 Tactics Drill	Ist Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics Laboratory work opt'l	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German 1 Tactics Laboratory work opt'l
This embraces the frou st Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. SECO 1st Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing 1 Tactics Drill	III.—Latin sollowing subjects: RTH CLASS. 2nd Term. 3 English. 2 History. 5 Latin. 5 Mathematics. 5 Drawing. Drill. AND CLASS. 2nd Term 3 English 3 Physics 5 Mathematics 3 Latin 2 Botany (optional) 4 Chemistry 5 Drawing 1 Tactics Drill	Ist Term. 5 Latin. 2 History. 5 Mathematics. 3 Chemistry. 3 Agriculture. 5 Drawing. Drill. 1st Term 2 Eng Literature 3 Mechanics 2 Nat History 5 French 4 German 1 Tactics Laboratory work opt'l	2 History. (optional) 5 Mathematics. 3 Chemistry. 2 Natural History. 3 Agriculture. 5 Drawing. Drill. ST CLASS. 2nd Term 2 Political Economy 3 Astronomy 2 Mat History 5 French 4 German 1 Tactics

SPECIAL INFORMATION

DEPARTMENTS OF INSTRUCTION.

Physics and Astronomy.

PRESIDENT BROUN.

The instruction is given by regular recitations from text-books, combined with lectures, illustrated by experiments. The first part of the Course is occupied with Elementary Rational Mechanics, treated graphically, avoiding, as far as possible, complex mathematical symbols.

This is followed by a full discussion of Molecular Mechanics. While due prominence is given to principles, constant reference is made to the Applications of Science.

In the First Class the subjects studied are Astronomy and Mechanics. In the study of Mechanics in this class Mathematical Analysis is used.

TEXT-BOOKS—Atkinson's Ganot or Daniel's Physics, White's Astronomy, Peck's Mechanics.

LATIN LANGUAGE AND HISTORY. PROFESSOR DUNKLIN.

The subjects taught in this Department are the Latin-Language and History.

LATIR.—The modes of instruction are by translation from the Latin texts into English, and vice rersa, orally and in writing.

A systematic course of exercises, illustrative of the principles of Latin, Etymology and Syntax, are carried on, in connection with the reading of the authors prescribed.

The progress of the student is valued not so much by the number of books read as by his ability to read Latin, and explain the principles of interpretation and construction.

A course in general History, Ancient and Modern, is given in the Third and Fourth classes.

LATIN TEXT-BOOKS.

Furth Class.—Cicero's Orations, Virgil, Composition, Mythology, Ancient Geography.
Third Class.—Horace, Odes, Satires, Epistles, Composition (Jones.)
Second Class.—Tacitus Germania and Agricola. Cicero de Officiis, Latin Composition. Elementary Greek. McClintock's 1st, and 2nd. Books or equivalent.

REFERENCE BOOKS.

White's Junior Student's Lexicon, Harper's Latin Lexicon, Smith's Classical Dictionary and Antiquities. Zumpt's and Madvig's Latin Grammars, Ginn & Heath's Classical Atlas.

CHEMISTRY.

PROFESSOR STUBBS,

ASSISTANTS, HUTCHINSON AND ACREF.

There are three Courses in this Department— I. A General Course for all students. II. A Scientific Course.

III. An Agricultural Course.

I.--GENERAL COURSE.

Consists of a series of daily lectures and recitations in Inorganic and Organic Chemistry, fully illustrated by experiments. Chemical principles are thoroughly explained, together with their application to the various arts and industries. Special attention given to the Composition of Soils, Fertilizers, Metalic Ores and Technical Products. All the students of the Third Class pursue this Course. Text-Book.—Bloxam's Chemistry with Professor's Notes.

II.—SCIENTIFIC COURSE.

Students enter upon this Course after completing the General Course of the Third Class. The entire second year is devoted to Agricultural Analysis—the first half to Qualitative and the second half to Quantitative Analyses.

The entire third year is devoted to Qualitative and Quantitative Analysis of Mineral, Ores, Waters, C. Having finished the General Course, the student is assigned to Work Table, with Gas and Water the necessary reagents, &c., and required to work at least two hours per day through the remaining years.

TEXT-BOOKS.—Church's Laboratory Guide Caldwell's Agricultural Analysis, Mott's Manual of Chemyears.

III.—AGRICULTURAL COURSE.

Consists of three years; ist. General Chemistry. 2nd. Agricultural Analysis. 3rd. Agricultural Chemistry

The first and second years are the same as Scientific Course, and same text-books used. In the third year the students pursue Chemistry in its special application to Agriculture.

TEXTS-LOOKS.—How Creps Grow (Johnson), How Crops Feed (Johnson).

MATHEMATICS.

The general course for the first two years embraces, the first year. Algebra, and Geometry, six books; second year, Solid and Spherical Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration, and Simple Railway Curves.

Two objects are sought to be attained—1st. Mental discipline; 2nd. A thorough knowledge of the practical applications.

Theoretical and practical instruction is given the Third Class, in Farm, Town and Government Land Surveying, Dividing Land. Mapping, Plotting and Computation of Areas; in Section, Cross-Section Surveying, Dividing Land. Mapping, Plotting and Computation out Simple Curves; also, in the Theory, Adjustment and use of Instruments.

The Class, in sections of six or eight, devote three afternoons a week, during the second term, to Field The Class, in sections of six or eight, devote three afternoons a week, during the second term, to Field The Class, in sections of six or eight, devote three afternoons a week, during the second term, to Field Work are Practice, with Compass, Transit, Level, Chain and Fod. Maps, Plans and Profiles of Field Work are Practice, with Compass, Transit, Level, Chain and Fod. Maps, Plans and extended course in the required in addition to regular work in Drawing. Mensuration includes an extended course in the measurement of Heights and Distances, Plane, keetilinear and Curvilinear Figures, Surfaces and Volumes. Halstead's Metrical Geometry is made the basis of instruction in this subject.

The completion of this Course, common to all students, lays the foundation for the Pure and Applied Mathematics of the Mechanical and Engineering Course, and qualifies those who discontinue the subject at this point to go into the field and shop, and do good and useful work.

Analytical Geometry, Descriptive Geometry and Calculus are pursued in the Engineering Course.

Especial attention is given to their practical applications. During the entire Course instruction in text-books is supplemented by lectures.

Solutions of original practical problems are required of the student, to make him familiar with the application of principles, to test his knowledge, and make him self-reliant and independent.

N. B. Special attention is called to imperfect preparation, for admission to the Fourth Class, in Arithmetic and Algebra. It is so common as to prove a serious obstacle to progress in this Department. The importance of thorough preparation cannot well be overestimated.

TEXT-BOOKS.

Olney's Algebra, Wentworth's Geometry, Schuyler's Surveying, Halstead's Metrical Geometry, Loomis' Analytical Geometry, (new edition) Warren's Descriptive Geometry,, Loomis' Calculus (new edition)

NATURAL HISTORY.

PROFESSOR MELL.

GEOLOGY.—This subject is studied in the Fall Term of the last year.

Special attention is given to the Geology of Alabama. The course is given by text-books and Lectures, illustrated by means of Diagrams, Maps and various Rocks, Fossiliferous and Non-Fossiliferous, to be found in the Geological Cabinet. Attention is given to the nature and origin of Ore deposits, Mineral Springs, and origin and Geological relations of Soil.

MINERALOGY.—The Course is devoted to a general analysis of Crystalization, illustrated by Glass and Wood models; and Blowpipe analysis of all the common Minerals that form the basis of our soils.

ZOOLOGY.—Those students pursuing the Agricultural Course are required to take this subject.

A systematic arrangement of the Animal kingdom, in accordance with natural affinities, is made a special feature of the instruction.

Browology.—This subject is studied after the completion of Zoology. Particular attention is given to Insects injurious to vegetation, their habits, and the methods best adapted for checking their rava-

BOTANY.—The students of the Fourth Class begin the study of Botany, and continue throughout the term. Analytical work is made an important feature. The Class is provided with Plants from the neighboring fields, and taught how to determine their specific names. This work is sufficiently exhaustive to enable the student, after completing the Course, to name, unassisted, any of the ordinary Weeds and Grases that he will encounter in this section.

In the second Class in the Course in Agriculture and Chemistry, a sufficient amount of time is devoted to Systematic and Structural Botany, and to advanced Laboratory work with the microscope, in the preparation of specimens showing plant structure.

METEOROLOGY.—This subject is required of all students of the First Class. The instruction is imparted by text-books and lectures. The system adopted by the United States Signal Service is made a distinctive feature of the Course.

parted by text-books and lectures. The system adopted by the United States Signal Service is made a distinctive feature of the Course.

Physiology.—This topic is required of all students of the Third Class and is completed in the second term of the session. The text is illustrated by class demonstrations and experiments.

TEXT-BOOKS.

LeConte's Geology Dana's Geology Dana's Manual of Mineralogy, Brush's Determinate Mineralogy and Blowpipe, Tenny's Zoology, Brooks' Hand Book of Invertebrate Zoology, Harris' Insects Injurious to Vegetation, Packard's Insects, Bessy's Botany, Gray's Botany, Appar's Plant Analysis, Chapman's Flora of Southern States, Loomis' Meteorology, Martin's Human Body.

ALABAMA WEATHER SERVICE.

The United States Signal Service has established in Alabama a State System for collecting meteorological data relating to climatic changes. The service is now in successful operation with the Central office located at this Institution. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered throughout the State. An opportunity is thus offered the students in Meteorology for becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING

PROFESSOR LANE.

The special studies in this Department begin in the Second Class, and are as follows:
SECOND CLASS.—Railroad Curves, Ordinates, Turnouts, Crossings, Leveling, Gradients, Setting Slope
Stakes, Excavations. Embankments and Railway Appliances
FIRST CLASS.—Building Materials, Strength of Materials, Strains, Mortars and Cements, Masonry,
Foundations on Land and in Water, Framing, Roofs, Arches, Bridges, Topographical Surveying, Common Roads, Pikes and Railroads, Canais, River and Sea Coast Improvements.

Theory and practice are combined in both classes.

TEXT-BOOKS.

SECOND CLASS.—Hanck's Field Rook. Gillespies Roads and Railroads. Barry's Railway Appliances.

SECOND CLASS.—Henck's Field Book, Gillespie, Roads and Railroads, Barry's Railway Appliances. First Class.—Mahan's Civil Engineering, and Allan's Strength of Beams under Transverse Loads (or their equivalent), with Lectures.

DRAWING

Drawing, in the Second, Third and Fourth Classes, is obligatory on the students of all the courses. In the First Class, only the students in Mechanics and Engineering are required to draw.

The Fourth Class students practice Linear and Model Drawing. In the Third Class the elementary principles of Orthographic and Isometrical Projections, Shades and Shadows, and Practical Perspective are taught.

In the Second Class, the instruction embraces Orthographic Projections, Isometric Drawing, Shades and Shadows, Tinting in India Ink and Colors, Sketches of Tools and Machines, Plans, Elevations and Cross Sections of Buildings, and Perspective:

The First Class are taught Perspective and Topographic Drawing; Drawings of Machines, Roofs, Bridges , &c. Plans, Profiles and Sections of Railroad Surveys complete the instruction in this Department.

BOOKS

FOURTH CLASS.—Davidson's Linear Drawing, Davidson's Model Drawing.
THIRD CLASS.—Davidson's Projections, Davidson's Practical Perspective,
SECOND CLASS.—Davidson's Building Construction, Minific's Mechanical Drawing. First Class.—Mahan's Industrial Drawing, French, German and American Plates belonging to the

AGRICULTURE.

PROF. J. S. NEWMAN.

instruction in this department commences with the Third or Sophomore Class and continues through the Second and First Classes. The subject is taught principally by lectures in which it is treated as an applied science, making the application of the teachings of the natural sciences to the art of agriculture, using the farm of the Experiment Station as a laboratory for the practical illustration of the lecture room instruction.

The classes accompany the professor (who is also Director of the Station), into the field, garden, orchard, vineyard, the green house and stock yard, where lectures are delivered in the presence of the work in progress, the objects and results of experiments explained, the propagation, planting, pruning and cultivation of plants illustrated; and so are as deemed necessary for thorough instruction manual labor, required of the students in any and every department of the farm. The principles of stock-breeding are taught in the lecture room and the practice illustrated on the farm.

Every principle and theory taught in the lecture room will be thoroughly illustrated and exemplified upon the farm which, within the next twelve months, will be made complete in all its appointments. The first class will be required to keep accurate records of all work done upon the farm including frequent observations of the progress of experiments. In a word, they will be required to keep just such resords of the farm as though they were its proprietors.

AGRICULTURAL EXPERIMENT STATION.

J. S. NEWMAN, DIRECTOR.

Prop. W. C. Stubbs, Chemist.

W. L. HUTCHINSON. Assistants. W. U. ACREE.

The State Agriculty ral Experiment Station is connected with the College.

The farm of the Station is adjacent to the College buildings and is used by the professor of agriculture to illustrate his lecture-room instruction. Here a great variety of experiments in Agriculture, the stock breeding and stock feeding will serve not only the purposes of instruction to the students but will afford valuable information to the farmers of the State, many of whom already show their appreciation of its work by visiting it for the purpose of inspecting the experiments in progress.

Bulletins are issued regularly through the State Department of Agriculture and widely distributed over the State by the Commissioner.

MODERN LANGUAGES AND ENGLISH LITERATURE.

PROF. C. C. THACH.

ENGLISH.

In this department the student will be carried through a systematic course of study in the English Language and Literature. In the courses of study which do not include the Ancient Classics, a fuil course in English is especially important. It is therefore designed, as much as the time allotted permits, to familiarize the student by frequent exercises with the standard authors of the language. The course of study is as follows:

FOURTH CLASS.—3 hours a week—study of Grammar: The principles of special and general composition, with frequent brief papers illustrating the laws studied.

THIRD CLASS.—3 hours a week.—study of Style: Analysis of the best selections of Prose and Poetry.

Frequent essays on Literary and Historical themes.

SECOND CLASS.—3 hours a week.—Critical study of English Classics, Shakespeare, Goldsmith, Milton, Longfellow: Essays.

FIRST CLASS.—2 hours first term—Outlines of General Literature, History of English Literature.

First Class.—2 hours first term—Outlines of General Literature, History of English Literature.
Weekly exercises in declamation are held in the Third Class.
Three original orations are required during the year of each student in the First and Second Classes.

MODERN LANGUAGES.

No attempt is made in this department to teach a student to speak French and German. The aim is togive such a facility in reading these two languages as will afford ready access to the important scientific papers in foreign journals. The following courses are pursued:

FRENCH—1st term—Otto's Grammar, part I: Exercises in writing French, French Readings.

2nd term—Otto's Grammar, part II: French Composition, Racine's Athalic.

3rd term—Composition, Scientific French.

German—1st term—Otto's Grammar, part I: Exercises in writing German, German Readings, 2nd term—Schiller's Wilhelm Tell. Otto's Grammar, part II.
3rd term—Scientific German and Composition.

MILITARY SCIENCE AND TACTICS.

COL. W. LEROY BROUN, PRESIDENT.

MAJ. T. H. FRAZER, COMMANDANT.

Military Science and Tactics are required to be taught in this Institution by law. This law is faithfully carried out, by imparting to each student not physically incaracitated to bear arms, practical instruction in the School of the Soldier, of the Company, and of the Battalion; also in Guard Mounting, Inspections, Dress Parade. Reviews, &c. The College is provided, by the State, with breech-loading Cadet muskets, swords and accourtrements.

The following uniform has been prescribed for dress, viz.: Sack coat of West Point Cadet grey; grey pants, vest and cap: trimmings black. A very neat and serviceable dress suit can be obtained here at about \$16. This is less expensive than the usual clothing. All students are required to wear this uniform at all times during the term.

form at all times during the term.

The Drills are short, and the military duty involves no hardship. The Military Drill is a health-giving exercise, and its good effects in the development of the physique and improvement of the carriage of the Cadet are manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, one 1st. Lieutenant, and one 2nd Lieutenant, with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the Faculty, on nomination of the Commandant, and are continuous unless forfeited by absence or misconduct. absence or misconduct.

No military duty is required of the privates of the First (lass, except to Drill with the Battalion.

The First and Second Classes recite once a week in Military Tactics.

POST-GRADUATE DEGREES.

There are two Post-Graduate Degrees-

MASTER OF SCIENCE.

CIVIL ENGINEER.

Any graduate of this College, who shall, after graduation, actively engage, for at least three years, in literary or scientific work in the line of his profession, and who may, by an examination prescribed by the Faculty, give satisfactory evidence of sufficient advancement, shall be entitled to a Post-Graduate Development of the graduate of the gr the Faculty, give satisfactory evidence of sufficient advancement, shall be entitled to a Post-Graduate Degree. The requisite course of study and the nature of the examination may be obtained by correspondence with the Faculty. A Post-Graduate Degree also may be obtained by a graduate by one year's residence at the College spent in the successful prosecution of such a course of applied Sciences as will be prescribed by the Faculty.

Applicants for Post-Graduate Degrees must matriculate and deposit with the Treasurer the amount of their Diploma fees. They shall also write and present to the Faculty satisfactory theses upon some subject pertaining to their professions.

subject pertaining to their professions.

Resident graduates may prosecute the studies in any Department of the College without payment of regular fees.

CERTIFICATES OF DISTINCTION

Will be awarded to the first four students in the different subjects of each class, provided their grade is above 90 per cent., and they have satisfactorily passed all the regular examinations of that

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the ϵ fficers of instruction, in a form shapped to permanent preservation. From this record a circular or statement is sent to the parent or guardian monthly.

EXAMINATIONS.

Written recitations or monthly examinations on the studies of the month are held at the option of

the Professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examinations can be promoted to the next list required that every student who enters the College shall remain through the examinations at within six weeks of the examinations, except in extreme cases.

At stated intervals during the year, all students, except those of the First Class, are required to Examinations for Degrees or Certificates of proficiency embrace, the entire subject of study in the Course.

MUSEUM OF NATURAL HISTORY AND GEOLOGY.

Many valuable additions have been made, to the various branches of this Museum within the past lew years. Contributions have been received from different States of the Union, from England, Italy, France

and the Bermuda Islands.

and the Bermuda Islands.

The Geology of Alabama is well illustrated with minerals, fossiliferous and non-fossiliferous rocks from the different formations of the State. The Museum is divided into the following departments: Mineralogical, Conchological, Geological, Zoological and Botanical. Each department is systematically arranged and catalogued for study and display.

The entire collection of the Museum, added to the private Cabinet belonging to the Professor of Natural History, numbers more than 30,000 specimens.

MUSEUM OF MECHANIC ARTS.

Some progress has been made in establishing a Museum of Mechanic Arts. Already there has been collected a number of the products of manufacture, giving illustrations of various branches of industry. It is proposed to make this an important feature in the College, by exhibiting, as far as possible, the various processes and products of manufacture.

MUSEUM OF AGRICULTURE.

The Agricultural Museum is intended to illustrate, as far as possible, the agricultural products of this and other countries. It now contains ucarly 1,000 specimens, obtained by domations and by a system of exchanges with other Agricultural Colleges, illustrating varieties of Soil, Cotton, Wheat, Oats, Corn, Pears. Grasses, &c.

CHEMICAL LABORATORY

The Chemical Laboratory is admirably fitted up for work in analysis. It consists of a Lecture Room, furnished with counters, pneumatic trough, gasometer and large glass case; a Work Room, with twenty-five tables; a Furnace Room, and a Balance Room. All are supplied with gas and water, every student pursuing Analytical Chemistry is provided with a separate work table, the necessary every student pursuing Analytical Chemistry is provided with a separate work table, the necessary chemicals and apparatus, a jet of gas with Bunsen's burners, and enameled water sinks. In the Balance Room are balances made by Oertling, of London, and Becker, of New York. An Annual fee of \$10 is paid by students in the Courses of Agriculture and Science for the use of Chemicals in the Laboratory. oratory.

AND LABORATORY OF EXPERIMENT LABORATORY STATE STATION.

WM. C STUBES CHEMIST IN CHARGE,

W. U. ACREE | Assistants. W. L. HUTCHINSON

During the past year a State Laboratory, excellent in all its appointments has been established atconsiderable expense for the execution of the following work:

lst. Analysis of Commercial Fertilizers required by act of General Assembly establishing a Department
of Agriculture.

Ist. Analysis of Commercial Fertilizers required by act of the data of Agriculture.

2nd. Analyses of Minerals, Marls, and Orcs for Department of Agriculture.

2nd. Analyses for State Experiment Station.

4th. Analyses for private parties.

Analyses under first head are made without charge when taken according to instructions furnished.

Analyses under first head are made without charge when taken according to instructions furnished.

Analyses under first head are made without charge when taken according to instructions furnished.

Analyses under first head are made without charge when taken according to instructions furnished.

Commissioner of Agriculture. Those under 2nd. and 3rd. heads are done only when ordered by by Commissioner of Agriculture and Director of Experiment Station. Analyses under 4th. head, will be Commissioner of Agriculture and Director of Chemist in charge, they are for public good, otherwise reasonable charges will be made.

138 Quantitative analyses have been performed during the past year, distributed as follows:

138 Quantitative analyses have been performed during the past year, distributed as follows:

138 Quantitative analyses have been performed during the past year, distributed as follows:

138 Quantitative analyses have been performed furning the past year, distributed as follows:

138 Quantitative analyses have been performed furning the past year, distributed as follows:

139 Quantitative analyses have been performed furning the past year, distributed as follows:

130 Quantitative analyses of Fertilizers under 1st Head.

12 analyses of Marls, Phosphates, Iron and Experiment Station.

52 analyses of Fertilizers, Ores, Marls, Waters, &c.

Besides the above a number of quantitative determinations have been made.

LIBRARY.

· Landon

A room in the College building is appropriated to the Library, but the number of books at present is not large. A portion of the recent appropriation made by the State Legislature will be used in the purchase of books. For this purpose there is also paid a small annual fee by each student.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the Faculty. 21185

PRINTING OFFICE.

By authority of the Board of Trustees a complete outfit for printing has been purchased for the purpose of economy and convenience in printing the reports, bulletins, &c., and to afford facilities to the students of the college for learning type setting. The printing office occupies two rooms in the college building and will be open each afternoon for practice by the cadets.

DISCIPLINE.

The government of the College is administered by the President and Faculty, in accordance with the Code of Laws and Regulations enacted by the Trustees. and furnished to each student upon matriculation.

Attention to study, and punctuality in attendance on recitations, and all other duties, will be made the condition of every student's continuance at the

College.

Students are prohibited from having in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICES.

Religious services are held every morning in the Chapel. The students are required to attend these exercises, and also to attend the church of their choice at 'least once on Sunday. Opportunities are also offered' for attending Bible Classes every Sunday.

LOCATION AND BUILDING.

The College is situated in the town of Auburn, sixty miles from Montgomery, directly on the line of the Western Railroad.

The region is high and healthful—821 feet above tide water,

The College building is an excellent brick edifice, which has recently been thoroughly refitted and repainted, with four stories, containing, in all, thirtyeight rooms, including two well furnished society halls, lecture rooms and offices, with Chemical Laboratory, Cabinets and Agricultural Museum.

Ti i LANGDON HALL.

This is a separate Hall recently erected, the second story of which is a commodious audience room 90 by 50 feet, appropriated to public exercises. The lower story is designed for an armory and other purposes.

By statute of the State, the sale of spirituous liquors and keeping of gaming saloons of every kind, within five miles of Auburn, are forbidden.

APPROPRIATIONS BY THE STATE LEGISLATURE.

The last Legislature of the State appropriated the sum of \$30,000 to this College, to be expended in buildings, repairs, the purchase of apparatus for the scientific departments, &c. Also, for the purpose of establishing an Experiment Station, to conduct experiments and illustrate improved methods in agriculture, and to have such chemical analyses of commercial fertilizers made as may be required, there was appropriated to this College a portion of the amount accruing from the special tax on all fertilizers sold in the State.

The Department of Agriculture, recently established, is by law located at Auburn. The office of the Commissioner is in the College building.

LITERARY SOCIETIES.

There are two Literary Societies—the Wirt and Websterian—connected with the College. Each has a commodious hall, handsomely fitted up, a library of standard and miscellaneous works, and a reading room. Their weekly exercises add to the facilities afforded by the College for practice in composition, elecution and discussion.

These Societies hold celebrations on the evenings of Thanksgiving. Day and the 22nd of February, and also on Monday and Tuesday evenings during Commencement week. They elect, annually, with the approval of the Faculty, an orator to represent them at the close of the year.

ARBOR DAY.

The 22nd of February is designated, by order of the Tructees, Arbor Day. It is a holiday, on which students are encouraged, with ceremonial celebrations, to take part in planting trees on the College grounds.

SOCIETY OF THE ALUMNI.

The annual Alumni Oration, by a member of the Society, is delivered in the Chapel, Wednesday afternoon of Commencement week. T. H. Frazer, President; T. J. Lamar, Vice President; C. C. Thach, Treasurer and Secretary; W. H. Blake of '79, Orator for 1884—85.

ALUMNI SCHOLARSHIP.

At its last annual meeting, June 24, the Society established a scholarship to be known as the Alumni Scholarship. The fund for the scholarship is to be raised by voluntary contributions from members of the society, to be paid annually, and the beneficiary is to be elected by the Society at its annual meeting in June. The Executive Committee, who have charge of this fund for the present year and to whom all communications should be directed, are Messrs.

I raizer and C. C. Thach, Auburn, Ala., and Mr. C. H. Lindsey, Mobile Ala.

Great good is to be expected from this movement, and the society should congratulate itself upon this advancement toward permanent organization.

BOARDING.

Students, after selecting their boarding-houses, will not be permitted to make changes without obtaining permission from the Faculty, having first given two weeks' notice.

The Faculty are authorized to remove students from boarding-houses when it becomes manifest that they are failing in their duties from improper associations, or for any other reason requiring such removal.

EXPENSES.

TUITION FREE TO ALL CADETS, IN OR OUT OF THE STATE.	
I idental for now town in advance	
Library fee, per annum	00 50
Surgeon's fee. Board, in private families, per month with fuel and light, \$12 to 15	00

FUNDS OF STUDENTS.

Parents and guardians are requested to deposit with the Treasurer of the College all funds designed for sons or wards, whether for regular charges of College fees and board or any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay for all expenses incurred by the student, including board, uniform, books, &c., only when approved by the President. A monthly statement of the receipts and expenditures will be forwarded.

ACADEMIC YEAR.

The Academic Year, which is divided into two equal terms, commences on the last Wednesday in September, and ends on the last Wednesday in June following, which is Commencement day. The second term begins on the second Wednesday in February.

CONTRIBUTIONS TO THE MUSEUM.

The following persons have made valuable additions to the various branches

of the Museum:

J. N. Bradford, J. T. McCrory, L. Payne, Dr. J. T. Tichenor, Miss M. White, Mrs. F. A. Lipscomb, R. W. Burton, T, L. Cunningham, S. H. Trowbridge, J. D. Trammell, S. J. Armstrong, Rev. J. M. Mason, A. F. Whitfield, J. M. Allen, Mrs. Bush, Mrs. P. H. Mell, W. E. Davis, C. M. Awtrey, Judge H. D. Clayton, G. N. Gilmer, Prof. W. C. Stubbs, George Broun, L. Boyd, B. B. Ross, Prof J. S. Newman, Miss Newman, D. D. McLeod, N. Davis, Miss. F. B. Payne, L. Levy, Mrs. O. D. Smith, Mrs. C. C. Perry, B. H. Boyd, J. D. Trammell, S. McAuley, W. Persons, Mrs. R. B. Smith, Prof. John M. Tyler, James Mason, B. C. Harvy, Mr. Rennel, Mrs. Hurt, Joe Holifield, Miss Kate Dowdell, Mr. Caslin W. Slaughter, Rev. W. E. Lloyd, Maj. T. H. Frazer, C. E. Mason, Paul Hoffman, Dr. Thomas S. Cobb, H. C. Armstrong, Jr.

Complete set of standard weights and measures from the United States Gov-

ernment.

CALENDAR.

1884-'85.

Entrance Examinations	Monday and Tuesday, Sept. 22-23.
Opening of Session	Wednesday, Sept. 24.
Intermediate Examinations	Feb. 4-10.
Opening of Second Term	Wednesday Feb. 11.
Commencement Sermon	Sunday June 21.
Commencement day	Wednesday June 24.
Commencement day	

CIRCULAR.

0-) 4 (----

The design of this institution is to teach primarily the principles and the applications of Science, at the same time not neglecting the fundamental discipline obtained by a careful study of the Languages. All students are required to study the English Language; the French, German and Latin Languages are optional, being required only in one course of study.

This College does not undertake to teach any handicraft, trade, or special skill in any art, but in the short time a student is under its influence it will endeavor to subject him to the exact and accurate training of science-discipline, giving prominence in all cases to the teachings of the sciences and their ap-

plications.

As a valuable auxiliary to this science-training all students will be taught geometrical drawing, a study which tends to train both the eye and the hand to

accuracy of observation and execution.

It is expected that a Laboratory for Practical Mechanics will be fitted up within the year, where the students under the supervision of a trained Professer will be taught practically the applications of the principles of mechanics.

The departments of Engineering and Physics will be supplied with new

apparatus.

By act of the Legislature the office of the Commissioner of Agriculture and the Agricultural Experiment Station for the state of Ala., are located at Auburn. The Professor of Agriculture is also Director of the Experiment Station, and the Prof. of Chemistry is State Chemist whose duty it is to analyze fertilizers for the benefit of the general agricultural interests of the state.

This public work done at Auburn in behalf of the agricultural and industrial interests of the state affords to students an unusual opportunity to become fa-

miliar with its agriculture, its defects and remedies.

In the Chemical Laboratory last year many analyses were made and the re-

sults reported in the regular bulletins.

While every attention will be given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought and thus qualify them for the duties of life, their moral and christian training will always constitute the prominent care and thought of the President and Faculty, and the constant for twill be made to duly impress all students with the superiority of high moral character to mere intellectual attainments.

WM. LEROY BROUN, President.

Auburn Ala., July 10th 1884.



Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

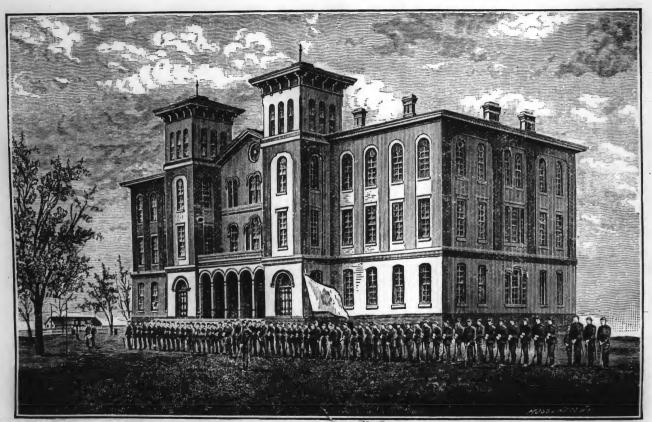
1884

```
OCLC: 36819601
                           Rec stat:
  Entered:
             19970429
                           Replaced:
                                        19970429
                                                      Used:
                                                              19970429
Type: a
              ELvl: I
                          Srce: d
                                       GPub: s
                                                   Ctrl:
                                                               Lang:
                                                                      enq
  BLvl: s
              Form: a
                          Conf: 0
                                       Freq: a
                                                               Ctry:
                                                   MRec:
                                                                      alu
  S/L:
        0
              Orig:
                          EntW:
                                       Regl: r
                                                   ISSN:
                                                               Alph:
  Desc: a
              SrTp:
                          Cont:
                                       DtSt: d
                                                   Dates: 1873,1893 ¶
    1 040
              AAA +c AAA ¶
    2 007
              h +b c +d b +e f +f u +g b +h a +i u +j p ¶
    3 043
              n-us-al ¶
    4 090
              LD271 +b .A76 ¶
    5 090
              *b ¶
    6 049
              AAAA ¶
    7 110 2
              Agricultural and Mechanical College of Alabama. ¶
    8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
    9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama 1
11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama ¶
 12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama ¶
13 260
              Auburn, Ala. : +b The College, ¶
  14 300
              21 v. ; +c 21 cm. ¶
15 310
              Annual ¶
 16 362 0
              1872-73-1892-93. ¶
  17 500
              Title varies slightly. ¶
18 533
              Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
#d 1997. #c microfilm reels : negative ; 35 mm. ¶
19 539
              d +b 1873 +c 1893 +d alu +e u +f u +g a ¶
  20 650 0 Universities and colleges +z Alabama +x Periodicals. ¶
> 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
▶ 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
23 785 00 Agricultural and Mechanical College of Alabama. +t Catalogue of
the Alabama Polytechnic Institute ¶
```

24 830 0 USAIN State and Local Literature Preservation Project 1

ATABAMA POLYTECHNIC INSTITUTE CATALOGUE 1884-85

AU LD271 .A76 1884/85 c.2



Alabama Agricultural & Mechanical College.

CATALOGUE

OF THE

STATE

AGRICULTURAL & MECHANICAL

COLLEGE

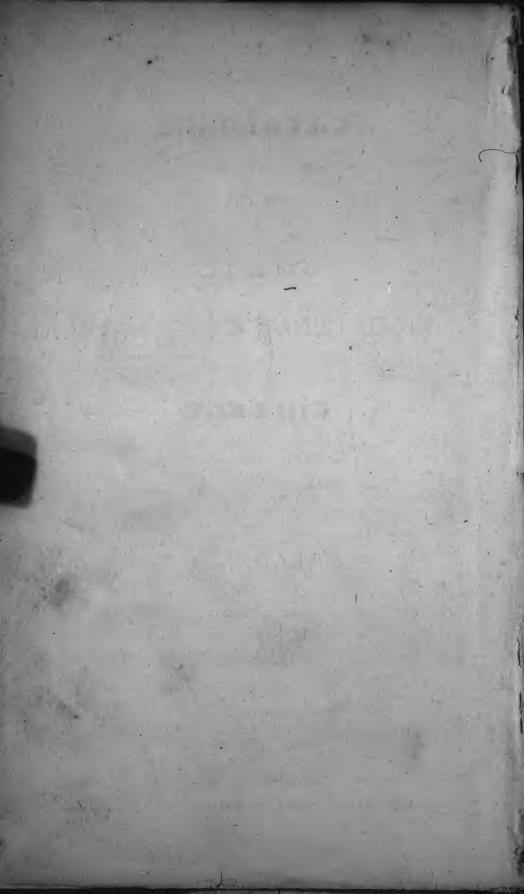
 \mathbf{OF}

ALABAMA.

1884-'85.

AUBURN.

Printed at the A. & M. College by the students of the printing class.



C. 2 AGRICULTURAL AND MECHANICAL COLLEGE.

3

An act to establish a college at Auburn, in Lee county, Alabama, for the benefit of agriculture and the mechanic arts, pursuant to an act of the Congress of the United States, approved February 26, 1872.

SEC. 1. Be it enacted by the General Assembly of Alabama, That there be and hereby is established at Auburn, in Lee county, Alabama, a college for the benefit of agriculture and the mechanic arts, whose leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as relate to agriculture and the mechanic arts, in conformity to an act of the congress of the United States entitled an act donating public land to the several States and territories which may provide colleges for the benefit of agriculture and the mechanic arts, approved July 2d, eighteen hundred and sixty two, under such regulations as may be hereafter provided.

SEC. 2. Be it further enacted, That the "East Alabama male college", a body corrorate, created by the laws of Alabama, having by David Clopton, the president, a d George P.Harrison, secretary of its board of trustees, made and executed a deed of conveyance of the college building lands and appurtenances therete attached, as described and set forth in said deed, to the State of Alaba na. for the purpose therein shown, bearing date of the 17th. day of February, eighteen hundred and seventy-two, said conveyance is hereby accepted for the purposes therein set forth on the part of the State.

An act in relation to the Agricultural and Mechanical College of Alabama, approved February 26, 1872.

SEC. 8. Be it further enacted, That the interest, income and proceeds arising from the investment of the funds created by the sale of lands or land script, granted by the Congress of the United States to this State for the promotion of agricultural and mechancal arts, shall be paid to the treasurer of said college as the same may accrue and be needed for the purposes of said agricultural and mechanical college, on the order of the said treasurer upon the auditor of the State, who shall draw his warrant on the treasurer_of the State for the same.

An act to establish a department of Agriculture for the State of Alabama, approved February 23, 1883.

SEC. 17 Be it further enacted That for the purpose of establishing an experimental farm or station, one-third of the net proceeds annually accruing from the sale of tags as hereinbefore provided shall be paid to the Treasurer of the Agricultural and Mechanical College, on the approval of the Governor, to be disbursed under the direction of the Board of Trustees of said institution, for the development of the Agricultural and Mechanical Departments of said college; Provided, the trustees of said college shall cause to be made at such college all analyses of fertilizers that may be required under the provisions of this act without any charge therefor; And provided further. That the Trustees shall jestablish and maintain an agricultural experimental farm or station, where careful experiments shall be made in scientific agriculture, results of which, together with other needed information shall be furnished the Commissioner of Agriculture for publication in his monthly bulletins and annual reports.

BOARD OF TRUSTEES.

His Excellency, E. A. O'NEAL, President,

Hon. SOLOMON PALMER, Superintendant of Education,

Hon. C. C. LANGDON,

Hon. W. H. BARNES,

Hon. H. D. CLAYTON,

Hon. JONATHAN HARALSON,

Hon, R. F. LIGON.

Hon. JOHN W. BISHOP,

Hon. J. G. GILCHRIST,

Hon. M. L. STANSEL,

Hon. J. N. MALONE,

term expires 1887.

term expires 1887.

term expires, 1887.

term expires, 1889.

term expires, 1889.

term expires, 1889.

term expires, 1891.

term expires, 1891.

term expires, 1891.

Mobile.

ex-officio.

ex-officio.

Opelika.

Clayton.

Selma.

Tuskegee.

Talledega.

Montgomery.

Carrollton.

Athens.

E. T. GLENN, Treasurer. F. M. REESE, Secretary.

FACULTY AND OFFICERS.

WM, LEROY BROUN, M. A., LL. D.,

President and Professor of Natural Philosophy.

J. T. DUNKLIN, A. M., LL. D., Professor of Latin Language and History.

WM. C. STUBBS. A. M.,

Professor of General and Agricultural Chemistry.

OTIS D. SMITH, A. M.,
Professor of Mathematics.

P. H. MELL, Jr., M. E., PH. D., Professor of Natural History and Geology.

GEN. J. H. LANE, C. E., A M.,

Professor of Civil Engineering and Drawing:

J. S. NEWMAN,

Professor of Agriculture and Director of the Experiment Station.

C. C. THACH, B. E.,

Professor of Modern Languages and English Literature.

Professor of Practical Mechanics.

MAJ. T. H. FRAZER, B. E..

Commandant and Instructor in Mathematics and Languages.

W. L_HUTCHINSON, B. S.,
Assistant in Laboratory.

B. B. ROSS, A. B.,
Assistant in Laboratory.

J. H. DRAKE, M. D., Surgeon.

C. C. THACH,
Recording Secretary.

P. H. MELL, JR., Corresponding Secretary.

> E. T. GLENN, Librarian.

OBJECT OF THE COLLEGE.

The leading object of this College is to teach the principles and the applications of science.

It does not undertake to teach any special handicraft or manual skill in any art, but in the short time a student is under its influence, it will endeavor to subject him to the exact and accurate training of science discipline, giving prominence in its instruction to the sciences and their applications so far as the facilities at its disposal will permit.

The essential discipline obtained by an accurate and critical study of languages is not neglected. All students are required to study the English language in each course of study for a degree, thus giving it special prominence. The Latin, French and German languages are taught, and opportunity for their study is offered to students in any course. In the Latin-Science course they are required for a degree.

By the College thus, in fact, becoming a distinctive School of Industrial Science, or Polytechnic Institute, work of great value to the youth of the state may be done in fitting them by a thorough Science-discipline for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought and thus qualify them for the duties of life, whatever their vocation may be, their moral and 'christian training will always constitute the prominent care and thought of the President and Faculty.

COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences with their applications; Agriculture, Mechanics, Astronomy, Mathematics, Engineering, Drawing, English, French, German and Latin Languages, History and Political Economy.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

LABORATORIES AND FACILITIES FOR INSTRUCTION.

The college now possesses facilities for giving instruction in the applied sciences in the following departments:

I-IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with a limited number of illustrative specimens of stock of select varieties.

By act of the Legislature the office of the Commissioner of Agriculture and the Experiment Station for the state of Alabama are located at Auburn. The Professor of Agriculture is also Director of the Experiment Station, and the Professor of Chemistry is State Chemist whose duty it is to analyze fertilizers for the benefit of the general agricultural interests of the state.

This public work done at Auburn in behalf of the agricultural and industrial interests of the state affords to students an unusual opportunity to become familiar with its agriculture, its defects and remedies.

The Experiment Station is not a model farm, but a place where experiments and scientific investigations in agriculture are made at the public expense for the common good, and where the young men at the college receive instruction in the methods applied.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard etc., where lectures are delivered in presence of the objects discussed.

II-IN PRACTICAL MECHANICS.

The Mechanic Art Laboratory will be used as an auxiliary in industrial education, to instruct in the arts that constitute the foundation of various industrial pursuits, and thus aid in giving mentally and manually, in theory and practice, that sound education that will in a measure qualify a young man to enter upon one of the associated industries; that education which comes of training the eye and the hand as well as the mind, and tends to associate skilled manual and mental labor. This Laboratory will be equipped and ready for the reception of students by the opening of the next session.

It will be located in a commodious hall 90 by 50 feet, and be provided with a steam engine, machines, and tools, useful for instruction.

The labor performed by the students will be instructive in character as in any other college laboratory, and the classes will be taught in sections under the supervision of a competent professor. There will be no attempt to teach students skill in constructing special articles of comnercial value, but all exercises will be systematically arranged for purposes of education.

III-IN PRACTICAL CHEMISTRY.

The Chemical Laboratory is well supplied with apparatus and facilities for instruction in Chemistry. It is provided with gas and water, a steam boiler for heating etc., filtering pumps and six analytical balances etc., with working tables for thirty students.

It is situated in the first story of the main building and occupies six rooms, one for special agricultural analysis, besides two small balance rooms.

IV-IN PHYSICS.

This department is now having valuable additions made to its apparatus, in Electricity, Magnetism, Heat etc. There has recently been added a Toepler-Holtz Electric machine, Gramme machine, Rueprecht's Physical Balance, Jamin's magnets. etc., with the necessary apparatus for an elementary physical laboratory.

v-IN BOTANY.

Besides the preserved specimens of plants, grasses etc., this department is provided with Auzoux's beautiful Clastic models of seeds and flowers for teaching Botany. The Botanical Laboratory is provided with tables and ten Beck's microscopes for the use of the students.

vi-IN MINERALOGY AND GEOLOGY.

In this department the collections for illustration are quite extensive embracing more than 20,000 specimens all well arranged in glass cases.

VII-IN ENGINEERING, SURVEYING, ETC.

This department is well supplied with apparatus, having recently had several valuable additions nade to its equipment, with which all important field work is taught.

AGRICULTURAL AND MECHANICAL COLLEGE.

VIII-IN DRAWING.

All the students in college are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. Well lighted drawing rooms are provided with suitable tables. For the advanced students there are individual tables adjustable to different heights and angles of inclination.

IX-IN PRINTING AND TELEGRAPHY.

The printing office is supplied with a new Gordon Press, different fonts of type, and stands for twelve students. In the same room are the instruments for teaching Telegraphy.

x-MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition, the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

MANUAL LABOR.

No manual labor is required of students but that which is educative in its character and is a part of the scheme of education as developed in the different laboratories of chemistry, physics, mechanic arts etc. Hence there is no opportunity at this college for a student to earn money by his labor. He should come prepared to devote all his time and energy to his academic duties.

THE COLLEGE BUILDING.

This is a handsome well constructed brick building one hundred and sixty by seventy-five feet, containing in all thirty-eight rooms.

This building is not used for dormitories for students, but is exclusively appropriated for purposes of instruction. It contains the lecture rooms and offices of the professors, the library, the laboratories, cabinets, assembly room, printing office and two large well furnished society halls with their library and committee rooms.

All the lecture rooms are provided with modern college furniture.

LANGDON HALL.

This is a two story building ninety by fifty feet, recently constructed. The second story is the audience hall and for commencement and other public occasions.

The first story is appropriated to the Mechanic Art Laboratory.

CATALOGUE OF STUDENTS.

FOR THE SESSION 1884-'85.

ABREVIATIONS.

AgAgriculture. EngEngineering. GenlGeneral Course for Students	L. Sc
--	-------

UNDERGRADUATES.

FIRST CLASS.

NAME.	RESIDENCE.	COURSE.
Allen, James Madison.	Montgomery county.	Eng.
Andrews, William Thomas	Mobile county.	Eng.
Collier, Robert Edward Lee.	Lee county.	Eng.
Penn, Walton Thomas.	Chambers county.	Ag.
Thach, Robert Henry.	Limestone county.	Eng.
	OND CLASS.	
Allison, Gilmer Alexander.	Lee county.	Ag.
Boozer, Henry West.	Georgia.	Ag.
Burton, Benjamin Sullivan.	Georgia.	Eng.
Capps, Luther Martin.	Henry county,	Ag.
Carter, Julius Cæsar.	Montgomery county.	Ag.
Howell, Lawson Franklin.	Georgia.	- Ag.
McCrory, James Thomas.	Georgia.	Ag.
McIntyre, Erastus Stonume.	Conecuh county.	Eng.
Morgan, James William, Jr.	Lauderdale county.	Eng.
Newman, Clifford Lewis.	Lee county.	Ag.
Pace, M. Downer.	Georgia.	Eng.
Perry, Frank Howard.	Lee county	L. Sc.
Pitts, Sterling Chambers.	Russell county.	Eng.
Ross, Charles Hunter.	Lee county.	Eng.
Samford, William Hodge.	Lee county.	Eng.

Simmons, Robert Jasper Hogue. Dale county. L. Sc. L. Sc. Smith, Robert Billups. Chambers county, Spratling, Leckinski Ware. L. Sc. Chambers county. Tillman, Henry Young. Georgia. Ag. Varner, Charles Monroe. Chambers county. Ag. Ag. Weaver, Dudley Saunders. Tennessee. Eng. Whitfield, Augustus Foscue. Marengo county. Wilkinson, Levi Washington. Dale county. Ag. Ag. Zellars, Thomas Peter. Georgia.

THIRD CLASS.

Genl.. Mobile county. Alexander, Arthur John. Genl Allen, Vassar Lyle. Montgomery county. Genl. . Armstrong, Henry Clay Jr. Lee county. Genl. Barclay, Alexander Cambpell. Lawrence county. Sp. Georgia. Bates, Wilson Allen. Genl. Bennett, Robert Love. Lee county. Genl. Blalock, George Zadock. Georgia Sp. Bradford, John Nunn. Lee county. Genl. Lee county. Daughtry, Claudius Isador. Genl. Louisiana. Gordon, Elgee Kingsbury. Genl. Randolph county. Harris, Thomas Winston. Genl. Holland, Orlando Monroe. Lee county. Genl. Etowah county. Hollingsworth, Edward Tracy. Sp. Georgia. Huguley, George Abner. Genl. Lee county. Jones, Thomas Hugh. Genl. Lee county. Lamar, George Holt, Genl. Lawson, Oswell Thos. Crawford. Georgia. Genl. Lee county. Lloyd, Edward Read. Genl. Russell county. Long, Jesse Locke, Genl. Lee county. Newman, Wilson Herbert. Genl. Mobile county Oates, James Jethro. Sp Lee county. Persons, John William. Genl. Bibb county. Pratt, William Luther. Genl. Florida. Reese, James Simpson. Sp: Texas. Sauder, Albert. Sp. Texas. Sauder, Oscar, Sp. Mobile county. Schowalter, Mack Reynolds. Sp. Elmore county. Slaton, Charles C. Genl. Georgia. Wooley, Andrew Feaster.

FOURTH CLASS.

		100
Allen, John Pendergrass.	Lee county.	Genl.
Armstrong, Britain Dixon.	Lee county.	Genl.
Bedell, Howard Alburn	Lee county.	Genl.
Boyd, Thomas Jackson.	Lee county.	Sp.
Branch, Benjamin Evans.	Bullock county.	Genl.
Bridges, Nathaniel Columbus.	Georgia.	Sp.
Broun, George Fleming.	Lee county.	Genl.
Brown, John Tee.	Texas.	Genl
Burnett, Jesse Bell,	Georgia.	Genl.
Cary, Joseph Milton.	Bullock county.	Genl.
Cochran, Edmond Collins.	Mobile county.	Sp.
Crawford; Abednego Jackson.	Lee county.	Genl.
Drake John Hodges Jr.	Lee county.	Genl.
Gay, Edward Wright.	Montgomery county.	Genl
Glover, Milton.	Georgia.	Genl.
Hardin, John Wesley.	Lee county.	Sp.
Jordan, Henry Asbury.	Autauga county.	Sp.
Kent, Thomas Joshua.	Russell county.	Genl.
Klie, Preston Clark.	Marengo county.	Genl.
Lee, George Forbes.	Lee. county.	Sp.
Levy, Lionel Clarence.	Georgia.	Sp.
Lloyd, Andrew Manly.	Lee county.	Sp.
Mason, James Monroe.	Lee county.	Geul.
McMillan, William Wiley.	Russell county.	Genl.
Nonnenmacher, Eugene Louis.	Perry county.	Genl.
Oates, John Claborne.	Mobile county.	Genl.
Oliver Arthur Wesley.	Lee county.	Genl.
Oliver, Claude Lee.	Lee county.	Sp.
Orr, Frederick Burleson.	Morgan county.	Sp.
Phillips, William Russell.	Georgia.	Genl.
Pittman, Joseph Jasper.	Tallapoosa county	Genl.
Rives, Robert Glenn.	Montgomery county	Sp.
Robertson, Charles Meachin.	Montgomery county.	Sp.
Smith, Otis Oliver.	Lee county.	Genl.
Stubbs, Jefferson Dunbar.	Virginia.	Genl.
Taylor, Samuel Oliver.	Montgomery. county	Sp.
Thurpe, Thomas Killen.	Georgia.	Sp.
Torbet, Lonnie Luellyn.	Russell county.	Sp.
	Bullock county.	Genl.
Walker, Thacker Vivian.	Danok county.	

SUBSECTION FOURTH CLASS.

Andrews, William Thomas.	Georgia.
Bedell, Paul.	Lee county.
Broughton, Louis Edward.	Butler county.
Clanton, William Howard.	Macon county.
Duke, Edwin Walton.	Chilton county.
Duke, Thomas William.	Macon county.
Dunklin, Joseph.	Butler county.
Glenn, Charles Bowles.	Lee county.
Gordon, Douglas Francis	Louisiana.
Greene, Zachariah.	Lee county.
Guice, Thomas E.	Conecuh county,
Jackson, William Carson.	Lee county
Kelly, Reuben.	Russell county.
Lea, Sumter Jr.	Dallas county
Mastin, Thomas Benton.	Montgomery county.
McDavid, William Henry.	Florida.
Moseley, Clay Augustus.	Perry county.
Powers, Edward Clyde.	Lee county.
Reynolds, Walter Augustus.	Lee county,
Seibert, William,	Lowndes county.
Sellers, Rufus Frederick.	Bullock county.
Taylor, Hugh McGehee.	Montgomery county
Williams, James Lee.	Dallas county.

RECAPITULATION.

First Class					. 5
Second Class		1	*		24
Third Class					29
Fourth Class					39
Sub Fourth					23
	AP "				
Total					120

MILITARY ORGANIZATION

1884-'85.

Chillen marinis. W. L. Broun, President. Will state of the said of the MAJ. T. H. FRAZER, Commandant. J. H. DRAKE, M. D., Surgeon. introduction is

CADET OFFICERS.

STAFF.

R. H. Thach, Jr., Adjutant. C. H. Ross, Color Sergeant.

Marion mountly.

Bulley county.

nici incl

77 (100) 20.1

1 4

SUL

Correctly rescond

COMPANY A,

Captain, R. E. L. Collier. 1st. Lieut., W. T. Andrews. 2nd. Lieut!, B. S. Burton. 1st. Sergt., S. C. Pitts. 2nd. Sergt., D. S. Weaver. 3rd. Sergt., J. T. McCrory. 1st. Corp., J. S. Reese.

Judge of William & Long of G. A. Allison, Sergeant Major. F. H. Perry, Ordnance Sergeant. A STATE OF THE STA

Acottones, William Prints

Springer, William Howard

mile, tillrin Wolsen

(if one, Zachariah.

Hammal Tompel

well) off!

of land

STREET STATE

COMPANY B,

Captain, J. M. Allen. 1st. Lieut., T. P. Zellers. 2nd. Lieut., C. L. Newman. 1st. Sergt., L. W. Spratling. 2nd. Sergt., R. B. Smith. 3rd. Sergt., J. W. Morgan, Jr. 1st. Corp., E. T. Hollingsworth.

COMPANY C.

Captain, W. T. Penn. 1st. Lieut, L. F. Howell. 2nd. Lieut., 1st. Sergt., L. W. Wilkinson. 2ad. Sergt., L. M. Capps. 3rd. Sergt-, R. J. H. Simmons. 1st. Corp., E. K. Gordon.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character and not less than fourteen years of age. To enter the fourth class the aplicant should be qualified to pass a satisfactory examination in the following subjects:

1. Geography and History of the United States.

2. English.—(a.) An examination upon sentences containing incorrect English. (b.) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar, and division into paragraphs.

The subject of composition for 1885-86 will be taken from one cf the following works: Scott's Lady of the Lake, or Ivanhoe, David

Copperfield. 3. Mathematics—(a) Arithmetic, including Fundamental Operations; Common and Decimal Fractions; Denominate Numbers, the Metric System; Percentage, including Interest and Discount; Proportion; Extraction of the Square and Cube Roots. (b)—Algebra, to Quadratic Equations, as in Olney's Complete Algebra.

The applicant will derive great advantage from having studied elcmentary geometrical drawing, as in Kitchener's Geometrical Note

Book. For admission to the Latin-Science course a satisfactory examination will be required in the following additional subjects: Latin Grammar (Allen and Greenough), Latin Lessons (Leighton's), Ceasar (4 Books.)

ENTRANCE EXAMINATIONS.

Entrance examinations will be held on Monday and Tuesday preceding the opening in September, at which all applicants should be present.

If. upon examination, an applicant should be found deficient in any of the required studies, he will be assigned to a course of preliminary training, provided that his attainments in the English branches are such that he may, with one year's training. be prepared for the studies of the Fourth Class.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any

class previous to matriculation.

SUB-COLLEGE DEPARTMENT.

For students who are not prepared for the regular College classes, this department is regularly organized under the direction of an experienced instructor. These students are subject to the discipline of the College.

NUMBER OF EXERCISES.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work; drawing and military drill.

SPECIAL STUDENTS.

All students are advised to enter one of the regular prescribed courses for a degree,

Those who are not candidates for a degree will be permitted to take, with the advice of the Faculty, and the written approval of their parents or guardians, such subjects as they may prefer and for which they may be qualified.

COURSES OF INSTRUCTION.

There are three Degree Courses, each leading to the degree of Bachelor of Science, and requiring four years for its completion.

I.—COURSE IN AGRICULTURE AND CHEMISTRY.

II.—COURSE IN MECHANICS AND ENGINEERING

III.-LATIN SCIENCE COURSE.

There are also two Partial Courses, each requiring two years for its completion.

IV.—TWO YEAR'S COURSE IN AGRICULTURE
V.—TWO YEAR'S COURSE IN MECHANIC ARTS.

9

Course I. includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agricultural or chemical pursuits.

Course II. includes the principles and applications of the sciences that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the profession of engineering.

Course III. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who do not now propose to enter a technical profession but who propose ultimately to engage in some commercial or manufacturing business.

Courses IV. and V. have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are not able to continue at college four years and take one of the regular degree courses.

Students who complete either of these two-year courses, will, on passing a satisfactory examination, receive certificates indicating their attainments.

I.—COURSE IN AGRICULTURE AND CHEMISTRY

I.—COURSE IN AGRICU	LTURE AND CHEMISTRY.
First Term.	CH CLASS. Second Term.
3. English,	5. English.
2, History.	2 History.
5. Mathematics.	5. Mathematics.
5. Elementary Physics.	3. Elementary Physiology.
5. Drawing.	5. Drawing.
Mechanic Art Laboratory.	Mechanic Art Laboratory.
Military Drill.	Military Drill.
THIR	O CLASS
First Term. 3. English.	Second Term.
3. English.	2. Botany,
2. History.5. Mathematics.	2. Botany,
	3. Mathematics.
3. Chemistry.	
3. Agriculture.	5. Drawing.
5. Drawing.	5. Drawing.
Military Drill.	5. Drawing. Military Drill.
	D CLASS.
First Term.	Second Term. 3. English.
3. English.	3. Physics.
3. Physics.	4. Chemistry,
4. Chemistry,	2. Agriculture,
2. Agriculture.	2. Natural History, (laboratory.)
1. Tactics.	1. Tactics.
	5. Drawing.
5. Drawing. Chemical Laboratory.	Chemical Laboratory.
Military Drill.	Military Drill.
Military Drill.	Military Drill.
First Term.	Second Term.
2. English Literature, (a).	2. Political Economy. (a)
3. Mechanics. (a)	3. Astronomy. (a)
3. Natural History.	3. Natural History.
2. Agriculture.	2. Agriculture.
4. Industrial Chemistry,	4 Industria Chemistry.
1. Tactics.	1. Tactics.
Chemical Laboratory.	Chemical Laboratory.
	or he substituted for the subjects marked

Agriculture or Analytical Chemistry may be substituted for the subjects marked (a) in the First Class.

8

2

1

II—COURSE IN MECHANICS AND ENGINEERING.

FOURTH CLASS.				
First Term.	Lecond Term.			
3. English.	5. English.			
2. History. 5. Mathematics.	2. History.			
5. Mathematics.	5. Mathematics.			
5. Elementary Physics.	3. Elementary Physiology. 5. Drawing.			
5. Drawing.	5. Drawing.			
Machania Art Laharatary	Mochania A wt Labovetowy			
Military Drill.	Military Drill			
Military Drill	RD CLASS.			
First Term.	Second Term.			
3. English.	3. English.			
The state of the s	2. History.			
2. History. 5. Mathematics. 3. Chemistry.	2. History. 3. Mathematics.			
3 Chamistry	5. Chemistry.			
2 Agriculture (a)	3. Agriculture. (a.)			
3. Agriculture. (a.) 5. Drawing.	5. Drawing.			
Mechanic Art Laboratory	Mechanic Art Laboratory			
5. Drawing. Mechanic Art Laboratory. Military Drill.	Military Drill.			
Military Dilli.	Military Dill.			
The second secon				
· SECO.	ND CLASS.			
First Term.	Second Term.			
First Term.	Second Term.			
First Term. 3. English. (a).	Second Term. 3. English. (a.)			
First Term. 3. English. (a). 3. Physics. 5. Mathematics.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering. 5. Drawing.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering. 5. Drawing,	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering. 5. Drawing, 1. Tactics. Military Drill.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering. 5. Drawing, 1. Tactics. Military Drill.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering. 5. Drawing, 1. Tactics. Military Drill.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5 /Engineering. 5. Drawing. 1. Tactics. Military Drill. First Term.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. ST CLASS. Second Term. 2. Political Economy. (a.)			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5. /Engineering. 5. Drawing. 1. Tactics. Military Drill. First Term. 2. English Literature, (a.)	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. ST CLASS. Second Term. 2. Political Economy. (a.) 3. Astronomy.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5. /Engineering. 5. Drawing, 1. Tactics. Military Drill. First Term. 2. English Literature, (a.) 3. Mechanics. 2. Natural History.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. Second Term. 2. Political Economy. (a.) 3. Astronomy. 2. Natural History.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5. /Engineering. 5. Drawing, 1. Tactics. Military Drill. First Term. 2. English Literature, (a.) 3. Mechanics. 2. Natural History. 3 Mathematics	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. ST CLASS. Second Term. 2. Political Economy. (a.) 3. Astronomy. 2. Natural History. 3. Mathematics.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5. /Engineering. 5. Drawing, 1. Tactics. Military Drill. First Term. 2. English Literature, (a.) 3. Mechanics. 2. Natural History. 3 Mathematics	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. ST CLASS. Second Term. 2. Political Economy. (a.) 3. Astronomy. 2. Natural History. 3. Mathematics.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5. /Engineering. 5. Drawing, 1. Tactics. Military Drill. First Term. 2. English Literature, (a.) 3. Mechanics. 2. Natural History. 3 Mathematics	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. ST CLASS. Second Term. 2. Political Economy. (a.) 3. Astronomy. 2. Natural History. 3. Mathematics. 5. Engineering. 5. Drawing.			
First Term. 3. English. (a). 3. Physics. 5. Mathematics. 5. /Engineering. 5. Drawing, 1. Tactics. Military Drill. First Term. 2. English Literature, (a.) 3. Mechanics. 2. Natural History.	Second Term. 3. English. (a.) 3. Physics. 5. Mathematics. 5. Engineering. 5. Drawing. 1. Tactics. Military Drill. Second Term. 2. Political Economy. (a.) 3. Astronomy. 2. Natural History.			

French or German may be substituted for the subjects marked (a).

III.—LATIN-SCIENCE COURSE.

FOURTH CLASS.

	First	Term.
77		

- English.
 History.
- 5. Latin.
- 5. Mathematics.
- 5. Drawing.

 Mechanic Art Laboratory.

 Military Drill,

Second Term.

- 5. English.
- 2. History.
- 5. Latin.
- 5. Mathematics.
- Drawing.
 Mechanic Art Laboratory.
 Military Drill.

THIRD CLASS.

First Term.

- 5. Latin.
- 2. History.
- 5. Mathematics.
- 3. Chemistry.
- 5. Drawing.
 Military Drill.

Second Term.

- 5. Latin.
- 2. Botany.
- 3. Mathematics.
- 5. Chemistry.
- 5. Drawing.
 Military Drill.

SECOND CLASS.

First Term.

- 3. English.
- 3. Physics.
- 5. Mathematics.
- 3. Latin.
- 2. Natural History.
- 5. Drawing.
- 1. Tactics.

Military Drill.

Second Term.

- 3. English.
- 3. Physics.
- 5, Mathematics.
- 3. Latin.
- 2. Natural History.
- 5. Drawing.
- 1. Tactics.

Military Drill.

FIRST CLASS.

First Term.

- 2. English Literature.
- 3. Mechanics.
- 2. Natural History.
- 5. French.
- 4. German.
- 1. Tactics.

Second Term.

- 2. Political Economy.
- 3. Astronomy.
- 2. Natural History.
- 5. French.
- 4. German.
- 1. Tactics.

French or German may be substituted for Latin in the Second Class.

IV.—TWO-YEAR'S COURSE IN AGRICULTURE.

	211 2110 222220000	CIO	THE THOUSE OF THE
		RST Y	EAR.
	First Term.		Second Term.
3.	English.	5.	English.
2.	Algebra.	2.	Algebra.
3.	Geometry.	3.	Geometry.
5.	Elementary Physics.	3.	Elementary Physiology.
3.	Agriculture.	2.	Botany.
5	Drawing.	5.	Drawing.
	Mechanic Art Laboratory.		Mechanic Art Laboratory
	Military Drill		Military Drill.
		OND Y	
	First Term.		Second Term.
3.	English.		English Composition.

•		
3.	Geometry.	
3,	Chemistry.	
5.	Agriculture.	
2.	Natural History.	
-	T .	

5. Drawing. Military Drill.

English Composition, Trigonometry. Surveying. Levelling. 5. Chemistry. 5. Agriculture.

Second Term

2. Natural History. 5. Drawing. Military Drill.

V.—TWO-YEAR'S COURSE IN MECHANIC ARTS. FIRST YEAR.

	A UI GU A UI II U.		Scotta Icilia
3	English.	5.	English.
2.	Algebra.	2.	Algebra.
3.	Geometry.	3.	Geometry.
5.	Elementary Physics.	3.	Elementary Physiology.
	Drawing,	5.	Drawing.
	Mechanic Art Laborator	·v.	Mechanic Art Laboratory
	Military Drill.	•	Military Drill.
		SECOND 1	EAR.
	First Term.	?	Second Term.
			English Composition.
	English Composition.		English Composition.

First Torm

2. Algebra. 5. Geometry.

3. Physics.

3. French.

5. Drawing.

Mechanic Art Laboratory. Military Drill.

3. French. 5. Drawing. Mechanic Art Laboratory. Military Drill.

5. Trigonometry.

3. Physics.

It is designed to arrange a more elaborate course when the Mechanic Art Laboratory is fully equipped with machinery and tools.

DEPARTMENT OF INSTRUCTION.

PHYSICS AND ASTRONOMY.

President Broun.

The instruction is given by regular recitations from text-books, illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics, treated graphically, avoiding, as far as possible, complex mathematical symbols.

This is followed by a full discussion of Molecular Mechanics, while due prominence is given to principles. Constant reference is made to the applications of science.

In the First Class the subjects studied are Astronomy and Mechanics. In the study of Mechanics in this class, mathematical analysis is used.

TEXT-BOOKS—Atkinson's Ganot or Daniel's Physics, Newcomb's Astronomy, Peck's Mechanics.

LATIN LANGUAGE AND HISTORY Professor Dunklin.

The subjects taught in this Department are the Latin Language and History.

Latin.—The modes of instruction are by translation from the Latin texts into English, and vice versa, orally an l in writing.

A systematic course of exercises, illustrative of the principles of Latin Etymology and Syntax, are carried on in connection with the reading of the authors prescribed.

The progress of the student is valued not so much by the number of books read as by his ability to read Latin, and explain the principles of interpretation and construction.

A course in general History, ancient and modern, is given in the Third and Fourth classes, also in Political Economy in the First Class.

LATIN TEXT BOOKS.

FOURTH CLASS.—Virgil, Composition, Mythology, Ancient Geography.

THIRD CLASS.—Cicero, Composition (Jones.)

SECOND CLASS.—Horaces, Cicero de Officiis, Latin Composition.

Optional Greek. Two years course, three recitation a week; Elementary Grammar. Selections from Xendphon & Homer.

REFERENCE BOOKS.

White's Junior Student's Lexicon, Harper's Latin Lexicon, Smith's Classical Dictionary and Antiquities, Zumpt's and Madvig's Latin Grammars, Ginn & Heath's Classical Atlas.

CHEMISTRY.

PROFESSOR, STUBBS.

Assistants, Hurchinson and Ross.

There are two courses in this department.

I. A general course.

II. A special course in Agriculture and Chemistry.

I.-GENERAL COURSE.

This course consists of a series of lectures and recitations, extending through the year in Inorganic and Organic Chemistry, fully illustrated by experiments. Chemical principles are thoroughly explained, together with their application to the various arts and industries. Special attention is given to the composition of soils, fertilizers, ores and technical products. In the last half of the session, considerable time is spent in Industrial Chemistry. All the students of the Third Class pursue this course.

Text Books, Bloxam's Chemistry, with Professor's notes.

II.—SPECIAL COURSE IN AGRICULTURE AND CHEMISTRY.

Students enter upon this course after completing the General course of the Third Class. Two years are spent in this course; the first in qualitative, the second in quantitative analyses. Besides daily recitations, each student devotes at least ten hours a week to laboratory work. He is assigned a work table, furnished with gas, water and a full set of reagents and necessary apparatus for general chemical work.

Accurate analyses are required and frequent determinations of unknown compounds constitute a part of their daily work.

The First Class also pursues the study of Agricultural Chemistry. Text Books—Junior Course in Practical Chemistry (Jones), Church's Laboratory Guide and Bollou's Quantitative Analysis Johnson's "How Crops" and "How Crops Feed."

CHEMICAL LABORATORIES.

These are well adapted to analytical work. There are six rooms and two balance rooms. The work rooms contain thirty work tables, each provided with gas and water facilities, a set of reagent bottles and necessary apparatus. The lecture room is 40 by 40 feet in size, and is provided with every facility for illustrating lectures by experiments. The furnace is supplied with a boiler, which runs the stills, and the water and filter pumps, of the work laboratory.

In the balance rooms are balances made by Oertling, Verbeck,

Pickholdt, Troemner and Becker.

An annual fee of \$10, for the use of chemicals in the laboratory, is paid by students pursuing the analytical work of the course in Agriculture and Chemistry.

STATE LABORATORY AND LABORATORY OF EXPERIMENT STATION.

Professor Stubbs, State Chemist. Assts., Hutchinson and Ross.

In this laboratory work is done for the Department of Agriculture and the Experiment Station. Since its establishment up to May the first of present year 320 quantitative analyses have been made consisting of commercial fertilizers, marks phosphates, mucks, iron and gold ores, mineral waters and soils. Numerous qualitative analyses have also been made.

This laboratory performs the following work: first, analyses of commercial fertilizers, minerals, marls, ores and etc., for depart-

ment of Agriculture.

2nd. Analyses for State Experiment Station.

3rd. Analyses for private parties.

The Commissioner of Agriculture orders the work done under 1st., head, the Director of Experiment Station the 2nd. while a charge is made for the 3rd.

MATHEMATICS.

Prof. Smith.

The general course for the first two years embraces, the first year, algebra and geometry, six books; second year, solid and spherical geometry, plane and spherical unigonometry, surveying, mensuration.

Two objects are sought to be attained—first, mental dicipline; second, a thorough knowledge of the practical applications.

Theoretical and practical instruction is given in the Third Class, in farm, town and government land surveying, dividing land, mapping, plotting and computation of areas, etc., also, in the taeory, adjustment and use of instruments.

The Class, in sections of six or eight, devote three afternoons a week, during the second term, to field practice, with compass, transit, level, chain and rod. Maps, plans and profiles of field work are required in addition to regular work in drawing. Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering course, and qualifies those who discontinue the subject at this point, to go into the field and shop, and do good and useful work.

Analytical Geometry, Descriptive Geometry and Calculus are pursued in the Engineering course.

Especial attention is given to their practical applications. During the entire course, instruction in text-books is supplemented by lectures.

Solutions of original practical problems are required of the student, to make him tamiliar with the application of principles, to test his knowledge, and make him self-reliant.

TEXT BOOKS.

Olney's Algebra, Wentworth's Geometry, Schuylers' Surveying, Halstead's Metrical Geometry, Loomis' Analytical Geometry, (new edition) Warren's Descriptive Geometry, Loomis' Calculus, (new edition).

NATURAL HISTORY AND GEOLOGY.

Prof. Mell.

Geology and Mineralogy.—These sudjects are studied in the Fall Term of the last year.

Special attention is given to the Geology of Alabama. The course is given by text-books and lectures, illustrated by means of dia-

grams, maps, models and various rocks, fossiliferous and nonfossiliferous, to be found in the Geological Cabinet. Attention is given to the nature and origin of ore deposits, mineral springs, and origin and Geological relations of s ils.

A systematic arrangement of the Animal Kingdom, in accordance with natural affinities, is made a special feature of the instruction.

Particular attention is also given to insects injurious to vegetatation, their habits, and the methods best adapted for checking their

ravages.

Botany.—The students of the Third Class begin the study of Botany, and continue it through the Second Term. Analytical work is made an important feature. The Class is provided with plants from the neighboring fields, and taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this Section.

In the Second Class an amount of time is devoted to systematic and structural Botany, and to advanced Laboratory work with the microscope, in the preparation of specimens showing plant structure, sufficient to familiarize the students not only with the methods of plant building and cellular organization. but also to practise them in detecting the various forms of fungi that are injurious to fruits and vegetables A Biological Laboratory has been fitted up for the students, provided with excellent microscopes of the most improved patterns, well constructed tables, and all the necessary chemicals for preparing and mounting vegetable tissues. A dark room is attached to this laboratory for micro-photographic work.

The teaching of Botany is greatly facilitated by the use of Auzoux complete set of clastic models of plants, imported recently from France.

Physiology.—This subject is taught to the students of the Fourth Class, and is completed in the second term of the session. The text is illustrated by models and microscopical sections projected on the screen. A skeleton, finely articulated, has been provided for the use of this class.

TEXT BOOKS

Le Conte's Geology, Holders Zoology, Bessey's Botany, Apgars Plant Analysis, Martin's Human Body.

ALABAMA WEATHER SERVICE.

The United States' Signal Service has established in Alabama a State System for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institution. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered throughout the State. An opportunity is thus offered the students in Meteorology for becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

Professor Lane. CIVIL ENGINEERING

The special studies of this Department begin in the Second Class, and are as follows:

SECOND CLASS.—Simple, compound, reversed and parabolic curves, turnouts, and crossings, levelling, gradients, setting slope stakes, excavations, embankments, location and construction of common roads and railroads.

mortars, CLASS.—Building materials, strength preservatives, materials, uniting and other and mechanics the framing, materials, strains, foundations on masonry, construction of in water, bridges and their construction, roofs and their construction, location and construction of common roads and railroads, canals and their construction, river and sea coaste improvements.

Theory and practice are combined in both classes.

For practical work, this department has been supplied with two transits, one of which has the solar attachment, two engineer's levels, one drainage or farmer's level, two surveyor's compasses, one pocket compass, one odometer, one pedometer, one Abney level and clinometer, one right angle reflector one sextant. one pocket sextant, one aneroid barometer, patent extension tripods, steel chains, patent steel tapes, levelling rods of different kinds flag staffs etc. The library has also been supplied with books of reference.

TEXT BOOKS.

Second Class.—Henck's, Field Book for Railroad Engineers Gillespie's Roads and Railroads.

First Class.—Wheeler's Civil Engineering, Von Ott's Graphic State

DRAWING.

Drawing in the Third and Fourth Classes, is obligatory on the students in all the courses. In the First and Second Classes, only the students in Mechanics and Civil Engineering are required to draw.

The Fourth Class receives instruction in graphical drawing and elementary graphical mechanics. In the Third Class, the principles of orthographic and isometrical projections, shades and shadows and practical perspective are taught. In the Second Class, the instruction embraces orthographic and isometrical drawing, perspective, shades and shadows, tinting in India ink and colors, sketches of tools and machines, plans, elevations and cross sections of buildings.

The First Class is taught perspective, topographical drawing and drawings of machines, roofs, bridges, etc. Plans, profiles and sections of railroad surveys, complete the instruction in this department.

The students in this department, use adjustable tables with black walnut tops and iron stands, Schroeder's models, French, German and American plates of roofs, bridges, masonry, tools, machines, etc., etc.

TEXT BOOKS.

Fourth Class'—Davidson's Linear Drawing, Notes on Graphical Mechanics.

Third Class. —Davidson's Projections, Davidson's Practical Perspective.

Second Class,—Davidson's Building Construction, Davidson's Drawing for Machinists and Engineers, Plates belonging to the College.

First Class.—French, German and American Plates belonging to the College.

AGRICULTURE.

Prof. Newman,

Instruction in this department commences with the Third or Sophomore Class and continues through the Second and First Classes. The subject is taught principally by lectures in which it is treated as an applied science, making the application of the teachings of the natural sciences to the art of agriculture, using the farm of the Experiment Station as a laboratory for the practical illustration of the lecture room instruction.

The classes accompany the professor (who is also Director of the Station), into the field, garden, orchard, vineyard, the green house and stock yard, where lectures are delivered in the presence of the work in progress, the objects and results of experiments explained, the propagation, planting, pruning and cultivation of plants illustrated, and so far as deemed necessary for thorough instruction manual labor required of the students in any and every department of the farm. The principles of stockbreeding are taught in the lecture room and the practice illustrated on the farm.

Every principle and theory taught in the lecture room will be thoroughly illustrated and exemplified upon the farm which, within the next twelve months, will be made complete in all its appointment?

The First Class will be required to keep accurate records of all work done upon the farm including frequent observations of the progress of experiments. In a word, they will be required to keep just such records of the farm as though they were its proprietors.

AGRICULTURAL EXPERIMENT STATION.

J. S. Newman, Director.

The State Agricultural Experiment Station is connected with the

College.

The farm of the station is adjacent to the College buildings and is used by the professor of agriculture to illustrate his lecture-room instruction. Here a great variety of experiments in Agriculture, Horticulture, stock breeding and stock feeding will serve not only the purposes of instruction to the students but will afford valuable information to the farmers of the State, many of whom already show their appreciation of its work by visiting it for the purpose of inspecting the experiments in progress.

Bulletins are issued regularly through the State Department of Agriculture and widely distributed over the State by the Commis-

sioner.

MODERN LANGUAGES AND ENGLISH LITERATURE.

Prof. Thach.

ENGLISH.

In this department the student will be carried through a systematic course of study in the English language and literature. In

the courses of study which do not include the ancient classics, a full course in English is especially important. It is therefore designed, as much as the time allotted permits to familiarize the student by frequent exercises with the standard authors of the language.

The course of study is as follows:

Fourth Class.—Three hours a week, study of Grammur; the principles of special and general composition, with frequent brief papers illustrating the laws studied.

Third Class.—Three hours a week, study of style, analysis of the selections of prose and poetry, frequent essays on literary and historical themes.

Second Class.—Three hours a week critical study of English classics, Shakespeare, Goldsmith, Milton, Longfellow, Essays.

First Class.—Two hours, first term, outlines of general literature, history of English literature.

Weekly exercises in declamation are held in the first class. Three original orations are required during the year of each student in the first and second classes.

MODERN LANGUAGES.

No attempt is made in this department to teach a student to speak French and German. The aim is to give such a facility in reading these two languages as will afford ready access to the important scientific papers in foreign journals. The following courses are pursued:

French, first term, Otto's Grammar, part first; exercises in writing French; French readings.

Second Term, Otto's Grammar, part second; French composition, Racine's Athalie.

Third term, composition scientific French.

German first term; Otto's Grammar, part first; exercises in writing German. German readings.

Second term; Schiller's Wilhelm Tell. Otto's Grammar, part second.

Third term; Scientific German and composition.

MILITARY SCIENCE AND TACTICS.

Maj. Frazer, Commandant.

Military Science and Tactics are required to be taught in this

Institution by law. This law is faithfully carried out, by imparting to each student not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion, also in Guard Mounting, Inspections, Dress Parades. Reviews, etc. The College is provided, by the State, with breechloading cadet muskets, swords and accourtements.

The following uniform has been prescribed for dress, viz., sack coat of West Point cadet grey, grey pants, vest and cap, trimmings black. A very neat and serviceable uniform can be obtained here at about \$18. This is less expensive than the usual clothing. All students are required to wear this uniform during the term.

The drills are short, and the military duty involves no hardship. The Military Drill is a health giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, one 1st. Lieutenant, one 2nd. Lieutenant, with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the President, on nomination of the Commandant, and are continuous unless forfeited by abscence or misconduct.

No military duty is required of the privates of the First Class except to drill with the Battalion.

The First add Second Classes recite once a week in Military Tactics.

POST-GRADUATE DEGREES.

There are two Post-Graduate Degrees-MASTER OF SCIENCE and CIVIL ENGINEERING.

Any graduate of this Coliege, who shall, after graduation, actively engage, for at least three years, in literary or scientific work in the line of his projession, and who may, by an examination prescribed by the Faculty, give satisfactory evidence of sufficient advance ment, shall be entitled to a Post-Graduate Degeee. The requisite course of study and the nature of the examination may be obtained by corresponding with the Faculty. A Post-Graduate Degree

also may be obtained by a graduate by one year's residence at the College spent in the successful prosecution of such a course of applied science as will be prescribed by the Faculty.

Applicants for Post-Graduate Degrees must matriculate and deposit with the treasurer the amounts of their diploma fees. They must also write and present to the Faculty satisfactory theses upon some subject pertaining to their professions.

Resident graduates may prosecute the studies in any department of the College without payment of regular fees.

CERTIFICATES OF DISTINCTION

Will be awarded to the first four students in the different subjects of each class, provided their grade is above 90 per cent., and they have satisfactorily passed all the regular examinations of that session.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction, in a form adapted to permanent preservation.

From the record a circular or statement is sent to the parent or guardian monthly.

EXAMINATIONS.

Written recitations or monthly examinations on the studies of the month are held at the option of the Professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examinations can be promoted to the next higher class only on satisfactory examinations at the opening of next session.

It is required that every student who enters the college shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examinations, except in extreme cases.

At stated intervals during the year, all students, except those of the First Class, are required to stand written examinations on Geography and English.

Examinations for degrees or certificates of proficiency embrace the entire subject of study in the course.

MUSEUM OF NATURAL HISTORY AND GEOLOGY.

Many valuable additions have been made to the various branches of this Museum within the past few years.

Contributions have been received from different States of the Union, from England, Italy, France and the Bermuda Islands.

The Geology of Alabama is well illustrated with minerals, fossiliferous and non-fossiliferous rocks from the different formations of the State. The Museum is divided into the following departments: Mineralogical, Conchological, Geological, Zoological and Botanical. Each department is systematically arranged and catalogued for study and display.

The entire collection of the Museum, added to the private Cabinet belonging to the Professor of Natural History, numbers more

than 30,000 specimens.

MUSEUM OF AGRICULTURE.

The Agricultural Museum is intended to illustrate, as far as possible, the agricultural products of this and other countries. It now contains nearly 1,000 specimens, obtained by donations and by a system of exchanges with other Agricultural Colleges, illustrating varieties of soil, cotton, wheat oats, corn, peas. grasses, etc.

LIBRARY.

A room in the College building is appropriated to the Library, but the number of books at present is not large. A portion of the recent appropriation made by the State Legislature has been used in the purchase of books. For this purpose there is also paid a small annual fee by each student.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the Fac

ulty.

PRINTING OFFICE.

The Printing Office is under the charge of Professor Mell, who assisted by J. P. Allen as foreman, superintends the work of the class in printing at fixed hours during the week. The Office occu-

pies a large room in the College building and has a complete outfit consisting of an excellent Gordon press, with fonts of type and stands for twelve students. It is open each afternoon for practice by the cadets.

DISCIPLINE.

The government of the College is administered by the President and Faculty. in accordance with the Code of Laws and Regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, is required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday. Opportunities are also offered for attending Bible Classes every Sunday.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meeting exerts a wholesome christian influence among the students of the College.

LOCATION

The College is situated in the town of Auburn, sixty miles from Montgomery, directly on the line of the Vestern Railroad.

The region is high and healthful—821 feet above tide water.

By statute of the State. the sale of spirituous liquors and keeping saloons of any kind, within five milse of Auburn are forbidden

THESIS.

Each applicant for a regular degree is required to write and submit to the Faculty a thesis on some subject of immediate relation to the studies of his course, and deliver the same at Commencement, if required by the Faculty.

This thesis must be given to the Professor of English, by the first day of June

LITERARY SOCIETIES.

There are two Literary Societies—the Wirt and the Websterian—connected with the College. And has a commodious hall, hand-somely fitted up, a library of standard and miscellaneous works, and a reading room. Their weekly exercises add to the facilities afforded by the College for practice in composition, elocution and discussion.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also on Monday and Tuesday evenings during Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

SOCIETY OF THE ALUMNI.

The annual Alumni Oration, by a member of the society, is delivered in the chapel, during Commencement week T. H. Frazer, President; T. J. Lamar, Vice President; C. C. Thach, Treasurer and Secretary; W. H. Blake of '79, Orator for 1884'85.

ALUMNI SCHOLARSHIP

At its annual meeting, June 24, 1883, the Society established a scholarship to be known as the Alumni Scholarship. The fund for the scholarship is to be raised by voluntary contributions from the members of the society. to be paid annually, and the beneficiary is to be elected by the society at its annual meeting in June. The Executive Committee, who have charge of this fund for the present year and to whom all communications should be directed, are T. H. Frazer and R. H. Thach, Auburn, Ala., and C. H. Lindsey, Mobile Ala.

BOARDING

Students, after selecting their boarding-houses, will not be permitted to make changes without obtaining permission from the college authorities

EXPENSES.

TUITION FREE TO ALL CADETS.

Incidental fee, per term	\$5	00
Library fee, per term	1	.00
Surgeon's fee per term	2	50
Board per month, with fuel and light,	\$12 to 15	00

FUNDS OF STUDENTS

Parents and guardians are requested to deposit with the Treasurer of the College all funds designed for sons or wards, whether for regular charges of College fees and board or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay for all expenses incurred by the students, including board, uniform, books. etc., only when approved by the President.

ACADEMIC YEAR.

The Academic Year, which is divided into two equal terms, commences on the last Wednesday in September. and ends on the last Wednesday in June following, which is Commencement day. The second term begins on the second Wednesday in February.

ALUMNI.

- 60.1	1860		
Rev. W. F. Glenn,		Atlanta, Georgia.	
F. S. Johnson,		Macon, Georgia.	
R. D. Lumsden,		Crawfordville, Georgia.	
*W. C. Thrash,		Orrville, Alabama.	
A. F. Wooley,		Kingston, Georgia.	
	1861		
Henry Harris,		Sparta, Georgia.	•
W. M. Jones,		Social Circle, Georgia.	
Sidney Lewis,	wy Nga	Sparta, Georgia.	
R. S. McFarland,	3.	LaGrange, Georgia.	
S. W. McMichael,		Columbus, Georgia.	
V.P. Fark,		Greenville, Georgia	
J. J. F, Rogers,		Perote, Alabama.	
	-867		
J. R. Dowdell,	2000	LaFayette, Alabama.	
Howard Hamill,		Jacksonville, Illinois.	
1	1868		
*W. W Moore.	2000	Birmingham, Alabama.	
Rav. W. T. Potillo,		Lineville, Alabama.	
	1869		
A. G. Dowdell,	2000	Opelika, Alabama.	
L. A. Dowdell,		Monterey, Mexico.	1
*A. S. Douglas,		Louisville, Alabama.	
Leander G. Jackson,	many.	Longview, Texas.	1
T. J. Lamar,		Auburn, Alabama,	
Caleb Lindsey.	•	Mobile, Alabama.	94
J. R. Motley,		Tuskegee. Alabama.	
James D. Myrick.		Midway, Alabama.	
R. C. Persons.		United States Navy	
The classes of 1860.	1861, 186	7, 1868, 1869 gradnated in	the East
Alabama College.			

^{*} Deceased.

1872

R. E. Hurt,
R. O. Rounsavall,
W. E. Horne,
L. V. Rosser,
Rev. E, W. Solomon,
G. C. Spigener,
Rev. C. R. Williamson,

1873

J. L. Golson, W. T. Rutledge, P. R. Rutledge,

1874

R. K. Fitzhugh, *P. H. Johnson. W. H. Moore, M. H. Moore.

1875.

Frank C. Dillard, *WM. M. Perry, *John A. Ratchford, Eugene R. Rivers,

1070

Rev. M. K. Clements, C. T. Hodge, S. B. Holt. E. M. Oliver, F. D. Peabody, J. E. Ruffin. P. H. Stow, Reese Wilson,

1877

Rev. Samuel C. Riddle, Charles C. Thach, John M. Trammell, William O. Trammell,

Lemuel G. Dawson, Silas C. Dowdell, Tucker H. Frazer. Salem, Alabama-Huntsville, Texas. Tampa, Florida. Colorado. Auburn, Alabama. Prattville, Alabama. Glennville, Alabama.

New Orleans. Louisiana, Crawford, Alabama. Crawford, Alabama.

Augusta Arkansas.

Montevallo, Alalama.

Auburn. Alabama.

Plano, Texas.

Sherman, Texas.
Columbus, Georgia.
LaFayette, Alabama.
Tallahassee. Florida.

Collhaville, Alabama.
Opelika, Alabama.
Siluria, Alabama.
LaFayette, Alabama.
Columbus, Georgia.
Luckford, Alabama.
Opelika. Alabama.
Centre, Texas.

Wills Point, Texas
Auburn, Alabama.
Chambers County, Alabama.
Chambers County, Alabama.
1878.

Ware, Alabama.
Point Goupe, Louisia: a.
Auburn, Alabama

D ceased.

Robert E. Hardaway. George H. Price, *Isaac A. Lanier, Lee S. Schieffelin, Reuben L. Thornton.

1879.

Mark ! . Andrews, Wyatt H. Blake, Frank B. Dillard, Joshua S. Dowdell Oliver C. McGehee. Allen B. O'Hara. Thomas M. Oliver, John O. Pinckard, J. E. D. Shipp,.

1880.

John T. Ashcraft, *Benjamin F. Atkinson. Samuel B Cantey. Samuel Callaway. . John S. N. Davis, Alva Fitzpatrick, E. J. Garrison, George R. Hall, . Harrison L. Martin, Charles B. McCov, Robert F. Ousley, Henry G. Perry, Edgar A. Price, George W. Stevens, Jabez C. Street. Robert Y. Street, James J. Sykes, Ross E. Thomas, Homer B. Urquhart, Bartow L. Walker.

W. U Acree, J. Callaway,

Tuscaloosa, Alabama Marlville, Terressee. Huntsville, Alabama. Nashville, Tennessee. Tuscaloosa, Alabama.

Greenville, Texas. Elake's Ferry, Alabama. Whistler, Alabama. LaFayette, Alabama. Eclectic, Alabama. Sandtown, Georgia. Opelika, Alabama Clayhatchee, Alabama. Cusseta, Georgia.

Brundidge, Alabama. West Point, Georgia. Fort Mitchell, Alabama. Montgomery, Alabama. Gold Hill, Alabama. Montgomery, Alabama. Lineville, Alabama. Midway, Alaba na. Elba, Alabama. Opelika, Alabama. Harpersville, Mississippi. Auburn, Alabama. Nashville, Tennessee. Roanoke, Alabama. bluff's Springs, Alabama. Atlanta, Georgia. Courtland, Alabama. Gadsden, Alabama. Birmingham, Alabama. Signal Service.

1881

Verbena, Alabama. Montgomery, Alabama.

^{*}Deceased.

O. H. Crittenden,

J. H. Jeter,

J. G. Jones,

W. H, Lamar, Jr.,

J. M. Langhorne,

J. T. Letcher,

A. J. Mitchell,

C. N. Ousley,

B. B. Ross,

W. H. Simmons,

W. D. Taylor,

J. D. Trammell,

E. I. Van Hoose,

E. N. Brown,

+G. A. Carden,

A M. Clegg,

W. H. Cunningham, Bartow Eberhart.

B. H. Fitzpatrick,

J. M. Hurt,

W. H. Jones.

Howard Lamar.

R. F. Ligon, Jr.,

W. W. Pearson,

J. M. Reid,

1883

W. H Bruce,

W. S. Cox.

W, L. Ellis,

C L. Gay,

A. L. Harlan,

M. L Harp, Jr,

D. B Mangum,

T. F. Mangum

A. M. McIntosh,

E. M.Pace,

N. P. D. Samford,

R. L. Sutton,

Baton Rouge, Louisiana.

Opelika, Alabama.

Barachias, Alabama.

Washington. District Columbia.

Philadelphia, Pennsylvania.

Texas.

Cedar Keys, Florida.

Waxahatchie, Texas,

Auburn, Alabama.

Newton, Alabama.

Auburn, Alabama,

Columbus, Georgia.

Mexico.

Union, Springs, Alabama.

Colorado.

Memphis, Tennessee.

Wood's Bluff, Alabama.

Columbus, Georgia.

Montgomery, Alabama.

Auburn, Alabama.

Union Springs, Alabama.

Auburn, Alabama.

Tuskegee, Alabama.

Mobile, Alabama.

Pilot Point, Texas.

Milltown, Alabama.

LaGrange, Georgia.

Pratville, Alabama.

Montgomery, Alabama.

Dadevill, Alabama

Atlanta, Texas.

Selma, Alaba na.

Selma. Alabama.

Dadeville, Alabama

Independence, Texas.

Auburn, Alabama.

East Point, Maine.

1884

B.	H. Doyu.
L.	R. Boyd.
	S. Corry.

F. C. Duke.

T. F. Hardin.

W. L. Hutchinson.

J. W. Lockhart.

D. D. McLeod J. B. Robinson, Jr.

W. C. Whitaker.

W. D. Wood. :

Macon county.

Macon county.

Butler county.

Georgia.

Lee county.

Georgia.

Chambers county.

Barbour county:

Tennessee.

Macon county.

Autauga county.

Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1885

```
OCLC: 36819601
                           Rec stat:
  Entered:
             19970429
                          Replaced:
                                        19970429
                                                     Used:
                                                               19970429
                          Srce: d
                                       GPub: s
                                                   Ctrl:
                                                               Lang:
Type: a
             ELvl: I
                                                                      enq
                          Conf: 0
                                                   MRec:
  BLvl: s
            Form: a
                                       Freq: a
                                                               Ctry:
                                                                      alu
 S/L: 0
Desc: a SrTp:
1 040 AAA +c AAA 1
                          EntW:
                                       Regl: r
                                                   ISSN:
                                                               Alph:
                          Cont:
                                       DtSt: d
                                                   Dates: 1873,1893 ¶
            h +b c +d b +e f +f u +g b +h a +i u +j p 1
   2 007
   3 043
              n-us-al ¶
           LD271 +b .A76 ¶
   4 090
   5 090
              +b ¶
   6 049
              AAAA ¶
              Agricultural and Mechanical College of Alabama. ¶
   7 110 2
   8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
    9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
▶ 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama ¶
▶ 12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama 1
 13 260
              Auburn, Ala. : +b The College, 1
 14 300
              21 v. ; +c 21 cm. ¶
              Annual ¶
15 310
 16 362 0 1872-73-1892-93. ¶
              Title varies slightly. ¶
 17 500

    Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
 18 533
≠d 1997. ≠c microfilm reels : negative ; 35 mm. ¶
              d +b 1873 +c 1893 +d alu +e u +f u +g a 1
19 539
 20 650 0 Universities and colleges +z Alabama +x Periodicals. ¶
 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. 1
▶ 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
▶ 23 785 00 Agricultural and Mechanical College of Alabama. ‡t Catalogue of
```

▶ 24 830 0 USAIN State and Local Literature Preservation Project ¶

the Alabama Polytechnic Institute ¶

AUBURN UNIVERSITY LIBRARY



AU LD271 .A76 1885/86 c.2

CAT-2-

M CIRCIII.ATA

CATALOGUE

OF THE

STATE

Agricultural & Mechanical

College,

ALABAMA POLYTECHNIC INSTITUTE.

1885-'86.

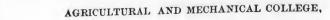
AUBURN, ALA.

Printed at the A. & M. College by the students of the printing class.

AUBURN UNIVERS LIBRARY



AU LD271 •A76 1885/86 c•2



LEGISLATION.

ACT OF CONGRESS.

An Act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts. (Approved July 2d, 1862.)

Section 4. And be it further enacted, That all moneys derived from the sale of the land aforesaid by the States to which lands are apportioned and from the sale of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section fifth of this act), and the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislature of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

ACTS OF THE STATE LEGISLATURE.

An act to establish a college at Auburn, in Lee County, Alabama, for the benefit of agriculture and the mechanic arts, pursuant to an act of the Congress of the United States, approved February 26, 1872

SEC. 1. Be it enacted by the General Assembly of Alabama, That there be and hereby is established at Auburn, in Lee county, Alabama, a college for the benefit of agriculture and the mechanic arts, whose leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as relate to agriculture and the mechanic arts, in conformity to an act of the congress of the United States entitled an act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanic arts, approved July 2d, eighteen hundred and sixty two, under such regulations as may be hereafter provided

SEC. 2. Be it further enacted, That the "East Alabama male college", a body corporate, created by the laws of Alabama, having by David Clopton the president, and George P. Harrison, secretary of its board of trustees made and executed a deed of conveyance of the college building lands and appurtenances thereto attached, as described and set forth in said deed, to the State of Alabama, for the purpose therein shown, bearing date of the 17th. day of February, eighteen hundred and seventytwo, said conveyance is hereby accepted for the purposes therein set forth on the part of the State.



A21 LD27/ A76 /895/86 C. 2 BARKSDALE

AGRICULTU

AGRIC ULTURAL AND MECHANICAL COLLEGE

3

An act in relation to the Agricultural and Mechanical college of Alabama, approved February 26, 1872.

SEC. 8, Be it further enacted, That the interest, income and proceeds arising from the investment of the funds created by the sale of lands or land scrip, granted by the Congress of the United States to this State for the promotion of agriculture and the mechanic arts, shall be paid to the treasurer of said college as the same may accrue and be needed for the purposes of said agricultural and mechanical college, on the order of the said treasurer upon the anditor of the State, who shall draw his warrant on the treasurer of the State for the same.

An act to amend an act entitled an act to establish a department of agriculture for the State of Alabama; approved February 17.h. 1885

SEC. 21 Be it further enacted, That for the purpose of establishing an experimental farm or station, one-third of the net proceeds annually accruing from the sale of tags as hereinbefore provided, shall be paid to the treasurer of the Agricultural and Mechanical College on the approval of the governor, to be disbursed under the direction of the board of trustees of said institution, for the development of the agricultural and mechanical departments of said college. Provided, the trustees of said college shall cause to be made at said college all analyses of fertilizers that may be required under the provisions of this act, as well as such other analyses as the commissioner of agriculture may deem advisable without any charge therefor; and provided further, that the trustees shall establish and maintain an agricultural experimental farm or station, where careful experiments shall be made in scientific agriculture, results of which, together with other needed information, shall be furnished the commissioner of agriculture, for publication in his monthly bulletin and annual reports.

BOARD OF TRUSTEES.

His Excellency, E. A. O'NEAL President.

Hon. SOLOMON PALMER, Superintendent of Education.

Hon. W. H. BARNES, Koff

Hon C. C. LANGDON,

Hon. H. D. CLAYTON. Wille

Hon. JONATHAN HARALSON.

Hon. R. F. LIGON,

Hon. JOHN W. BISHOP.

Hon. J. G. GILCHRIST.

Hon. M. L. STANSEL,

Hon. J. N. MALONE,

term expires 1887

term expires 1887.

term expires 1887.

term expires 1839,

term expires 1889.

term expires 1889.

term expires 1891.

term expires 1891.

term expires 1891.

ex-officio

ex-officio.

Opelika.

Mobile.

Clayton.

Selma.

Tuskegee.

Talladega.

Montgomery

Carrollton.

Athens.

E. T. GLENN, Treasurer.

F. M. REESE, Secretary.

BOARD OF TRUSTEES.

His Excellency, E. A. O'NEAL President. Hon. SOLOMON PALMER, Superintendent of Education.

Hon. W. H. BARNES, KJA

Hon C. C. LANGDON,

Hon. H. D. CLAYTON. WWw.

Hon. JONATHAN HARALSON,

Hon, R. F. LIGON,

Hon. JOHN W. BISHOP,

Hon. J. G. GILCHRIST.

Hon. M. L. STANSEL,

Hon. J. N. MALONE,

term expires 1887

term expires 1887.

term expires 1887.

term expires 1889,

term expires 1889.

term expires 1889.

term expires 1891.

term expires 1891,

term expires 1891.

ex-officio. ex-officio.

Opelika.

Mobile.

Clayton.

Selma.

Tuskegee.

Talladega.

Montgomery

Carrollton.

Athens,

E. T. GLENN, Treasurer.

F. M. REESE, Secretary.

OBJECT OF THE COLLEGE.

The leading object of this College is to teach the principles and

the applications of science.

It endeavors to subject each student under its influence to the exact and accurate training of science-discipline, giving prominence in its instruction to the sciences and their applications so far as the

facilities at its disposal will permit.

The essential discipline obtained by an accurate and critical study of languages is not neglected. All students are required to study the English language in each course of study for a degree, thus giving it special prominence. The Latin, French and German languages are taught, and opportunity for their study is offered to students in any course. In the General course they are required for a degree.

By the College thus, in fact, becoming a distinctive School of Irdustrial Science, or POLYTECHNIC INSTITUTE, work of great value to the youth of the state will result from fitting them, by a thorough Science-discipline for the successful and honorable per-

formance of the responsible duties of life,

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought and thus qualify them for the duties of life, whatever their vocation may be, their moral and christian training will always constitute the prominent care and thought of the Faculty.

LABORATORIES AND FACILITIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in the applied sciences in the following departments:

I-IN AGRICULTURE AND HORTICULTURE

The farm contains 226 acres and is supplied with illustrative specimens of stock of select varieties.

By act of the Legislature the office of the Commissioner of Agriculture and the Experiment Station for the state of Alabama are located at Auburn. The Professor of Agriculture is also Director

of the Experiment Station, and the Professor of Chemistry is State Chemist, whose duty it is to analyze fertilizers for the benefit of the general agricultural interests of the state.

This public work done at Auburn in behalf of the agricultural and industrial interests of the state affords to students an unusual opportunity to become familiar with its agriculture, its defects and remedies.

The Experiment Station is not a model farm, but a place where experiments and scientific investigations in agriculture are made at the public expense for the common good, and where the young men at the college receive instruction in the methods applied.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc, where lectures are delivered in presence of the objects discussed.

II-IN MECHANIC ARTS

The Mechanic Art Laboratory is used as an auxiliary in industrial education, to instruct in the arts that constitute the foundation of various industrial pursuits, thus aiding in giving mentally and manually, in theory and practice, that sound education that will in a measure qualify a young man to enter upon some one of the associated industries; that education which comes of training the eye and the hand as well as the mind, and tends to associate skilled manual and mental labor. This Laboratory is now well equipped in the wood-working department.

It is located in a commodious hall 90 x 50 feet, and is provided with a twenty-five horse power Corliss Engine with indicator, a planer, circular saw, band saw, two scroll saws, a buzz planer, twenty stands with lathes, with full sets of lathe and carpentry tools required for instruction. It is designed, as early as practicable, to complete the foundry, forge, and machine departments for working in metals.

The work performed by the students is instructive in character as in any other college laboratory, the classes are taught in sections under the supervision of the professor. There is no attempt to teach students skill in constructing special articles of commercial value, but all exercises are systematically arranged and designed for purposes of education.

III-IN PRACTICAL CHEMISTRY.

The Chemical Laboratory is well supplied with apparatus and facilities for instruction in practical Chemistry. It is provided with gas and water, a steam boiler for heating, etc., with filtering pumps, six analytical balances, and working tables for each student.

It is situated in the first story of the main building and occupies six rooms, one for special agricultural analysis, besides two small balance rooms.

IV-IN PHYSICS.

This department has had valuable additions made to its apparatus, in Electricity, Magnetism, Heat, etc. There has recently been added a Toepler-Holtz Electric machine, Gramme machine, Rueprecht's Physical Balance, Jamin's magnets, etc., with the necessary apparatus for an elementary physical laboratory.

V-IN BOTANY.

Besides the preserved specimens of plants, grasses etc., this department is provided with Auzoux's beautiful Clastic models of seeds and flowers for teaching Botany. The Botanical Laboratory is provided with tables and ten Beck's microscopes for the use of the students.

VI-IN MINERALOGY AND GEOLOGY.

In this department the collections for illustration are quite extensive embracing more than 20,000 specimens all well arranged in glass cases.

VII-IN ENGINEERING, SURVEYING, ETC.

This department, having recently had valuable additions made to its equipment, is now well supplied with instruments, with which all important field work is taught.

VIII-IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. Well lighted drawing rooms are provided with suitable tables. For the advanced students there are individual tables adjustable to different heights and angles of inclination.

IX .-- IN PRINTING AND TELEGRAPHY

The printing office is supplied with a new Gordon Press, different fonts of type, and stands for twelve students. In the same room are the instruments for teaching Telegraphy.

X-IN MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition, the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic auties.

This department is under the charge of Lieut. M. C. Richards. 2nd Artillery U. S. A.

It has recently been supplied with new cadet muskets and accountrements for the corps, and for artillery practice, with two three inch rifled gues, carriages and limbers.

THE COLLEGE BUILDING

This is a handsome well constructed brick building one hundred and sixty by seventy five feet, containing in all thirty-eight rooms.

This building is not used for dormitories for students, but is appropriated for purposes of instruction. It contains the lecture rooms and offices of the professors, the library, the laboratories, cabinets, assembly room, printing office and two large well furnished society halls with their library and committee rooms.

All the lecture rooms are provided with modern college furniture.

LANGDON HALL.

This is a two story building ninety by fifty feet, recently constructed. The second story is the audience hall used for commencement and other public occasions.

The first story is appropriated to the Mechanic Art Laboratory.

CATALOGUE OF STUDENTS.

FOR THE SESSION 1885-'86.

ABREVIATIONS.

C. & Ag	Chemistry and Agriculture.	Gen	General Course.
Eng	Engineering.	Sp	Special Course.

UNDERGRADUATES.

FIRST CLASS.

NAME.	COURSE,	BESIDENCE
Allison, Gilmer Alexander.	C. Ag.	Lee Co.
Burton, Benjamin Sullivan.	C Ag.	Georgia.
Capps, Luther Martin.	C. Ag.	Henry Co.
Howell, Lawson Franklin.	C. Ag.	Georgia.
Newman, Clifford Lewis.	C. Ag.	Lee Co.
Persons. Frank Archilous.	Sp.	" "
Perry, Frank Howard.	C, Ag.	" "
Pitts, Sterling Chambers.	Eng.	Russell Co.
Ross, Charles Hunter.	Eng.	Lee "
Simmons, Robert Jasper Hogu		Dale "
Smith, Robert Billups.	Gen.	Chambers "
Spratling, Leckenski Ware.	Gen,	Chambers "
Weaver, Dudley Sanders	C. Ag.	Tennessee "
Wilkinson, Levi Washington	C. Ag.	Dale "
Zellers, Thomas Peters.	C. Ag.	Georgia.
		,
	ND CLASS.	
Alexander, Arthur John	Eng.	Mobile Co.
Allen, Vassar Lyle.	C. Ag.	Montgomery "
Armstrong, Henry Clay Jr.,	Sp.	Lee "
Barclay, Alexander Campbell,	C. Ag.	Lawrence "
V Boykin, Burwell Lee. □	C. Ag.	Lowndes "
Davis, William Esley.	Cg.	Lee "
Gordon, Elgee Kingsbury.	C. Ag.	Lousiana.

Jones, Roger ap Catesby.	C. Ag,		Dallas Co.
Jones, Thomas Hugh.	C. Ag.		Lee "
Lamar, George Holt.	C. Ag.		. " "
Lloyd, Edward Read.	C. Ag.		66 66
Newman, Wilson Herbert.	C. Ag.		
Simmons, Charles Woodward.	Gen.		Dale "
Woolley, Andrew Feaster.	Sp.	*	Georgia.

THIRD CLASS.

The state of the s	· · · · · · · · · · · · · · · · · · ·	
Allen, John Pendergrass.	Montgomery Co).
Armstrong, Britain Dixon.	Lee '	
Boyd, Thomas Jackson.	66 66	
Broun, George Fleming.		
Broun, Henry Lee.	Virginia	
Clower, John Robertson,	Lee Co	
Cobb, Edward Hunter.	Macon "	
Cory, Alonzo Francis.	Autauga "	
Crawford, Abednego Jackson	Lee "	
Drake, John Hodges Jr.,	" "	
Driver, David Miller.	Perry "	
Foster, Edmund Wiley.	Mobile "	
Glover, Milton.	Georgia	
Griggs, John.	Macon Co	
Jones, John Cargill,	Wilcox "	
Harris, Eugene Willis.	Lee "	
Henderson, Joseph Linton.	Montgomery "	
Klie, Preston Clar	Marengo "	
Lloyd, Audrew Manly.	Lee "	
Macartney, Edwir Conway.	Mobile "	
Mason, James Monroe.	Lee "	
Nelson, William Portie.	Dallas "	
Nonnenmacher, Eugene Louis.	Perry "	
Oliver, Arthur Wesley.	Lee "	
Orr, Frederick Burleson.	Morgan "	
Partridge, Thaddens Joseph.	Mobile "	
Persons, Henry Stanford	Lee "	
Phillips, William Russell.	Georgia	
Rives, Robert Glenn.	Montgomery, Co	,
Samford, Thomas Drake.	Lee "	

Smith, Otis Oliver.
Taylor, Samuel Oliver.
Thompson, John W.
Walker, Thacker Vivian.
Weaver, Norman Randolph.

Lee Co.
Montgomery "
Georgia.
Bullock Co.
Dallas "

Lee

FOURTH CLASS.

Allison, Charles H. Andrews, William Thomas. Bedell, Howard Alburn, Bedell, Paul. Bridges, Nathaniel Columbus. Cochran, Edmond Collins. Crenshaw, Bolling Hall. Crowder, Arthur Campbell. Crowder, Howard Grayson. D'Alembert, Harry Turner, Ferguson, Leontz Wilmore. Hatchett, James Benton. Hearn, George Watts. High, James Clarence. Holland, Edward Bell. Jackson, William Carson. Kirkpatrick, Samuel. Lea, Sumpter, Jr. Lee, William Joseph. Levy, Lionel Clarence. Mastin, Thomas Benton. McDavid, William Henry. McLennan, Alexander Dowling. McMillan, Robert Houston. Melvin, William Arthur. Mitchell, Afton Person. Mitchell, Tennant Lomax. Morgan, William Barnes. Nelson, General Jackson. Pittman, Joseph Jasper. Powers, Edward Clyde. Riggs, Robertson. Rowe, John Albert.

Georgia. Lee Co. 66 66 Georgia. Mobile Co. Butler " Talladega Florida. Baldwin Co Limestone Lee Bullock Georgia. Lee Co. Dallas " Dallas " Henry " Georgia. Montgomery Co. Florida. Barbour Co. Talladega " Georgia. Russell Co. Tallapoosa Georgia. Tallapoosa Co. Lee Dallas Tallapoosa

Sankey, Frank Emmet.	Montgomery Co.
Seibert, William,	Lowndes "
Shelton, Joseph Augustus.	Lee "
Smith, Walter Raleigh.	Tallapoosa "
Staten, W. Thomas.	Georgia.
Story, Alonzo Grove.	Talladega Co.
Taylor, Hugh McGhee.	Montgomery "
Thrash, Daniel Mathew.	Dalfas "
Tuttle, G. Hart.	Macon "
Tuttle, M. Hart.	60 66
Van Antwerp, Andrew,	Mobile "
Vaughan, Paul Turner.	Dallas ."
Watlington, Thomas Morgan.	Marengo "
Walker, 'James.	Chambers "
Wells, James William.	Montgomery "
Williams, Madison Jack.	Dallas "
Worrell, Albert Snead.	Talladega "

SUB-SECTION FOURTH CLASS

Deb billion 1 delitin childe	
Arnold, Hugh Brad.	Georgia.
Adams, Emmett.	Perry Co.
Broughton, Louis Edward.	Butler "
Bryan, Judson William.	Georgia.
Cooper, Houston Franklin.	Lownes Co.
Curry, Thomas Murfey.	Talladega "
Davidson, William,	Georgia.
Glenn, Charles Bowles.	Lee Co.
Gordon, Douglas Francis.	· Louisiana.
Hughes, Daniel.	Florida.
Harrington, George Mills.	Lee Co.
Hudson, Belus Ephriam.	Lee "
Kyle, John.	Georgia.
Lupton, Frank Allemong.	Lee Co.
Lurton, James Walter.	Florida.
Milstead, Frank Davis.	Elmore Co.
Myddelton, Sim Smith.	Georgia.
Norman, Gilbert Augustus.	Lee Co.
Osborne, Jonathan Lumpkin.	Georgia.
Parham, Eugene Douglass:	Chambers Co,
Presley, John Calvin.	Tallapoosa "

Mobile Co.
Texas.
Lown-les Co.
District of Columbia.
Russell Co.
Limestone "
Mississippi.
Georgia.
Lee Co.

RECAPITULATION.

First Class.	210			15
Second Class.	•			14
Third Class.	. •			35
Fourth Class.				51
Sub Fourth Class.		2.0		30
				- 50
Total.			- 12	145

MILITARY ORGANIZATION.

1885-'86.

President:

WM. LEROY BROUN.

Conmandant:

MELZAR C. RICHARDS, Licut. 2nd U. S. Artillery.

Cadet Captains.

T. P. ZELLERS.

L. F. HOWELL.

B. S. BURTON.

Vadet Lieut, & Adjutant.

Cadet Lieut. & Quartermaster,

G. A. ALLISON, .

C, H. ROSS.

Cadet 1st. Lieutenants,

Cadet and. Lieutenants,

L. W. SPRATLING.

R. B. SMITH.

L. M. CAPPS. D. S. WEAVER.

R. J. H. SIMMONS. E K. GORDON.

Cadet Sergeant Major,

Cadet Q. M. & Color Sergeant,

A. F. WOOLLEY.

E. R. LLOYD.

Cadrt 1st. Sergeants,

C. W. SIMMONS.

H. C. ARMSTRONG, Jr.,

V. L. ALLEN.

Cadet Sergeants,

Cadet Corporals.

W. H. NEWMAN.

H. L. BROUN. T. D. SAMFORD.

W. E. DAVIS. G. H. LAMAR. A, J. ALEXANDER.

W. R. PHILLIPS. H. S. PERSONS,

B. L. BOYKIN.

A. F. CORY.

T. H. JONES.

Cadet Color Corporals.

D. M. DRIVER.

J. H. DRAKE.

E. L. NONNENMACHER.

T. V. WALKER. E. C. MACARTNEY.

E. H. COBB.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character and not less than fifteen years of age. To enter the fourth class the applicant should be qualified to pass a satisfactory examination in the following subjects:

1. Geography and History of the United States.

2. English.—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar, and division into caragraphs.

3. Mathematics—(a) Arithmetic, including Fundamental Operations; common and Decimal Fractions; Denominate Numbers, the Metric System; Percentage, including Interest and discount; Proportion; Extraction of Square and Cube Roots.

(b) Algebra, to Quadratic Equations.

For admission to the fourth class in the General Course a satisfactory examination will be required in the following additional subjects: Latin Grammar (Allen & Greenough), Latin Lessons (Leighton's), Caesar (4 books.)

ENTRANCE EXAMINATIONS,

Entrance examinations will be held on the 15th. of September, the day on which the session opens.

Applicants, who are fully prepared to stand the entrance examinations, including those of fourteen years of age, are admitted to the sub-college department, which includes the Fifth class.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

SUB-COLLEGE DEPARTMENT.

For students who are not prepared for the regular college classes, this department is regularly organized under the direction of an experienced instructor. These students are subject to the discipline of the College.

NUMBER OF EXERCISES.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the Second class, and those over twenty one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty.

Regular students who fail to pass satisfactory final examinations in any one study become special students.

They will be classed as regular students, pursuing a course for a degree, whenever they can pass the examinations in those subjects in which they were found deficient.

COURSES OF INSTRUCTION

The courses of study include the Physical, Chemical and Natural Sciences with their applications; 'Agriculture, Mechanics, Astronomy, Mathematics, Engineering, Drawing, English, French, German and Latin Languages, History, Folitical Economy. Mental and Moral Science.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

There are three Degree courses, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

I --- COURSE IN CHEMISTRY AND AGRICULTURE.

II --- COURSEIN MECHANICS AND ENGINEERING.

III-GENERAL COURSE.

There are also two Partial courses, each requiring two years for its completion:

IV-TWO YEAR'S COURSE IN AGRICULTURE.
V.-TWO YEAR'S COURSE IN MECHANIC ARTS.

Course I. includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or Chemical pursuits.

Course II. includes the principles and applications of the sciences that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the profession of engineering.

Course III. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses IV. and V. have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are not able to continue at college four years and take one of the regular degree courses,

Students who complete either of these two year courses, will, on passing a satisfactory examination, receive certificates indicating their attainments.

When all of the departments in the School of Mechanic Arts are provided with the necessary appliances it is designed to arrange a more extended course in Mechanical Engineering.

COURSE IN PHARMACY.

The following resolutions were adopted by the Trustees August 27, 1885.

"That the faculty are hereby authorized and directed to arrange as early as practicable a special course of instruction in Pharmacy, adapted to qualify young men, by systematic work in chemistry and other sciences, to become practical pharmacists and chemical manufacturers.

Students who expect to become practical pharmacists can enter upona special course of Chemistry and Natural History and with great advantage, occupy all of their time in the laboratories of these departments, under the immediate direction of the Professors.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this college, and as far as posssible all students are required to enter upon laboratory work in some one department.

Laboratory instruction is given in the following departments:

I---CHEMISTRY.

II—Physics.

III-Engineering; Field Work.

IV—AGRICULTURAL ENGINEERING & SURVEYING.

V-AGRICULTURE.

VI-NATURAL HISTORY.

VII—TECHNICAL DRAWING.

VIII-MECHANIC ARTS.

IX —PRINTING & TELEGRAPHY.

I.—COURSE IN CHEMISTRY AND AGRICULTURE

FOURTH CLASS.

First Term.

- 3. English.
- 2. History.
- 5. Mathematics.
- 5. Elementary Physics.
- 3. Drawing.
- 3. Mechanic Art Laboratory.
 Military Drill.

THIRD CLASS.

First Term.

- 3. English.
- 2. History.
- 5. Mathematics.
- 3. General Chemistry.
- 3. Agriculture.
- 3. Drawing.
 Chemical Laboratory.
 Practical Agriculture
 Military Drill.

SECOND CLASS

First Term.

- 3, English.
- 3. Physics.
- 3. Industrial Chemistry.
- 2. Agriculture.
- 4. Natural History, (laboratory)
- Military Science & Tactics Chemical Laboratory.
 Practical Agriculture.
 Military Drill.

First Term.

- 2. English Literature.
- ·2. Mental Science·
- 2. Physics.
- 4. Natural History
- 2. Agriculture.
- 2. Agricultural Chemistry.
- 1. Military Science & Tactics.
 Chemical Laboratory.
 Practical Agriculture.

Second Term.

- 5. English.
- 2. History.
- 5 Mathematics.
- 3. Elementary Physiology.
- 3. Drawing.
- 3. Mechanic Art Laboratory. Military Drill.

Second Term.

- 3. English.
- 2. Botany.
- 5. Mathematics.
- 3. General Chemistry.
- 3. Agriculture.
- 3. Drawing.
 Chemical Laboratory.
 Practical Agriculture.

Military Drill.

Second Term.

- 3. English:
- 3. Physics.
- 3. Industrial Chemistry.
- 2. Agriculture.
- 4. Natural History, (laboratory)
- 1. Military Science & Tactics.
 Chemical Laboratory.
 Practical Agriculture.
 Military Drill.

FIRST CLASS.

Second Term,

- 2. Political Economy.
- 2. Moral Science.
- 2. Astronomy,
- 4. Natural History.
- 2. Agriculture.
- 2. Agricultural Chemistry.
- 1. Mlitary Science & Tactics.
 Chemical Laboratory.
 Practical Agriculture.

		ANICS AND ENGINEERING			
	First Term.	Second Term.			
3.	English.	5. English.			
2.	History.	2. History.			
5.	Mathematics,	5. Mathematics.			
5.	Elementary Physics.	3. Elementary Physiology.			
	Drawing.	3. Drawing.			
3.	Mechanic Art Laboratory.	3. Mechanic Art Laboratory.			
,	Military Drill.	Military Drill.			
	THÍF	RD CLASS.			
	First Term.	Second Term.			
3.	English.	3. English.			
2.	History.	2. Botany.			
5.	Mathematics.	5. Mathematics.			
3.	General Chemistry.	3. General Chemistry.			
3.	Agriculture. (a)	3. Agriculture. (a)			
5.	Drawing.	5. Drawing.			
3	Mechanic Art Laboratory.	3. Mechanic Art Laboratory.			
	Military Drill.	Military Drill.			
		ND CLASS.			
	First Term.	Second Term.			
3.	English. (a)	3. English. (a)			
3.	Physics.	3. Physics.			
5.	Mathematics.	5. Mathematics.			
5.	Engineering.	5. Engineering.			
	Drawing.	5. Drawing.,			
1.	Military Science & Tactics.	1. Military Science & Tactics.			
	Laboratory & Field work.	Laboratory & Field work.			
	Military Drill,	Military Drill.			
	FIRST CLASS				
	First Term.				
2	English Literature	2. Political Economy			
	Physics	2. Astronomy.			
2.		2. Natural History.			
3.	Mathematics.	3. Mathematics.			

5. Engineering.

Laboratory & Field work.

5. Drawing.

1. Military Science & Tactics. 1. Military Science & Tactics.

NOTE-French may be substituted for the subjects marked [a]

5. Engineering.

Laboratory & Field work.

5. Drawing.

4. German.

. 1. Military Science & Tactics.

III.—GENERAL COURSE.

III.—GE	NERAL COURSE.
· · FOU	RTH CLASS.
First Term.	Second Term.
3. English.	5. English.
2. History.	2. History.
5. Latin.	5. Latin.
5. Mathematics.	5. Mathematics.
3. Drawing.	3. Drawing.
3. Mechanic Art Laboratory	. 3. Mechanic Art Laboratory.
Military Drill.	Military Drill.
THIRD CLASS.	
First Term.	Second Term.
5. Latin.	5. Latin.
2. History.	2. Botany.
5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.
3. Drawing.	3. Drawing.
Laboratory work.	Laboratory work.
Military Drill.	Military Drill.
	COND CLASS.
First Term.	Second Term.
3. English.	3. English.
3. Physics. 5. Mathematics.	3. Physics.
3. Latin.	5. French.
	3. Latin.
2. Natural History,	2. Natural History.
Laboratory work.	s. 1. Military Science & Tactics.
Military Drill.	Laboratory work.
	Military Drill.
	TRST CLASS,
First Term.	Second Term.
2. English Literature.	2. Political Economy.
2. Mental Science.	2. Moral Science.
2. Physics.	2. Astronomy.
2. Natural History.	2. Natural History.
3. French.	3. French.

4. German.

1. Military Science & Tactics.

V-TWO-YEAR'S COURSE IN MECHANIC ARTS.

FIRST YEAR.

First Term.

- 3. English.
- 5. Mathematics.
- 5. Elementary Physics.
- 3. Drawing.
- Mechanic Art Laboratory. Military Drill.

Second Term.

- 5. English.
- 5. Mathematics.
- 3. Elementary Physiology.
- 3. Drawing.
- 6. Mechanic Art Laboratory.
 Military Drill.

SECOND YEAR.

First Term. Second

- 3. English.
- 5. Mathematics.
- 3. Physics.
- 3. Drawing.
- 6. Mechanic Art Laboratory.
 Military Drill.

- Second Term.
- 3. English.
- 5. Mathematics.
- 3. Physics.
- 3. Drawing..
- Mechanic Art Laboratory. Military Drill.

IV.—TWO-YEAR'S COURSE IN AGRICULTURE.

FIRST YEAR.

First Term.

- 3. English.
- 3. Mathematics.
- 5. Elementary Physics.
- 3. Agriculture.
- 3. Drawing.
- 3. Mechanic Art Laboratory.
 Practical Agriculture.
 Military Drill.

Second Term.

- 5. English.
- 3. Mathematics.
- 3. Elementary Physiology.
- 3. Agriculture.
- 2. Botany.
- 3. Mechanic Art Laboratory.
 Practical Agriculture.
 Military Drill.

SECOND YEAR.

First Term.

- 3. English.
- 3. Mathematics.
- 3. General Chemistry.
- 2. Agriculture.
- 4. Natural History.

 Practical Agriculture.

 Military Drill.

Second Term.

- 3. English.
- 3. Mathematics.
- 3. General Chemistry.
- 2. Agriculture.
- 4. Natural History.

 Practical Agriculture.

 Military Drill.

SCHEDULE OF STUDIES.

Hours.	- Monday.	Tuesday.	Wednesday.
-	4. Mathematics.	4. Mathematics,	
	3. Latin.	3. Latin,	3. Latin.
I.	3. French.	3. French.	1. 4. 10. 10.
8-9.	2. Botany.	2. Botany.	2. Botany.
	2. Engineering.	2. Engineering.	2. Engineering.
	1. Agric :lture.	0 0	1. English.
4)	4. Physics.	4. Physics.	4. Physics.
II.	4. Latin.	4. Latin.	4. Latin,
9-10.	3. Chemistry.	3. Engineering.	3. Chemistry.
	2. Mathematics.	2. Mathematics.	2. Mathematics.
	1. French.	1. Physics	1. French,
		4. History.	
	3. Agriculture.	3. Agriculture.	
III.	2. Physics.		2. Physics.
10–11.	1. Engineering.	1. Engineering.	1. Engineering.
	1. Natural History.		1. Nat. History.
	1. German	1. German.	1. German.
	4. Mechanic Ar.s	4. English.	4. English.
	3. Mathematics.	3. Mathematics.	3. Mathematics.
IV.	2. Chemistry.	1. Chemistry.	2. Chemistry.
11–12.	2. Latin.	2. Botany G.C.	2. Latin
	1-2. Drawing.	1.2. Drawing	i.2. Drawing.
- 4	1. Agriculture.	2. Agriculture.	1. Agriculture.
		5, Mechanic Arts,	8
	4. Mechanic Arts.	. 10	4. Drawing.
	3. History.	3. Drawing.	3. History.
V.	1 0	2. English.	
12–1.		1. Ment. Science.	1. Nat. History.
-	1. Mathematics.	1. Mathematics.	TITOMITY.
		5. Mechanic Arts.	
	4. Mechanic Arts.	4. Mechanic Arts.	4. Mechanic Arts.
VI.	3. Pract. Agricul.	Mi itary Science	3. Pract. Agricul.
VII.	2. Laboratory.	Military Drill.	2. Laboratory.
2-5.	1. Engineering.		Printing.
	Printing.		- mung.

SCHEDULE OF STUDIES.

Hours.	Thursday.	Friday	Saturday.
I 89.	4. Mathematics. 3. Latin. 3. French. 2. Botany. 2. Engineering, 1. Agriculture.	4. Mathematics. 3. Latin. 2. Engineering. 1. English.	Rhetorical Exercises
II 910	4. Physics, 4. Latin. 3. English. 2. Mathematics. 1. Physics.	4. Physics. 4. Latin. 3. Chemistry. 2. Mathematics. 1. French.	Military Drill.
III 10–11	 History. Agriculture. Engineering. German. 	3. English, 2. Physics. 1. Engineering.	Mechanic Arts. Laboratory work.
IV. 11-12.	3. Mathematics. 1. Chemistry. 2. Botany G.C. 1 2. Drawing. 2. Agriculture. 5. Mechanic Arts	4 English. 3. Mathematics. 2. Chemistry. 2. Latin. 1-2 Drawing. 5. Mechanic Arts.	Mechanic Arts. Laboratory work.
V. 12-1.	4. Drawing. 3. Drawing. 2. English 1. Ment. Science. 1. Mathematics. 5. Mechanic Arts.	4. Drawing. 3. Drawing. 2. English. 1. Nat. History.	Mechanic Arts. Laboratory work.
V1. VII- 2–5.	4. Mecbanic Arts Military Science Military Drill,	4. Mechanic Arts. 3. Pract. Agricul. 2. Laboratory. 1. Engineering. Printing.	

Chapel Exercises Every Morning At 7;45.

During the second term this Schedule is subject to modification.

DEPARTMENTS OF INSTRUCTION,

PHYSICS AND ASTRONOMY.

President Broun.

The instruction is given by recitations from text books and lectures, illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics, treated graphically.

This is followed by a full discussion of Molecular Mechanics, while due prominence is given to principles, frequent reference is made to the applications of science.

The studies of the Second Class include the properties of matter, units of measure, force, work, energy; kinematics, kinetics, mechanic powers, friction. gravitation, pendulum; molecular forces of solids, liquids and gases; theory of undulations; heat, electricity, magnetism; etc.

The studies of the First Class include Electricity and its applications; Optics, Astronomy and Meteorology.

LATIN LANGUAGE AND HISTORY.

Professor Dunklin.

The subjects taught in this Department are the Latin Language and Literature, and History,

Latin — The modes of instruction are? by translation from the Latin texts into English and from English into Latin. The constant use of black boards adds much to the progress and accuracy of the student.

A systematic course of exercises, illustrative of the principles of Latin Etymology and Syntax, is carried on in connection with the reading of the authors prescribed. Special attention is given to English derivatives from the Latin, and to the corresponding idioms of the two languages.

The progress of the student is valued not so much by the number of books read as by his ability to read Latin, and explain the principles of interpretation and construction,

HISTORY.—A course in general History, Ancient and Modern is given to the Fourth and Third classes in all the College Courses.

The plan and purpose of the instruction in History are to learn the facts of history, their bearing on each other, and to make them lessons of warning and instruction; and to train the mind of students to proper modes of thought and reflection in reference to human action as far as can be done from the light of history.

POLITICAL ECONOMY.—A brief course in Political Economy is also given to the students of the First class, sufficient to enable them

to pursue the subject into its wide domain.

Latin authors read:

Fourth class.—Virgil; Cicero's Orations; Grammar and Composition.

Third class.—Cicere; Horace; Composition.

Second class.—Horace; Selections from Latin Poets and Prose writers. Classical Literature.

Optional. A brief course in Greek is given to such students as may have time and inclination to study this language. Selections from Xenophon, Homer and Demosthenes may be read.

MATHEMATICS.

Prof. Smith.

The general course for the first two years embraces the first year, Algebra, and Geometry six books; second year, Solid Geometry Plane and Spherical Trigonomety. Surveying, Mensuration.

Two objects are sought to be attained, first, mental discipline; second, a thorough knowledge of the practical applications of pure mathematics.

Theoretical and practical instruction is given in the third class, in farm, town and government land surveying, dividing land, mapping, plotting and computing of areas, etc., also in the theory, adjustment and use of instruments

The class in sections of six or eight devote three afternoons a week during the second term, to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering Course. Analytical Geometry, Descriptive

Geometry and Calculus are pursued in the Engineering course. Especial attention is given to their practical applications.

During the entire course, instruction in text books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with the application of principles studied.

Text Books.

Olney's and Wentworth's Algebra, Wentworth's Geometry, Schuylers' Surveying, Loomis' Analytical Geometry, (new edittion) Warren's Descriptive Geometry. Loomis Calculus, (new edition).

MATURA). HISTORY AND GEOLOGY.

Prof. Mell Geology.—This subject is studied in the senior class.

Special attention is given to the Geology of Alabama. The course is given by text books and lectures, illustrated by means of diagrams, maps, models and various rocks, fossiliferous and nonfossiliferous, to be found in the Geological Cabinet. Attention is given to the nature and origin of ore deposits, mineral springs, and origin and Geological relations of soils. SOFTAN ATTER

Zoology A systematic arangement of the Animal Kingdom, in accordance with natural affinites, is made a special feature of the instruction. Particular attention is also given to insects injuries to vegetation, their habits, and the methods best adapted for checking their ravages.

Botany.—The students of the Third Class begin the study of Botany, and continue it through the second term. Analytical work is made an important feature. This Class is provided with plants? from the neighboring fields, and taught how to determine their specific na nes. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section.

In the Second Class ar amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope, in the preparation of specimens showing plant structure, sufficient to familiarize the students not only with the methods of plant building and cellular organization, but also to practice them in detecting the various forms of fungi that are injurious to fruits and vegetables. A Biological Laboratory has been fitted up for students, provided with excellent microscopes o. the most improved patterns, well constructed tables, and all the necessary chemicals for preparing and mounting vegetable tissues. A dark room is attached to this laboratory for micro-photographic work.

The te ching of Botany is greatly facilitated by the use of Au-

zoux's, complete set of clastic models of plants.

Physiology.—This subject is taught to the students of the Fourth class, and is completed in the second term of the session. The text is illustrated by models and microscopical sections projected on the screen. A s'eleton, finely articulated, has been provided for the use of the class.

Text Books

Le Conte's Geology, Holder's Zoology, Pessey's Botany, Apger's Plant Analysis, Martin's Human Body.

ALABAMA WEATHER SERVICE:

The United States' Signal Service has established in Alabama a State System for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered throughout the State. An opportunity is thus offered the students in Meteorology for becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

Professor Lane.

CIVIL ENGINEERING.

The special studies of this department begin in the Second Class, and require a good knowledge of Algebra, Geometry, Trigonome ry and Mechanics. They are as follows:

Second Class,—Simple. compound, reversed and parabolic curves, turnouts, and crossings, leveling, gradients, setting slope stakes location and construction of common roads and railroads.

First Class,—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings.

solid and open built beams; classification, construction and mechanics of masonry; foundations on land and water; bridges and roofs of different kinds, their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads: navigable, irrigation and drainage canals; river and sea-coast improvements.

Theory and practice are combined in both classes.

For practical work, this Department has been supplied with two transits, one having the solar attachment, two engineers' levels, a farmer's level, two surveyor's compasses, a railroad compass, one sextant, one pocket sextant, an aneroid barometer, an Abney hand level and clinometer and other instruments.

The library has been supplied with books of reference.

Text Books.

Second Class,—Hench's Field Book for Railway Engineers, Gillespie's Roads, and Rail Roads.

First Class,—Wheeler's Civil Engineering, Von Ott's Graphic Statics.

DRAWING.

All of the students of the Third and Fourth classes are required to take Drawing; but only the students in Mechanics and Engineering, in the First and Second classes.

The Fourth class is taught linear drawing and elementary graphical mechanics. The Third class is instructed in the principles of orthographic and isometric projections, shades and shadows, practical perspective and tinting. In the Second class, the instruction embraces a more extended course in orthographic and isometric drawings, perspective, shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings. The First class make topographical drawings and drawings of machines, roofs, bridges etc. to different scales. Plans, profiles and sections of railroad surveys complete the instruction in this department.

The drawing rooms are furnished with adjustable tables with black walnut tops and iron stands, Schroeder's and other models, French, German, English and American plates of roofs, bridges, masonry, tools, machines etc., etc.

Text Books:

Fourth Class,—Davidson's Linear Drawing, Broun's Elementary Graphical Mechanics.

Third Class,—Davidson's Projections, Davidson's Practical Perspective.

Second Class,—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the College.

First Class,—French, German, English and American Plates belonging to the College.

AGRICULTURE.

Prof. Newman,

Instruction in this department commences with the Third Class and continues through the Second and First Classes. The sulject is taught principally by lectures in which it is treated as an applied science, or the application of the teachings of the natural sciences to the art of agriculture, using the farm of the Experiment Station as a laboratory for the practical illustration of the lecture room instruction.

The classes accompany the professor (who is also Director of the Station) into the field, garden, orchard, vineyard, the green house and stock yard, where lectures are delivered in the presence of the work in progress, the objects and results of experiments explained, the propagation, planting, pruning and cultivation of plants illustrated, and so far as deemed necessary for thorough instruction, manual labor required of the students in any and every department of the farm.

Every principle and theory taught in the lecture room will le thoroughly illustrated and exemplified on the farm.

AGRICULTURAL EXPERIMENT STATION.

J. S. Newman, Director.

The state Agricultural Experiment Station is connected with the College.

The farm of the station is adjacent to the College buildings and is used by the professor of agriculture to illustrate his lecture room instruction. Here a great variety of experiments in Agriculture. Horticulture, stock breeding and stock feeeding will serve not only the purposes of instruction to the students, but will afford valuable

information to the farmers of the State, many of whom already show their appreciation of the Station by visiting it for the purpose of inspecting the work in progress.

Bulletins are issued regularly through the State Department of Agriculture and widely distributed over the State by the Commis-

sioner.

MODERN LANGUAGES AND ENGLISH LITERATURE.

Prof. Thach, ENGLISH.

In this department the students are carried through a systematic course of study in the English language and literature. In the courses of study which do not include the ancient classics, a full course in English is especially important. It is, therefore, designed, as much as the time allotted permits, to familiarize these students by frequent exercises with the standard authors of the language.

The course of study is as follows:

Fourth Class.- Three hours a week, study of Grammar; the principles of special and general composition, with frequent brief papers illustrating the laws studied.

Third Class—Three hours a week, study of style, analysis of the selections of prose and poetry, frequent essays on literary and his-

torical themes.

Second Class.— Three hours a week, critical study of English Classics, History of English and American Literature, Logic, Essays.

First Class.— Two hours aweek, first term, principles of criticism and study of English Classics.

Weekly exercises in declamation are held in the third class. Three original orations are required during the year of each student in the first and second classes.

MODERN LANGUAGES.

No attempt is made in this department to teach a student to speak French and German. The aim is to give such a facility in reading these two languages as will afford ready access to the important scientific papers in foreign journals. The following courses are pursued;

French,—I. Otto's Grammar, part first; exercises in writing French; French readings.

French,—II.Otto's Grammar, part second; French composition, Racine's Athalie.

French—III. composition, scientific French.

German—I. Otto's Grammar, part first; exercises in writing German; German readings.

German—II. Otto's Grammar, part second, Schiller's Wilhelm Tell, Scientific German and composition.

CHEMISTRY.

Professor Lupton.

Assistants, Ross and Wilkinson.

Instruction in this department embraces—

- 1. A course of lectures in General Chemistry.
- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each course of lectures for the practice of chemical analysis and chemical research.
- 1. (Course in General Chemistry. This consists of a series of lectures (three per week) extending throughout the entire session and in cludes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties, and compounds of the metallic and non-metallic elements, with the main facts and principles of Organic Chemistry. In this course, the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

Reference-books: Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cooke's Chemical Philosophy, Chemical Journals.

2. The lectures on Industrial Chemistry (three per week) extend throughout the Session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures, in the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, heating, illumination, cleansing, purifying, writing, printing, etc.

These Lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

Reference books: Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufactures, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology. Percy's Metallurgy.

3. Course in Agricultural Chemistry. This consists of lectures on Chemistry in its applications to Agriculture (two per week) and includes a thorough discussion of the origin, composition, and classification of soils, the composition and growth of plants, the sources of plant-food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, in the feeding of live stock, and in the various operations carried on by the intelligent and successful agriculturist.

Books of Reference.—Lupton's Elementary Principles of Scientific Agriculture, Johnston & Cameron's Elements of Agricultural Chemistry Scientific Journals, Reports of the United States Department of Agriculture, and the pulletins and reports of the various home and foreign Agricultural Departments and Stations.

4. The Course of Systematic Laboratory work. This course of practical work in the Laboratory is carried on in connection with each course of lectures and embraces the practical operations of Chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The Laboratories, which are open from 9 a. m. to 5 p. m. during five days in the week, are amply supplied with every thing necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of Practical Chemistry.

A fee of \$10 per Session is charged each student in the Analytical Laboratory for the use of apparatus, and for material consumed.

Each student on entering the Chemical Laboratory is required to deposit \$5, and is furnished with a working-table, a set of reagent

Lottles, and the common reagents and apparatus used in Qualitative and Quantitative Analyses. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

Books used: In Qualitative Analysis—Jones, Fresenius, Plattner. In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying. In Agricultural Chemical Analysis—Church, Frankland.

CHEMICAL LABORATORIES.

These are well adapted to analytical work. There are six rooms and two balance rooms. The work rooms contain a table for each student, provided with gas and water facilities, a set of reagent bottles and necessary apparatus. The lecture room is 40 by 40 feet in size, and is provided with every facility for illustrating lectures by experiments. The furnace is supplied with a boiler, which runs the stills, and the water and filter pumps, of the work laboratory.

In the balance rooms are balances made by Oertling Verbeck, Pickholdt, Troemner and Becker,

STATE LABORATORY AND LABORATORY OF EXPERIMENT STATION

Professor Lupton, State Chemist. Assts. Ross and Wilkerson.

In this laboratory work is done for the Department of Agriculture and the Experiment Station. During the present sesson about 200 quantitative analyses have been made consisting of commercial fertilizers, marls phosphates, muck, iron and gold ores, mineral waters and soils, Numerous qualitative analyses have also been made.

This laboratory performs the following work: first analyses of commercial fertilizers, minerals, marls. ores etc., for the Department of Agriculture.

2nd. Analyses for State Experiment Station.

3rd. Analyses for private parties.

The Commissioner of Agriculture orders the work done under 1st., head, the Director of Experiment Station the 2nd., while a charge is made for the 3rd.

MILITARY SCIENCE AND TACTICS.

Lieut. Richards U. S. Army, Commandant.

Military Science and Tactics are required to be taught in this Institution by law. This law is faithfully carried out, by imparting to each student not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion, also in Guard Mounting, Inspections, Dress Parades, Reviews, etc.

Under Section 1225 U. S.Revised Statutes, the College is provided with modern Cadet Rifles and accourrements and two pieces of Field Artillery. Ammunition for practice firing is used under the direction of an experienced officer.

The following uniform of standard cadet gray cloth has been prescribed for dress, viz: Coats and pants as worn at West Point, with sack-coat for fatigue, dark blue cadet cap, white helmet for dress occasions.

A very neat and serviceable uniform can be obtained here at \$18. This is less expensive than the usual clothing. All students are required to wear this uniform during the term.

The drills are short, and the military duty involves no hardships. The military drill is a health giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, one 1st. Lieutenant, one 2nd Lieutenant and with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the President, on nomination of the Commandant.

Privates of the First Class may be excused by the Faculty from all military drill except battalion drill.

The First and Second Classes recite once a week in Military Tactics.

MECHANIC ARTS.

G. H. Bryant, B. S., Instructor.

This department of Manual Training will embrace when completed

a three year's course as follows:

1st. year, wood-working-carpentry, turning, etc.

2nd. year, forge and foundry-black-smithing, moulding and casting.

3d. year, machine shop,—chipping and filing, and machine work in metals.

This course is obligatory upon the students of the three lower classes (5th., 4th. and 3rd.) in Mechanics and Engineering, but may be pursued by other students with the consent of the Faculty.

During the past year the wood working shop has been equipped and is in very successful operation, and it is the purpose of the au thorities to complete the other departments as soon as funds are available. It is expected this year to build and equip the forge, and foundry departments.

The power for running the apparatus in this department is derived from a twenty five horse-power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse power steel horizontal tubular boiler of most approved design. A Deane steam pump and a heater for the feed water form a part of the steam apparatus.

The equipment in the wood working department comprises the fol lowing: 20 wood working benches, each with complete set of carpen ters' tools; 16 turning lathes, 10 in. swing, 30 in. between centres, each with complete set of tools; 1 double circular saw; 1 band saw; 1 board planing machine; 1 buzz planer; 2 scroll saws (power); 1 large pattern-maker's lathe; 16 in. swing, 4 ft. between centers; 1 36 in. grindstone. In addition to these the tool room is supplied with a variety of extra hand tools for special work.

The course of work in this department comprises:

I. A course of carpentry (hand work) covering the first term and part of the second, or about five months. The lessons include; instruction on the nature and the use of tools, elementary work with plane, saw, chisel, &c., different kinds of joints—timber—plices, cross-joints, mortice and tennon, used in construction, miter and frame work, dove-tail work comprising different kinds of dovetail joints used in cabinet making, &c., &c.

II A. course in Turning and Pattern making, covering the first three months of second term. The lessons comprise first, nature and use of lathe tools, cylindrical turning, caliper work—turning to different diameters and lengths, simple curves, compound curves, taper work, screw-plate work.

rosette turning, chuck work-hollow and spherical turning, etc, etc.

III. Special work, covering the remainder of the year, combining hand and lathe work, cabinet-making, scroll work, and the use of the various machines. Besides this much of the repairs and improvements about the shop are done by the students, thus giving them actual practical construction.

All instruction is given, 1st. by black-board drawings or sketch es which the student copies, with dimentions, in a note book with which each one provides himself; thus each one works from his own notes. This supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class; 2nd. by inspection and direction at bench by instructor. There are three exercises in this course, each two hours long.

A special course of instruction is also given to more advanced students especially interested in the subject of Applied Mechanics, comprising, 1st., A series of lectures on elementary Steam and Mill Engineering, supplemented by actual experiment and practice with the apparatus, including steam generation, and the nature and use of the steam boiler and its accompaning apparatus; steam as a motive power, and the forms, construction and use of the steam engine, with the study and the use of the Indicator; transmission of power, shafting, belting, etc. 2d. A course of shopwork,—carpentry turning, etc.—this part being a more comprehensive course than that for the lower classes.

POST-GRADUATE DEGREES.

There are two Post-Graduate Degrees-MASTER OF SCIENCE and CIVIL ENGINEER-ING.

Any graduate of this College, who shall, after graduation, actively engage, for at least three years, in literary or scientific work in the line of his profession, and who may, by an examination prescribed by the Faculty, give satisfactory evidence of sufficient advancement, shall be entitled to a Post-Graduate Degree. The requisite course of study and the nature of the examination may be obtained by corresponding with the Faculty. A Post-Graduate Degree also may be obtained by a graduate by one year's residence at the College spent in the successful prosecution of such a course of applied science as will be prescribed by the Faculty.

Applicants for Post-Graduate Degrees must matriculate and deposit with the treasurer the amounts of their diploma fees. They must also write and present to the Faculty a satisfactory thesis

upon some subject pertaining to their professions.

Resident Graduates may prosecute the studies in any department of the College without payment of regular fees.

DISTINCTIONS.

Distinctions will be awarded, in the different subjects of each class, to those students whose grade is above 90 per cent. and who have satisfactorily passed all the regular examinations of that session.

Certificates of Distinction are awarded on Commencement day to those students who obtain three Distinctions.

RECORDS AND CIRCULARS.

Daily records of various exercises of the classes are kept by the officers of instruction, in a form adapted to permanent preservation.

From the record a circular, or statement is sent to the parent or guardian, monthly.

EXAMINATIONS.

Written recitations or monthly examinations on the studies of the month are held at the option of the Professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examinations can be promoted to full standing to the next higher class only on satisfactory examinations at the opening of next session.

It is required that every student who enters the college shall remain, through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examinations, except in extreme cases.

Examinations for degrees or certificates of proficiency embrace the entire subject of study in the course.

MUSEUM OF NATURAL HISTORY AND GEOLOGY.

Many valuable additions have been made to the various branches of this Museum within the past few years.

Contributions have been received from different States of the Union, from England, Italy, France, and the Bermuda Islands.

The Geology of Alabama is well illustrated with minerals, fossiliferous and non-fossiliferous rocks from the different formations of the State. The Museum is divided into the departments of Mineralogy, Conchology, Geology, Zoology and Botany. Each department is systematically arranged and catalogued for study and inspection.

The entire collection of the Museum, added to the private Cabinet belonging to the Professor of Natural History, numbers more than 30,000 specimens.

MUSEUM OF AGRICULTURE.

The Agricultural Museum is intended to illustrate, as far as possible, the agricultural products of this and other countries. It now contains nearly 1,000 specimens, obtained by donations and by a system of exchanges with other Agricultural Colleges, illustrating varieties of soil, cotton, wheat, oats, corn, peas, grasses etc.

LIBRARY.

A room in the College building is appropriated to the Library, but the number of books at present is not large. A portion of the recent appropriation made by the State Legislature has been used in the purchase of books. For this purpose there is also paid a small annual fee by each student.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the Faculty

PRINTING OFFICE.

The Printing Office is under the charge of Professor Mell, who assisted by D. M. Thrash as foreman, superintends the work of the class in printing at fixed hours during the week. The office occupies a large room in the College building and has a complete outfit consisting of an excellent Gordon press, with fonts of type and stands for twelve students. It is open each afternoon for practice by the cadets. This Department is also furnished with a Caligraph Type-writer where special students have the opportunity of becoming familiar with type writing.

DISCIPLINE.

The government of the College is administered by the President and Faculty in accordance with the Code of Laws and Regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations

and all other duties, is required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students are required to attend these exercises. and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday

'LOCATION.

The College is situated in the town of Auburn sixty miles from Montgomery, directly on the line of the Western Railroad.

The region is high and healthful—821 feet above tide water. By statute of the State the sale of spirituous liquors and keeping saloons of any kind, within five miles of Auburn are forbidden.

THESIS.

Each applicant for a regular degree is required to write and subnit to the Faculty a thesis on a subject of immediate relation to some study of his course, and deliver the same at commencement, if required by the Faculty.

This thesis must be given to the Professor of English by the first day of June.

LITERARY SOCIETIES.

There are two Literary Societies—the Wirt and Websterian—connected with the College. Each has a commodious hall, hand-somely fitted up, a library of standard and miscellaneous works and a reading room. Their weekly exercises add to the facilities afforded by the College for practice in composition, elocution and discussion.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also on Monday and Tuesday evenings during 'Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

SOCIETY OF THE ALUMNI.

The annual Alumni Oration, by a member of the society, is delivered in the chapel, during Commencement week. R. L. Thornton of 78, Orator for 1885-'86,

Officers—T. H. Frazer, President; T. J. Lamar, Vice President; C. C. Thach, Treasurer and Secretary;

ALUMNI SCHOLARSHIP.

At its annual meeting, June 24, 1883, the Society established a scholarship to be known as the Alumni Scholarship. The fund for the scholarship is to be raised by voluntary contributions from the

members of the society, to be paid annually, and the beneficiary is to be elected by the society at its annual meeting in June. The Executive Committee, who have charge of this fund for the present year and to whom all communications should be directed, are T. H. Frazer and C. C. Thach, Auburn, Ala., and C. H. Lindsey, Mobile, Ala.

BOARDING.

Students after selecting their boarding-houses, will not be permitted to make changes without obtaining permission from the college authori ies.

EXPENSES

TUITION FREE TO ALL STUDENTS.

Incidental fee, per term	\$7.50
Library fee, per term	1.00
Surgeon's fee, per term	2.50
Board, per month, with fuel and lights	\$12 to 14.00

FUNDS OF STUDENTS.

Parents and guardians are requested to deposit with the Treasurer of the College all funds designed for sons or wards, whether for regular charges of College fees and board, or for any other purpose. It it is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., only when approved by the President.

ACADEMIC YEAR.

The Academic Year, which is divided into two equal terms, commences on the third Wednesday in September, and ends on the last Wednesday in June following, which is Commencement day.

The second term begins on the second Wednesday in February.

RESOLUTION OF THE TRUSTEES.

The Following resolution was adopted by the trustees at their meeting held August

"That in view of the increased facilities for instruction in Agriculture. and the technical departments of education, now possessed by this college, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the faculty are authorized, in addition to the legal name of this college, to print on the catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the courses of education now provided for.

DONATIONS TO THE LIBRARY.

- By Hon. J. L. Pugh, 50 Volumes. Consisting in part of
 Census of 1880.

 Report of Commissioner of Fisheriese
 Report of United States Coast Survey.

 Report of National Board of Health.

 Cotton and Woollen Mills of Europe.
- By Hon. J. T. Morgan, 10 Volumes.

 Report of Commissioner of Patents.

 Public Documents.
- By Hon. W. C. Oates, 80 Volumes. Consisting in part of Report of Bureau Ethnology.

 Report of Geological Survey.

 Congressional Record of 1886.

 Public Documents.

War Department. 2 Volumes.

Secretary Interior. 5 Volumes.

Department of State. 4 Volumes,

Smithsonian Institute. 1 Volume.

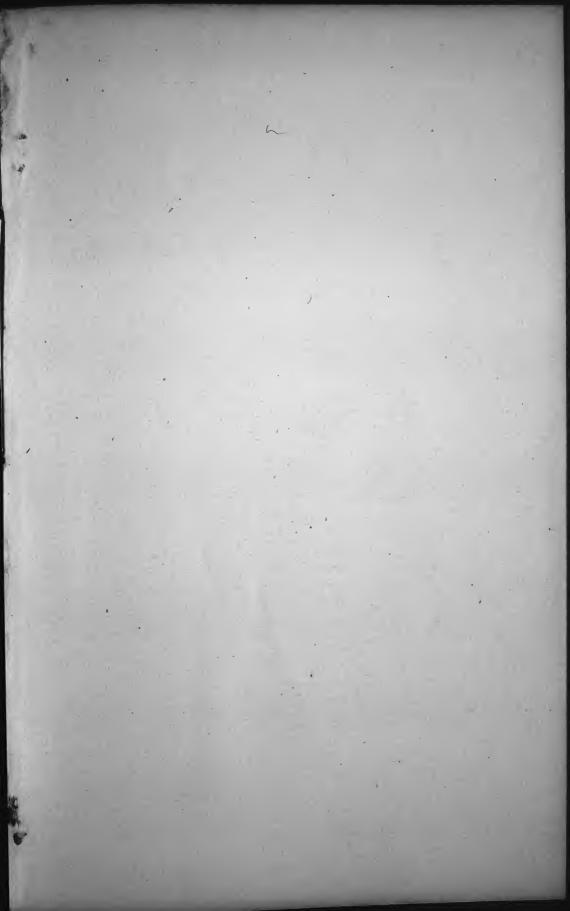
Massachusett's Agricultural College Reports.

University California Reports.

Michigan Agricultural College Reports.

North Carolina Experiment Station Reports.

History of Butler Co., J. B. Little.



Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1886

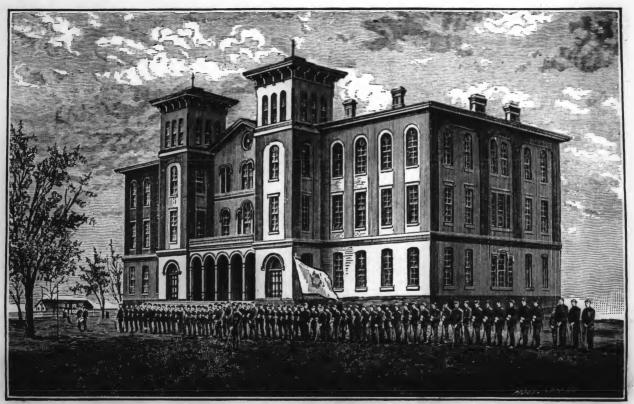
```
Rec stat:
  OCLC: 36819601
             19970429
                         Replaced:
                                       19970429
                                                    Used:
                                                             19970429
  Entered:
             ELvl: I
                          Srce: d
                                      GPub: s
                                                  Ctrl:
                                                              Lang: eng
Type: a
             Form: a
                          Conf: 0
                                      Freq: a
                                                  MRec:
                                                              Ctry: alu
  BLvl: s
                          EntW:
                                      Regl: r
                                                  ISSN:
                                                              Alph:
  S/L: 0 Orig:
  Desc: a SrTp:
                                      DtSt: d
                          Cont:
                                                  Dates: 1873,1893 ¶
   1 040
             AAA +c AAA ¶
            h +b c +d b +e f +f u +g b +h a +i u +j p ¶
   2 007
           n-us-al ¶
   3 043
   4 090
             LD271 +b .A76 ¶
   5 090
             *b ¶
             AAAA ¶
   6 049
   7 110 2
             Agricultural and Mechanical College of Alabama. ¶
   8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
   9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama 1
 12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama 1
             Auburn, Ala. : +b The College, ¶
13 260
 14 300
             21 v. ; +c 21 cm. ¶
 15 310
             Annual ¶
 16 362 0
             1872-73-1892-93. ¶
 17 500
             Title varies slightly. ¶
             Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
18 533
#d 1997. #c microfilm reels : negative ; 35 mm. ¶
             d +b 1873 +c 1893 +d alu +e u +f u +g a 1
19 539
 20 650 0 Universities and colleges +z Alabama +x Periodicals. ¶
21
      610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
> 22 780 00 Agricultural and Mechanical College of Alabama. #t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
> 23 785 00 Agricultural and Mechanical College of Alabama. +t Catalogue of
```

24 830 0 USAIN State and Local Literature Preservation Project ¶

the Alabama Polytechnic Institute ¶

of the of the institute 1880-1887

AU LU271 .476 1886/87 c.2



Alabama Agricultural 52 Mechanical College.

CATALOGUE

OF THE

STATE

Agricultural and Mechanical College.

ALABAMA POLYTECHNIC INSTITUTE.

1886-'87.

Shri 1987

AUBURN, ALA.

Frinted at the A. & M. College by the students of the printing class.

LEGISLATION.

ACT OF CONGRESS.

An Act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts. (Approved July 2d, 1862.)

SECTION 4. And be it futher enacted, That all moneys derived from the sale of the land aforesald by the State to which lands are apportioned and from the sale of land scrip herein before provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be propriated, by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one College, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislature of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

Act of the State Legislature

An act to establish a college at Auburn, in Lee County, Alabama, for the benefit of agriculture and the mechanic arts. pursuant to an act of the Congress of the United States, approved February 26, 1872.

Sec. 1. be it enacted by the General Assembly of Alabama' That there be and hereby is established at Auburn, in Lee County, Alabama, a college for the benefit of agriculture and the mechanic art, whose leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning of the Unied States entitled an act donating public lands to the several states and terriapproved July 2d eighteen hundred and sixty two, under such regulations as may be hereafter provided.

Sec. 2. Beit further enacted, That the" East Alabama male college", a body corporate created by the laws of Alabama, having by David Clopton the president, and George P. Harrison' secretary of its board of trustees made and executed a deed of conveyance of the college building lands and appurtenances thereto attached, as described and set forth in said deed, to the State of Alabama, for the purpose therein shown, bearing date of the 17th, day of February, eighteen hundred and seventy two, said conveyance is here... by accepted for the purposes therein set forth on the part of the State.

An act in relation to the Agricultural and Mechanical college of Alabama, approved February 26, 1872.

Sec. 21, Be it further enacted, That the interest, income and proceeds arising from the investment of the funds created by the sale of lands or land scrip, granted by the Congress of the United States to this State for the promotion of agriculture and the mechanic arts, shall be paid to the treasurer of said college as the same may accrue and be needed for the purposes of said agricultural and mechanical college, on the order of said treasurer upon the auditor of the State, who shall draw his warrant on the treasurer of the State for the same.

An act to amend an act entitled an act to establish a department of agriculture for the State of Alabama; approved February 17th, 1885.

Sec. 21, Be it further enacted, That for the purpose of establishing an experimental farm or station, one-third of the net proceeds annually accruing from the sale of tags as herein before provided, shall be paid to the treasurer of the Agricultural and Mechanical College on the approval of the governor, to be disbursed under the direction of the board of trustees of said institution, for the development of the agricultural and mechanical departments of said college. Provided, the trustees of said college shall cause to be made at said college all analyses of fertilizers that may be required under the provisions of this act, as well as such other analyses as the commissioner of agriculture may deem advisable without any charge therefor; and provided further, that the trustees shall establish and maintain an agricultural experimental farm or station, where carful experiments shall be made in scientific agriculture, results of which, together with other needed information, shall be furnished the commissioner of agriculture for publication in his monthly and annual reports.

An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and of the acts supplementary thereto.

SECTION 1. Be it enacted by the Senate and House of Representives of the United State's of America in Congress assembled, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges, or agricultural department of colleges in each state or territory established, or which may hereafter be established, in

accordance with the provisions of an act approved July 2, 1862, entitled "An act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanic arts," or any of the supplements of said act, a department to be known and designated as an "agricultural experiment station:" provided, That in any state or territory in which two such colleges have been or may be so established, the appropriation hereinafter made to such state or territory shall be equally divided between such colleges, unless the Legislature of such state or territory shall otherwise direct.

Sec. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or teritories.

SEC. 4. That bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the states or territories in which they are respectively located, and to such individuals as actually engage in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports, and the annual reports of said station shall be transmitted in the mail of the United States free of charge for postage, under such regulations as the postmaster-general may from time to time prescribe.

BOARD OF TRUSTEES.

His Excellency, THOMAS SEAY President.

Hon. SOLOMON PALMER, Superintendent of Education.

Hon. W. H. BARNES,

Hon. C. C. LANGDON,

Hon. R. F. KOLB,

Hon. JONATHAN HARALSON,

Hon. R. F. LIGON,

Hon. JOHN W. BISHOP,

Hon. J. G. GILCHRIST,

Hon. M. L. STANSEL,

Hon. J. N. MALONE,

term expires 1893.

term expires 1893.

term expires 1893.

term expires 1889.

term expires 1889.

term expires 1889.

term expires 1891.

term expires 1891.

term expires 1891.

ex-officio.

ex-officio. Opelika.

Mobile.

Eufaula.

Selma.

Tuskegee.

Talladega.

Montgomery.

· Carrollton.

.

Athens.

E. T. GLENN, Treasurer. F. M. REESE, Secretary.

FACULTY AND OFFICERS

WM. Leroy Broun. M. A., LL.D.
President and Professor of Physics and Astronomy.

OTIS D. SMITH, A. M. Professor of Mathematics.

P. H. MELL, Jr., M. E., Ph. D. Professor of Natural History and Geology.

JAMES H. LANE, C. E., A. M. Professor of Civil Engineering and Drawing.

J. S. NEWMAN,
Professor of Agriculture and Director of the Experiment Station.

CHARLES C. 7 HACH, B. E. Professor of English and Latin

N. T. LUPTON, A. M., M. D., LL, D.
Professor of General and Agricultural Chemistry, and State Chemist.

LIEUT. M. C. RICHARDS, 2d Artillery, U. S. A. [West Point.]

Commandant and Professor of Military Science.

GEORGE H. BRYANT, M. E. [Wass. Inst. Technology,]
Instructor in Mechanic Arts.

W. S. FLEMING, A. B,
Adjunct Professor of Modern Languages and History

L. W. WILKINSON, B. Sc. B. S. BURTON, B. Sc.

Assistants in the Chemical Laboratory.

S. C. PITTS, B. Sc. Assistant in Mechanic Arts

JAS W. MORGAN, JR. C. W. SIMMONS

Assistants in Mathematics and English.

J. H. DRAKE, M. D. Surgeon.

C. C. THACH, Recording Secretary.

W. S. FLEMING, Corresponding Secretary.

OBJECT OF THE COLLEGE

The leading object of the college, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially those that relate to agriculture and the mechanic arts, so far as the facilities at its disposal will permit; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on a sound general education.

The college in fact has become a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue; and work of great value to the youth of the state is now being accomplished by fitting them, by a thorough science-discipline,—in which hand-craft in the lower classes is made a prominent feature,—for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought and thus qualify them for the duties of life, whatever their vocation may be, their moral and christian training will always constitute the prominent care and thought of the Faculty.

LABORATORIES AND FACILITIES FOR INSTRUCTION

The College now possesses facilities for giving laboratory instruction in applied science in the following departments;

L-IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with illustrative

specimens of stock of select varieties.

By act of the legislature the office of the Commissioner of Agriculture and the Experiment Station for the state of Alabama are located at Auburn. The Professor of agriculture is also Director of the experiment station, and the Professor of chemistry is state chemist to the department of agriculture, whose duty it is to analyze fertilizers for the benefit of the general agricultural interests of the state.

This public work done at Auburn in behalf of the agricultural and industrial interests of the state affords to students an unusual opportunity to become familiar with its agriculture, its

defects and remedies.

The Experiment Station is not a model farm, but a place where experiments and scientific investigations in agriculture are made at the public expense for the common good, and where the young men at the college receive instruction in the methods applied.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc. where lectures are

delivered in presence of the objects discussed.

II-IN MECHANIC ARTS

The Mechanic Art Laboratory is used as an auxiliary in industrial education, to instruct in the arts that constitute the foundation of various industrial pursuits, thus aiding in giving mentally and manually, in theory and practice, that sound education that will in a measure qualify a young man to enter upon some one of the associated industries; that education which trains the eye and the hand as well as the mind, and tends to associate skil-

led manual and mental labor. This laboratory is now well equip-

ped in the wood and iron department.

The wood department in located is a commodious hall 90 x 50 feet, and is provided with a twenty-five horse power Corliss Engine with indicator, a planer, circular saw, band saw, two scroll saws, a buzz planer, twenty stands with lathes, with full sets of lathe and carpentry tools required for instruction.

A brick building with two rooms, each 30 x 35 feet, has recently been constructed. especially for instruction in working iron.

One room is equipped with twelve forges, and tools required for a forge department, the other with a cupola furnace, having a capacity of 400 pounds, a core oven, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant

fan and exhauster supplied with power from the engine.

The machine department will be thoroughly completed next year; the liberal appropriation made by the state legislature rendering this possible.

The Weston dynamo of five horse power, used for furnishing electricity to the laboratories and for lighting the halls, is located

in the large hall of the Mechanic Art laboratory.

The work performed by the students is instructive in character as in any other college laboratory, the classes are taught in sections under the supervision of the professor. There is no attempt to teach students skill in constructing special articles of commercial value, but all exercises are systematically arranged and designed for purposes of education.

III-IN PRACTICAL CHEMSTRY

The chemical laboratory is well supplied with apparatus and facilities for instruction in practical chemistry. It is provided with gas and water, a steam boiler for heating, etc., with filtering pumps, six analytical balances, and working tables for each student.

It is situated in the first story of the main building and occupies six rooms, one for special agricultural analysis, besides two small balance rooms.

. . .

-. reg arminister

IV-IN PHYSICS

This department has had valuable additions made to its apparatus, in electricity, magnetism, heat etc. There has recently been
liev added a Toepler-Holtz Electric machine, Gramme machine, Rueto appendit's Physical Balance, Jamin's magnets, etc., with the necessary
apparatus for an elementary physical laboratory. Electricity will

-tory to the supplied as needed, by the dynamo in the mechanic art labora-

hand the state of the same of the BOTANY.

Besides the preserved specimens of plants, grasses etc., this department is provided with Auzoux's beautiful Clastic models of seeds and flowers for teaching Botany. The botanical laboratory is provided with tables and ten Beck's microscopes for the use of the students.

VI IN MINERALOGY, AND GEOLOGY.

In this department the collections for illustration are quite exexistensive embracing more than 20,000 specimens all well arranged in glass cases.

The cabinet is also provided with a very complete collection of finely mounted skeletons of Mammalia; prepared by Professor Ward of Rochester N. Y. embracing the dolphin, sea lion, this horse, cow, slicep, dog, bear, kangaroo, ourang-outang, man.

VII-IN ENGINEERING, SURVEYING ETC,

This department, having recently had valuable additions made to its equipment, is now well supplied with instruments, with which all important field work is taught.

VIII—IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. Well lighted drawing rooms are provided with suitable tables. For the advanced students there are individual tables adjustable to different heights and angles of inclination.

IX .- IN PRINTING AND TELEGRAPHY,

The printing office is supplied with a new Gordon Press, different fonts of type, and stands for twelve students. In the same room are the instruments for teaching Telegraphy.

X-IN MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition, the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

This department is under the charge of Lieut. M. C. Richards

2nd Artillery U.S.A.

It has recently been supplied with new cadet muskets and accoutrements for the corps, and for artillery practice, with two three inch rifle guns, carriages and limbers.

THE COLLEGE BUILDING.

This is a handsome well constructed brick building one hundred and sixty by seventy five feet, containing in all thirty eight rooms.

This building is not used for dormitories for students, but is appropriated for purposes of instruction. It contains the lecture rooms and offices of all the professors, the laboratories, cabinets, assembly room, printing office and two large well furnished society halls with their library and committee rooms.

All the lecture rooms are provided with modern college fur-

niture.

LANGDON HALL.

This is a two story building ninety by fifty feet, recently constructed. The second story is the audience hall used for commencement, and other public occasions.

The first stery is appropriated to the Mechanic Art Laboratory

GRADUATES.

With degree of Bachelor of Science (B. Sc.)

Class of 1886.

Gilmer Alexander Allison, Benjamin Sullivan Burton. Luther Martin Capps. Lawson Franklin Howell. Clifford Lewis Newman. Sterling Chambers Pitts.

Charles Hunter Ross. Robert Jasper Hogue Simmons. Robert Billups Smith. Leckenski Ware Spratling Dudley Sanders Weaver. Augustus Archilous Persons. Levi Washington Wilkinson. Thomas Peters Zellers.

With degree of Master of Science (Hon.)

Benjamin B. Ross.

DISTINGUISHED STUDENTS.

AWARDED HONOR CERTIFICATES IN 1886.

The students of each class, who secure a grade above 90 in three or more different subjects, are distinguished for excellence in scholarship, and are awarded HONOR CERTIFICATES.

FIRST CLASS.

Gilmer Alexander Allison.
Benjamin Sullivan Burton
Lawson Franklin Howell.
Clifford Lewis Newman
Augustus Archilous Persons.

Sterling Chambers Pitts.

Charles Hunter Ross.

Robert Jasper Hogue Simmons.

Dudley Sanders Weaver.

Levi Washington Wilkinson.

Thomas Peter Zellers.

SECOND CLASS.

Vassar Lyle Allen.

George Holt Lamar. Wilson Herbert Newman.

- T

THIRD CLASS.

George Fleming Broun.
Henry Lee Broun.
Alonzo Francis Cory.
David Miller Driver.
Edmund Wiley Foster.

Edwin Conway Macartney.
James Monroe Mason.
Arthur Wesley Oliver.
Thadeus Joseph Partridge.
William Russell Phillips.

Otis Oliver Smith.

FOURTH CLASS.

Howard Alburn Bedell. Bolling Hall Crenshaw. George Watts Hearn. Alexander Dowling McLennan. Hugh McGhee Taylor. Paul Turner Vaughan.

Thomas Morgan Watlington.

CATALOGUE OF STUDENTS

FOR THE SESSION 1886-'87.

GRADUATE STUDENTS.

	COUNTY.	STATE.
NAME.		Ala.
Allison, Gilmer Alexander.	Lee	Ala.
A. & M. College.	Montgomery	3566
Blakey, Bolling Anthony.	montgomery	21
Univ. Ala. Hewell, Lawson Franklin.	le de la companya de	Geo.
A. & M. College.	201	
Lamar, Howard.	Lee	Ala.
A. & M. College.		Geo.
Mell, Charles Irwin.		Geo.
Univ. Ga.	Lauderdale	Ala.
Morgan, James William, Jr.	Lauderdale	
State Normal College Newman, Clifford Lewis.	Lee	66
A. & M. College.		-186
Persons, Augustus Archilous	. "	"
A. & M. College.		66
Pitts, Sterling Chambers.	Russell	113
A. & M. College.		- 66
Wilkinson, Levi Washington	Dale	witness.
A. & M. College.	unal ninet	all of
	CLASS	and the
Alexander, Arthur John.	Mobile	Ala,
Allen, Vasser Lyle.	Montgomery	10 000
Armstrong, Henry Clay.	Lee	
Barclay, Alexander Campbell.	Lawrence	66
Boykin, Burwell Lee.	Dallas	66
Davis, William Easly.	Lee	66
Jones, Roger ap Catesby.	Dallas	66
Jones, Thomas Hugh.	Lee	66
Lamar, George Holt.	66	66
Lloyd, Edward Read.	"	66
Morgan, James William Jr.	Lauderdale	64
Newman, Wilson Herbert,	Lee	66.
Perry, Frank Howard.	"	. 66
Simmons, Cyarles Woodward	Dale	- 66

E - 1117	AGRICULTURAL AN	D MECHA				3
PER TE	3	ECOND CLAS	20	**		
	AMB.	Coun	TYS &	ing the state of t	STATE.	
	, Robert Love.	¥.			Va.	
Broun,	George Fleming.	J.e	e. · ·		West Va.	
Broun,	Edmund Fontaine.				Va.	
Broun,	Henry Lee:				Ala.	
Clower,	John Robertson.	Le	e i		Ala,	
	louzo Francis.					
	John Hodges Jr.					
all Driver,	David Miller.	Da	allas			
	Nathan Owen:	T	llapoosa	-	46	
Foster,	Edmund Wiley.	M	obile .	74.		
	y, John Thomas.	La	auderdale	3		
Harris,	Eugene Willis.		ee		1	
Hearn.	George Watts!		. 6	-1		
' Hugule	ey, George Abner				Geo.	
	, William.	Sh	nelby		Ala.	
Macart	ney, Edwin Conway	y. M	obile.		1 2	
Mason.	James Monroe.	Ba	rbour			
Oliver.	Arthur Wesley				11/2/1/16	
Partric	lge, Thaddeus Josep	oh. Me	obile ·			
Person	s, Henry Stanford.	Le	ee' ·		A 11 K 6	
Samfor	rd, Thomas Drake			- h - h		
	Otis Oliver		6	, 1 4	. 11 - 66	
Toylor	, Samuel Oliver	. M	ontgome	ry	- E - 661	
Taylor	William Kerr.	Je	efferson	AL COLUMN	"	
Terry,		THIRD CLA	38.	- D B		
			efferson			
Abern	ethy, Heustes Barr	,	HEISOIL		Geo).
Andre	ws, William Thoma	S.	ee		Ala	
Bedde	ll, Howard Alburn.	. 1	4	HAS IN		
Bedde	ll, Paul.	el .		Sens Clar	Geo	0.
Bishor	p, Burton Mell.	-	466		Ala	
Boyd,	Thomas Jackson.	1	Jee ,		Geo	
Brook	s, Thomas John.		. 19	and the		
Burde	ett, Leslie Dallas.			100	"	
Burr,	Aaron Jason.		Tabile .		. Al	2
Cochr	an, Edmund Collin		Mobile		. "	-
Corv	Charles Morris.	4	Autauga		46	
Crawi	ford, Abednego Jac	kson.	Lee -			

NAME.	COUNTY	STAVE
Crenshaw, Bolling Hall.	Butler	Ala.
Crowder, Arthur Campbell.	St. Clair	66
Crowder, Howard Grayson.	"	66
Doster, Howard Staten.	Autauga	0
Dryer, Percival Lewis.	Macon	66,
Dunlap, Walter Davis.	Dallas	
Dunstan, Arthur StCharles.	Shelby	44
Harris, George William.		Geo.
High, James Clarence	Bullock	Ala.
Hightower, John Hilliard.	Lee	
Hutchinson, Pleasant Lee.	() (Geo.
Irvin, John Reuben.	Tallapoosa	Ala
Jones, Egbert.		Geo.
Killebrew, Oscar Don.	Dale	Ala.
Lloyd, Andrew Manly.	Lee	4.6
Levy, Clarence Lionel.		Geo.
McLennan, Alexander Dowling.	Barbour	Ala.
McMillan, Robert Houston.	Talladega	44
McVoy, Leonard Kent.	Dallas	46
Mitchel, Tennant Lomax.	Russell	-4
Moragne. Joseph Hugh.	Calhoun	
Philips, Frank.	٢	Fla.
Powers, Edward Clyde.	Lee	Ala.
Quarles, John Washington.	Clay	Ala.
Rice, Rufus Jackson.	Lee	
Riggs, Robertson.	Dallas	
Robertson, Walter Lee.	Jefferson	
Robinson, Joe Huguley.	Chambers	
Rowe, John Albert.	Tallapoosa	1
Sankey, Frank Emmett.	Montgomery	
Shelton, Joseph Augustus-	Lee	, 6
Smith, Lawrence Avery,	Chambers:	46
Spratling, Edgar Johnson.	.t.	
Staten, William Thomas.	Lowndes	
Story, Alonzo Grove.	Talladega	1
Taylor, Hugh McGhee.	Montgomery	40
Thrash, Daniel Mathew.	Dallas	

NAME.	COUNTY:	STATE,
Tuttle, Montague Hart.	Macon	Ala.
Tuttle, Mortimer Hart.	66	6
Vaugha, Paul Turner.	Dallas	· cont
Vernon, Frederick Henry.	Chambers	66
Waker, James.	"	"
Watlington, Thomas Morgan.	Marengo	"
Weaver, Norman Rutherford.	Dallas	
	URTH CLASS	
Abernethy, Benjamin Cheny.	Jefferson	"
Anderson, Albert Massey	Montgomery	66
Ashurst, James Henderson.	Tallapoosa	6.
Betts, Victor.	Madison	• 6
Boyd, Douglass		Geo.
Browder, David.	Montgomery	Ala.
Burnett, John Stokeley.		Geo
Chambers, James McCoy.	Montgomery	Ala
Conner, Robert David.	Macon	
Cooper, Houston Franklin.		Geo.
Curry, Thomas Murrey.	Talladega	Ala.
Davidson, William.		Geo.
Drake, Joseph Emory.		0.07
Fonta ne, Frank Maury.		
Glenn, Charles Bowles.	Lee	Ala.
Hall, Dorian.	Lowndes	66
Haralson, Hugh Anderson.	Dallas	
Harvey, Bryant Clower.	Lee	66
Harris, John Dixon.	Chambers	.6
Harrison, William Groce.	Talladega	**
Holland, Edward Bell.		Geo.
Horst, Martin.	Mobile	Ala.
Hudson, Belus Ephraim.	Lee	
Irvin, Robert Edward Daniel.	Tallapoosa	"
Johnson, Albert Sidney.	Henry	46
Lawson, John Robertson.	Pike	6.
Leary, William Merriwether.	Montgomery	• 6
Leslie, Frank.		Scotland.
Little, John Hammond.	Lee	Ala

NAME.	COUNTY.		STATE.
Lupton, Frank Allemong.	Lee		Ala.
Mastin, Thomas Benton Jr.	Montgomery		. 66
McConnell, Frank Percy,	Talladega		66
McMillan, Thomas Martin.	Monroe		66
Milstead, Frank Davis,	Elmore		66
Milton, John.			Fla.
Molton, Thomas James.	Montgomery	•	Ala.
Morris, Thomas Avery.			N. C.
Noble, Robert Ernest.	Calhoun		Ala.
Parhan. Edwin Douglass.	Limestone		66
Pollock, Joseph Francis.	Dallas		64
Pritchett, Edward Hill.	Lowndes		6.
Riddle, Seldon Jasper.	Etowah	1140	46
Robertson, Howard Payne.	Lowndes		66
Robinson, William Walter.	Coosa		
Ross. Thomas Alexauder.	Lowndes	W. 10	66
Scott Nathaniel Jeckson.		District of Co	lumbia.
Slocum. John Greenway.	Lee		Ala.
Smith. Thomas Leonard.	Coosa		66
Thomas, Simeon Allen,	cc .		66
Thorington, Chilton.	Montgomer		66
Tuttle. Jerry Claud.	Macon		
Warring. George Houston.	·		Geo.
Williams, Madison Jackson.	Dallas. Co.		Ala.
Whisnant, Ernest Shelton.	Calhoun	200	66
Woodruff, Ernest Rencher	Sumpter		66
FOURTH	CLASS SECTION B.		
Armstrong, Holcombe Hunte	r .Macon		Ala.
Bowie, Leroy William.	Talladega		66
Bradford, Ethelred Ransom.	Marengo		66
Bridges, Charles.	Mobile		68
Carr. Reuben.	Lee		66
Cason. Frank Lampton.			La.
Cawthon, Stephen Colquitt.			Fla.
Cawthon, Jefferson Ballon.			66
Chapman, Giles Hardy.	Conecuh		Ala.

4.00	4 1 4 1	-
NAME.	COUNTY.	STATE,
Drake, Richard		Geo.
Dudley, Arthur Thomas.		Geo.
Duke, Samuel	Macon	Ala.
Eads, Caswell, Bell.	Mobile	66
Elliott, Walter Dallas.		Geo.
Harrington, Willam H.	Macon	Ala.
Loeb, Leon.	Montgomery	66
Montgomery, Harry Best.	Talladega	+6
Noble, Alfred Royall.	Calhoun	66
Nuckols, James Terry.	Russell '	46
Robinson, Wyche Jackson.	Chambers	66
Sable, Wiley.	Montgomery	66
Tait, Frank Shropshire.	Wilcox	66
Tate, Charles Cabiness.	Marengo	6.
Todd, George Henry	Montgomery	66
Young, George Barret.		Geo.
Wimberley, Frank Lee	Lee	Ala.
Zeigler, William James.	Autauga	"

RECAPITULATION.

Graduate Students.		10
First Class.		13
Second Class.		24
Third Class.		56
Fourth Class.	Sec. A.	55
Fourth Class.	Sec. B.	27
Total		 185

NUMBER OF STUDENTS IN EACH SUBJECT OF STUDY.

English,	172	Agriculture, 96
History,	40	Physics, 71
French,	14	Natural History & Geology, 73
German,	10	Physiology, 28
Latin,	44	Engineering, 16
Mental Science,	11	Drawing, 114
Political Economy,	13	Mechanic Arts, 90
Mathematics	162	Printing & Telegraphy, 42
Chemistry	85	Military Tactics, 163



MILITARY ORGANIZATION.

1886-'87.

President.

WM. LEROY BROUN,

Commandant.

MELZAR. C. RICHARDS, Lieut. 2nd U. S. Artillery.

Surgeon.

J. H. DRAKE, M. D.

Assistant to Commandant with rank of Major.

CADET C. W. SIMMONS.

Cadet Captains.

V. L. ALLEN.

E. R. LLOYD.

W. H. NEWMAN.

Cadet Lieut. & Adjutant.

Cadet Lieut. & Quartermaster.

B. L. BOYKIN. G. H. LAMAR.

Cadet 1st. Lieutenants.

Cadet 2nd Lieutenants.

T. H. JONES.

W. E. DAVIS.

F. H. PERRY. H. L. BROUN.

H. S. PERSONS.

R. ap C. JONES.

T. D. SAMFORD.

A. F. CORY.

G. A. HUGULEY.

Cadet Sergeant Major. J. H. DRAKE, Jr.

Cadet Q. M. & Color Sergeant. E. C. MACARTNEY.

Oadet 1st, Sergeants. G. F. BROUN.

R. L. BENNETT. E. W. HARRIS.

Cadet Sergeants.

O. O. SMITH.

E. W. FOSTER.

FONTAINE BROUN.

J. T. GREGORY. W. K. TERRY,

Wm. LYMAN.

A. W. OLIVER. S. TAYLOR.

Cadet Corporals.

R. RIGGS.

B. H. CRENSHAW.

M. H. TUTTLE.

G. H. TUTTLE.

H. M. TAYLOR.

P. T. VAUGHAN, Jr.

J. A. ROWE.

Cadet Color Corporals.

W. T. STATEN.

L. A. SMITH.

F. PHILIPS.

J. W. QUARLES.

H. CROWDER.

F. H. VERNON.

J. H. MORAGNE.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character. To enter the fourth class the applicant must be not less than fifteen years of age, and be qualified to pass a satisfactory examination in the following subjects:

1. Geography and History of the United States.

2. English.—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar, and division into paragraphs.

3. Mathematics—(a) arithmetic, including fundamental operations; common and decimal fractions; denominate numbers, the metric system; percentage, including interest and discount; proportion; extraction of square and cube roots; (b) algebra, to quadratic equations.

For admission to the fourth class in the General Course a satisfactory examination will also be required in Latin grammar and Caesar (4 books.)

ENTRANCE EXAMINATIONS.

Entrance examinations will be held on the 15th, of September, the day on which the session opens.

Applicants, who are not fully prepared to stand the entrance examinations for full admission to the Fourth Class, including those of fourteen years of age, are admitted to the sub-college department, which includes the Fourth class, Sec. B.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

NUMBER OF EXERCISES.

All students are required to have not less than fifteen recitations per week or their equivalent, in addition to the exercises in laboratory work, drawing and military drill.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the Second class, and those over twenty one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty. Regular students who fail to pass satisfactory final examinations in any one study become special students.

They will be classed as regular students, pursuing a course for a degree, whenever they can pass the examinations in those subjects

in which they were found deficient.

COURSES OF INSTRUCTION

The courses of study include the Physical, Chemical and Natural Sciences with their applications; Agriculture, Mechanics, Astronomy, Mathematics, Engineering, Drawing. English, French, German and Latin Languages, History, Political Economy, Mental and Moral Science.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

There are three Degree courses, for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

I---COURSE IN CHEMISTRY AND AGRICULTURE.

II---COURSE IN MECHANICS AND ENGINEERING.

III-GENERAL COURSE.

There are also two partial courses; each requiring two years for its completion:

IV -- TWO YEAR'S COURSE IN AGRICULTURE.
V---TWO YEAR'S COURSE IN MECHANIC ARTS.

Course I. includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II. includes the principles and applications of the science that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the profession of engineering.

Course III. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Course IV. and V. have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are not able to continue at college four years and take one of the regular degree courses,

Students who complete either of these two year courses, will, on passing a satisfactory examination, receive certificates indicating their attainments.

When all of the departments in the School of Mechanic Arts are provided with the necessary appliances it is designed to arrange a more extended course in Mechanical Engineering.

COURSE IN PHARMACY.

The following resolution was adopted by the trustees:

"That the faculty are hereby authorized and directed to arrange as early as practicable a special course of instruction in Pharmacy, adapted to qualify young men by systematic work in chemistry and other sciences, to become practical pharmacists and chemical manufacturers.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all of their time in the laboratories of these departments under the immediate direction of the Professors.

COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry.—Assaying, Reduction of ores, Mineralogy Economic Geology, Mining machinery, Drifting, Tunnelling, Timbering, Ore-Dressing, and the various operations connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering, and Natural History.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this college, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction is given in the following departments:

I——CHEMISTRY.

II -PHYSICS.

III-ENGINEERING; FIELD WORK.

IV --- AGRICULTURAL ENGINEERING & SURVEYING.

V-AGRICULTURE.

VI.—NATURAL HISTORY.

VII—TECHNICAL DRAWING.

VIII-MECHANIC ARTS.

IX-PRINTING & TELEGRAPHY.

I.—COURSE IN CHEMISTRY AND AGRICULTURE.

FOURTH CLASS

First Term.

- 3. English.
- 2. History.
- 5. Mathematics.
- 5. Elementary Physics.
- 3. Drawing.
- 3. Mechanic Art Laboratory.
 Military Drill.

Second and Third Terms.

- 4. English.
- 1. Agriculture.
- 2. History.
- 5. Mathematics.
- 3. Elementary Physiology.
- 3. Drawing.
- 3. Mechanic Art Lab'tory. Military Drill.

THIRD CLASS.

First Term.

- 5. English
- 5. Mathematics.
- 3. General Chemistry.

First Term,

3. Industrial Chemistry.

4. Natural History, (laboratory.)

1. Military Science & Tactics.

Chemical Laboratory.

Practical Agriculture.

- 3. Agriculture.
- 3. Drawing.

3. English.

3. Physics.

2. Agriculture.

Mechanic Art Laboratory.
Military Drill

Second and Third Terms.

- 3, English
- 2. Botany.
- 5. Mathematics.
- 3. General Chemistry.
- 3. Agriculture.
- 3. Drawing.
 Mech. Art Lab.(2d. t'm)
 Practical Agriculture.
 Military Drill.

SECOND CLASS

Second and Third Terms.

- 3. English.
- 3. Physics.
- 3. Industrial Chemistry.
- 2. Agriculture.
- 4. Natural History (lab'try.)
- 1. Military Science & Tactics
 Chemical Laboratory.
 Practical Agriculture.
 Military Drill.

FIRST CLASS.

First Term.

2. English Literature.

Military Drill.

- 2. Mental Science.
- 2. Physics.
- 4. Natural History.
- 2. Agriculture.
- 2. Agricultural Chemistry.
- 1. Military Science & Tactics, Chemical Laboratory. Practical Agriculture

Second and Third Terms.

- 2. Political Economy.
- 2. Moral Science,
- 2. Astronomy.
- 4. Natural History.
- 2. Agriculture.
- 2. Agricultural Chemistry.
- 1. Military Science & Tactics
 Chemical Laboratory,
 Practical Agriculture.

II—COURSE IN MECHANICS AND ENGINEERING.

FOURTH CLASS.

First Term.

English.
 History.

5. Mathematics.

5. Elementary Physics.

3. Drawing.

3. Mechanic Art Laboratory.

Military Drill.

Second and Third Terms.

4. English.

1. Agriculture.

2. History.

5. Mathematics.

5. Latin.

3. Drawing.

English.
 Botany.

5. Drawing,

5. Mathematics.

3. Agriculture, (a)

3 General Chemistry.

3. Mechanic Art Laboratory.
Military Drill.

Second and Third Terms.

THIRD CLASS.

First Term.

. . . .

5. English.5. Mathematics.

3. General Chemistry.

3. Agriculture. (a)

5. Drawing.

3. English.

3. Physics.

3. Mechanic Art Laboratory.
Military Drill.

First Term.

Military Drill.

Second and Third Terms.

3. Mechanic Art Laboratory.

3. English.

3. Physics.5. Mathematics.

5. Engineering.

5. Drawing

 Military Science & Tactics. Laboratory & Field work, Military Drill.

5. Mathematics,5. Engineering.

5. Drawing.

 Military Science & Tactics. Laboratory & Field work. Military Drill.

First Term.

2. English Literature.

2. Physics.

2. Natural History.

3. Mathematics.

5. Engineering.

5. Drawing.

1. Military Science & Tactics.

FIRST CLASS.

Second and Third Terms.

2. Political Economy.

2. Astronomy.

2. Natural History.

3. Mathematics.

5. Engineering.

5. Drawing.

1. Military Science & Tactics.

III.—GENERAL COURSE.

FOURTH CLASS.

First Term.

- 3. English.
- 2. History.
- 5. Mathematics.
- 5. Latin.

5. Latin.

2. English.

3. Drawing.

5. Mathematics.

3. General Chemistry.

Military Drill.

- 3. Drawing.
- 3. Mechanic Art Laboratory.
 Military Drill.

First Term.

Second and Third Terms.

- 4. English.
- 1. Agriculture.
- 2. History.
- 5. Mathematics.
- 5. Latin.
- 3. Drawing.
- 3. Mechanic Art Laboratory.
 Military Drill.

THIRD CLASS.

Second and Third Terms.

- 5. Latin.
- 2. Botany.
- 5. Mathematics.
- 3 General Chemistry.
- 3. Drawing,

Mechanic Art Laboratory.
Military Drill.

SECOND CLASS.

First Term.

Mechanic Art Laboratory.

- 3. English.
- 2. Physics.
- 5. Mathematics,
- 3. Latin.
- 2. Natural History.
- 1. Military Science & Tactics.

 Laboratory work.

 Military Drill.

Second and Third Terms.

- 3. English.
- 3. Physics.
- 5. French.
- 3. Latin.
- 2. Natural History.
- 1 Military Science & Tactics.
 Laboratory work.
 Military Drill.

FIRST CLASS.

First Term.

- 2. English Literature.
- 2. Mental Science.
- 2. Physics.
- 2. Natural History.
- 3. French.
- 5. German.
- 1. Military Science & Tactics.

Second and Third Terms.

- 2. Political Economy.
- 2. Moral Science,
- 2. Astronomy.
- 2. Natural History.
- 3. French,
- 5. German.
- 1. Military Science & Tactics.

V-TWO YEAR'S COURSE IN MECHANIC ARTS.

FIRST YEAR.

First Term.

Second and Third Terms.

- 3. English,
- 6. Mathematics.
- 5 Elementary Physics.
- 3. Drawing.

3. Physics.

6. Mechanic Art Laboratory. Military Drill.

First Term.

- 4. English.
- 1. Agriculture
- 5. Mathematics
- 3 Elementary Physiology
- 3. Drawing.
- 6. Mechanic Art Laboratory. Military Drill.

SECOND YEAR.

Second and Third Terms.

- 3. English. 3. English.
- 5. Mathematics. 5. Mathematics.
 - 3. Physics.
 - 3. Drawing.
- 3. Drawing 9. Mechanic Art Laboratory. 6. Mechanic Art Laboratory. Military Drill. Military Drill.

FIRST YEAR.

IV-TWO YEAR'S COURSE IN AGRICULTURE.

First Term.

- 3. English.
- 3. Mathematics.
- 5. Elementary Physics.
- 3. Agriculture.
- 3 Drawing.
- 3. Mechanic Art Laboratory. Practical Agriculture. Military Drill,

Second and Third Terms.

- 5. English.
- 3. Mathematics,
- 3. Elementary Physiology.
- 3. Agriculture.
- 2. Botany.
- 3. Mechanic Art Laboratory. Practical Agriculture. Military Drill.

SECOND YEAR.

Second and Third Terms.

- 3. English.
- 3. Mathematics.
- 3, General Chemistry...
- 2: Agriculture.
- 4. Natural History Practical Agriculture. Military Drill.

First Term.

3. English.

- 3. Mathematics.
- 3. General Chemistry.
- 2 Agriculture.
- 4. Natural History. Practical Agriculture. Military Drill.

DEPARTMENTS OF INSTRUCTION.

PHYSICS AND ASTRONOMY.

President Broun.

The instruction is given by recitations from text books and lectures, illustrated by experiments. The first part of the course is ocupied with Elementary Rational Mechanics, treated graphically.

This is followed by a full discussion of Molecular Mechanics, while the prominence is given to principles, frequent reference is

made to the applications of science.

The studies of the second class include the properties of matter, units of measure, force, work, energy; kinematics, kinetics, mechanic powers, friction, pendulum; molecular forces of solids liquids and gases; theory of undulationr, heat, electricity, magnetism; etc.

The studies of the First Class include Electricity and its applications; Optics, Astronomy and Meteorology,

Text Books-in Physics Atkinson's Ganot;-in Astronomy Newcomb, & White.

MATHEMATICS.

Prof. Smith.

The general course for the first two years embraces the first year, Algebra, and Geometry six books; second year, Solid Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration.

Two objects are sought to be attained, first, mental discipline; second, a thorough knowledge of the practical applications of pure mathematics.

Theoretical and practical instruction is given in the third class, in farm, town and government land surveying, dividing land, mapping, plotting and computing of areas, etc., also in the theory, adjustment and use of instruments.

The class in sections of six or eight, devote three afternoons a week during the second term, to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering Course. Analytical Geometry, Descriptive Geometry and Cateulus are pursued in the Engineering course. Especial attention is given to their practical applications.

During the entire course, instruction in text books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with the application of

principles studied.

Text Books. Olney's and Wentworth's Algebra, Wentworth's Geometry, Schuylers' Surveying, Loomis' Analytical Geometry, Warren's Descriptive Geometry, Loomis' and Taylor's Calculus.

NATURAL HISTORY AND GEOLOGY. Prof. Mell.

Geology.—This subject is studied in the senior class.

Special attention is given to the Geology of Alabama course is given by text books and lectures, illustrated by means of diagrams, maps, models and various rocks, fossiliferous and non-fossiliferous to be found in the Geological Cabinet. Attention is given to the nature and origin of ore deposits, mineral springs, and origin and geolgical relations of soils.

Zoology.—A systematic arrangement of the Animal Kingdom, in accordance with natural affinities, is made a special feature of the instruction. Particular attention is also given to insects injurous to vegetation, their habits, and the methods best adapted for

checking their ravages.

Botany.—The students of the Third Class begin the study of Botany, and continue it through the second term. Analytical work is made an important feature. This Class is provided with plants from the neighboring fields, and taught how to determine The work is sufficiently exhaustive to entheir specific names. able the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section.

In the Second Class an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope, in the preparation of specimens showing plant structure, sufficient to familiarize the students not only with the methods of plant building and cellular organization, but also to practise them in detecting the various forms of fungi that are injurious to fruits and vegetables. A Biological Laboratory has been fitted up for students, provided with excellent microscopes of the most improved patterns, well constructed tables, and all the necessary chemicals for preparing and mounting vegetable tissues. A dark room is attached to this laboratory for micro-photographic work.

The teaching of Botany is greatly facilitated by the use of Au-

zoux's, complete set of clastic models of plants.

Physiology.—This subject is taught to the students of the Fourth class, and is completed in the second term of the session. The text is illustrated by models and microscopical sections projected on the screen.

Text Books.

Le Conte's Geology, Holder's Zoology, Bessey's Botany, Apgar's Plant Analysis, Martin's Human Body.

ALABAMA WEATHER SERVICE.

The United States' Signal Service has established in Alabama a state sytem for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered throughout the State. An opportunity is thus offered the students in Meteorology of becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

Professor Lane.
CIVIL ENGINEERING

The special studies of this department begin in the Second Class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics They are as follows:

Second Class,—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, location and construction of common roads and railroads.

First Class,—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description, of natural building stones; bricks concretes; cast and wrought iron, steel and other metals; limes, cements, mortars their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings, solid and open built beams; classification, construction and mechanics of masonry; foundations on land and water; bridges and roofs of different kinds, their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads: navigable, irrigation and drainage canals; river and sencoast improvements.

Theory and practice are combined in both classes.

For practical work, this Department has been supplied with two transits, one having the solar attachment, two engineers' levels, a farmer's level, two surveyor's compasses, a railroad compass, sextant, pocket sextant, aneroid barometer, Abney hand level and clinometer, and other instruments

The library has been supplied with books of reference.

Text Books.

Second Class,—Henck's Field Book for Railway Engineering, Gillespie's Roads, and Rail Roads.

First Class,—Wheeler's Civil Engineering, Von Ott's Graphic Statics.

All of the students of the Third-and Fourth classes are required to take Drawing; but only the students in Mechanics and Engineering, in the First and Second classes.

The Fourth class is taught linear drawing and elementary graphical mechanics. The Third class is instructed in the principles of orthographic aud isometric projections, shades and shadows, practical perspective and tinting. In the Second class, the instruction embraces a more extended course in orthographic and isometric drawing, perspective, shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings. The First class make typographical drawings and drawings of machines, roofs bridges, etc. to different scales. Plans, profiles and sections of railroad surveys complete the instruction in this department.

The drawing rooms are furnished with adjustable tables with black walnut tops and iron stands, Schroeder's and other models, French, German, English and American plates of roofs, bridges masonary, tools machines etc. etc.

Text Books:

Fourth Class,—Davidson's Linear Drawing, Broun's Elementary Graphical Mechanics.

Third Class,—Davidson's Projections, Davidson's Practical Perspective.

Second Class,—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the college.

First Class,—French, German, English and American Plates belonging to the College.

AGRICULTURE.

Prof. Newman.

Instruction in this department commences with the Fourth Class and continues through the other three Classes. The subject is taught principally by lectures in which it is treated as an applied science, and by the application of the teachings of the natural sciences to the art of agriculture, using the farm of the Experiment Station as a laboratory for the practical illustration of the lecture room instruction.

The classes accompany the professor into the field, garden, orchard, vineyard, the green house and stock yard, where lectures are delivered in the presence of the work in progress, the objects and results of experiments explained, the propagation, planting, pruning and cultivation of plants illustrated, and so far as deemed necessary for thorough instruction, opportunity is given to students in agriculture to perform manual labor in any and every department of the farm.

Every principle and theory taught in the lecture room will be thoroughly illustrated and exemplified on the farm.

AGRICULTURAL EXERIMENT STATION. J. S. Newman, Director,

The state Agricultral Experiment Station is connected with the College.

The farm of the station is adjacent to the College buildings and is used by the professor of agriculture to illustrate his lecture room instruction. Here a great variety of experiments in Agriculture Horticulture, stock breeding and feeding will serve not only the purposes of instruction to the students, but will afford valuable information to the farmers of the State.

Bulletins are issued through the State Department of Agriculture and widely distributed over the State by the Commissioner.

CHEMISTRY.

Professor Lupton.

Assistants, Wilkinson and Burton.

Instruction in this department embraces-

- 1. A course of lectures in General Chemistry.
- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each course of lectures for the practice of chemical analysis and chemical research.
- 1. Course in General Chemistry. This consists of a series of lectures (three per week) extending throughout the entire session and includes a discussion of the fundamental principles of Chemistry Philosophy in connection with the history, preparation, properties, and compounds of the metallic and non-metallic elements with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

Reference-books: Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cook's Chemical Philosophy, Chemical Journals.

2. The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the process s and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures in the reduction of ores, the preparation of materials for food and drink for clothing, shelter, heating, illumination, cleansing, purifying, writing, printing, ect.

These Lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

Reference books: Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology. Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week) and includes a thorough discussion of the origin, composition, and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils the manufacture and uses of fertilizers, the chemical principles involved in the rotation of crops, in the feeding of live stock and in the various operations carried on by the intelligent and successful agriculturist.

Books of reference,—Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Departments and Stations,

4. The course of systematic Laboratory work: This course of practical work in the Laboratory is carried on in connection with each course of lectures and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The Laboratories, which are open from 9 a. m. to 5 p. m. during five days in the week, are amply supplied with every thing necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

A fee of \$10 per session is charged each student in the Analytical Laboratory for the use of apparatus, and for material consumed.

Each student on entering the Chemical Laboratory is required to deposit \$5, and is furnished with a work-table, a set of reagent

bottles, and the common reagents and apparatus used in qualitative and quantitative analyses. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

Books used: In Qualitative Analysis-Jones, Fresenius, Platt-

ner.

In Quantitative Analysis-Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying. In Agricultural Chemical Analysis—Church, Frankland.

CHEMICAL LABORATORIES.

There are six rooms These are well adapted to analytical work. and two balance rooms. The rooms contain a table for eacl student, provided with gas and water facilities, a set of reagent bottles and necessary apparatus. The lecture room is 40 by ; 40 feet in size, and is provided with every facility for illustrating lectures by experiments. The furnace is supplied with a boiler, which runs the stills, and the water and filter pumps, of the work-laboratorv.

In the balance rooms are balances made by Oertling Verbeck, Pickholdt, Troemner and Becker.

STATE LABORATORY AND LABORATORY OF EXPERIMENT STATION.

Assts. Wilkerson and Burton. Prof. Lupton, State Chemist.

In this laboratory work is done for the Department of Agriculture and the Experiment Station. During the present season about 200 quantitative analyses have been made consisting of commer-. cial fertilizers, marls, phosphates, muck, iron, gold and silver ores, mineral waters and soils. Numerous qualitative analyses have also been made.

This laboratory performs the following work: first analyses of commercial fertilizers, minerals, marls, ores, etc., for the Department of Agriculture.

Analyses for State Experiment Station.

Analyses for private parties.

The Commissioner of Agriculture orders the work done under 1st., head, the Director of Experiment Station the 2nd., while a charge is made for the 3rd.

ENGLISH AND LATIN.

Prof. Thach.

ENGLISH.

In this department the students are carried through a systematic course of study in the English language and literature. the courses of study which do not include the ancient classics, a full course in English is especially important. It is, therefore, designed, as much as the time allotted permits, to familiarize these students by frequent exercises with the standard authors of the

The course of study is as follows:

Fourth Class.—Three hours a week; study of Grammar; the principles of special and general composition, with frequenl brief papers illustrating the laws studied.

Third Class.—Three hours a week; study of style; analysis of the selections of prose and poetry; frequent essays on literary and historical themes.

Second Class.—Three hours a week; critical study of English Classics; History of English and America Literature; Logic; Essays.

First Class .- Two hours a week, first term; principles of criticism and study of English Classics.

Weekly exercises in declamation are held in the third class. Three original orations are required during the year of each student in the first and second classes.

The subjects taught in this Department are the Latin Lauguage and Literature.

The modes of instruction are by translation from the Latin texts into English and from English into Latin. The constant use of black boards adds much to the progress and accuracy of the stu-

A systematic course of exercises, illustrative of the principles of Latin Etymology and Syntax, is carried on in connection with the . reading of the authors prescribed. Special attention is given to English derivatives from the Latin, and to the corresponding idioms of the two languages.

The progress of the student is valued not so much by the number of books read as by his ability to read Latin, and explain the principles of interpretation and construction.

Latin authors read:

Fourth class.—Virgil; Cicero's Orations; Grammar and Composition.

Third class.—Cicero; Horace; Composition.

Second class.—Horace; Selections from Latin Poets and Prose writers. Classical Literature.

MECHANIC ARTS.

G. H. Bryant B. S. Instructor

This department of Manual Training will embrace when completed a three year's course as follows: 1st year, wood-working, carpentry, turning and pattern making; 2nd. year, forge and foundry work,—moulding, casting, and smithing; 3rd. year, machine shop,—chipping and filing, and machine work in metals.

This course is obligatory upon the students of the three lower classes (5th, 4th, and 3rd.) For satisfactory reasons a student may be excused from this laboratory work by the Faculty.

The full work of each class is six hours per week, in three exercises, of two hours each.

The wood-working shop was established in 18*5, with a complete equipment for wood-work. A thorough course is now provided for.

During the past year the forge shop and foundry have been built and equipped, and are now in successful operation.

It is expected the authorities will complete the other department of machinery etc., the next session, with the funds recently appropriated by the Legislature.

The power for running the apparatus in this department is derived from a twenty five horse-power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler of most approved design. A Deane steam pump, and a heater for the feed water form a part of the steam apparatus.

The equipment for the wood working shop comprises the following: 20 double wood working benches, each with complete set of carpenter's tools; 16 turning lathes, 10 in. swing, each with complete set of tools; 1 double circular saw; 1 band saw; 1 board planing machine; 1 buzz planer; 2 scroll saws (power); 1 large pattern maker's lathe, 16 in. swing; I 36 in. grindstone. In addition to these, the tool room is supplied with a variety of extra hand tools for special work.

During the summer of 1886 a substantial brick building 72 by 32 feet, one story high, with monitor roof, was built for the forge and foundry departments. This is divided into two rooms each 35 by 30 feet, each department occupying one room.

The equipment for the Foundry consists of moulding benches for 12 students, each supplied with a complete set of moulder's

tools; a 14 inch cupola with all modern improvements, capable of melting 1000 pounds of iron per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of cruciables tongs, etc. Also a full supply of ladles, large and small moulding flasks, special tools, etc.

The Forge Shop equipment consists of 12 hand forges of new pattern each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola); and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke flues and forces it out through the chimney.

The nature of the work in each department is as follows:

1st, year: I—, A course of Carpentry (hand work covering the first term and part of the second or about five months.)

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, etc, different kinds of joints—timber-splices, cross joints, mortice and tennon, miter and frame work, dovetail work comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof-trusses, etc.

II—.A course in turning and pattern making extends through the three months of the third term. The lessons comprise first nature and use of lathe and tools, plain straight turning, caliper work to different diameters and lengths, simple and compound curves, screw plates and chuck work, hollow and spherical turning. The work in pattern making comprises a variety of examples of whole and split patterns, core work, etc. giving the student practice in forming irregular shapes in wood with the lathe and carving tools, as well as familiarity with the nature and use of patterns for moulding.

2nd. year: I—.A course in moulding and casting in iron and brass, occupying the first ten weeks. The work consists for the most part of small articles such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two-part flasks, core work is also given, and some three-part flask and some dry sand work is introduced.

The same patterns which have been made by students the previous year are used, besides special patterns for occasional larger or more complicated work. Instruction and practice is given in working the cupila, each student in turn taking charge of a melting.

II A course in forge work in iron and steel. The lessons are arranged so that the students in making the series of objects, become familiar with the nature of the metals, and the successive steps in working them by hand into simple and complex forms; as drawing, upsetting, bending, cutting, punching, welding by various methods, tool forging, tempering, hardening, etc.

In connection with this second-year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel, brass, etc.

All instruction is given; first, by black-board drawings or sketches which the student copies, with dimensions, in note book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class: second, by inspection and direction at the bench by the instructor.

3d, year: Course in Machinery. Students desiring to pursue the study of applied mechanics beyond the above course in shop work, will be required to take in addition a special course including the study of Steam and Mill Engineering, supplemented by experiment and practice with the apparatus; including steam generation and the forms, construction and use of steam boilers and accompanying apparatus; steam as a motive power, and forms, construction and use of the steam engine, with the study and use of the indicator; transmission of power,—shafting, belting, gearing, etc., also elementary theoretical mechanism.

MODERN LANGUAGES AND HISTORY.

W. S. Fleming, Adjunct Professor.

No attempt is made in this department to teach a student to speak French and German. The aim is to give such a facility in

reading these two languages as will afford ready access to the important scientific papers in foreign journals. The following courses are pursued:

French,—I. Otto's Grammar, part first; exercises in writing French; French readings.

French,—II. Otto's Grammar, part second; French compositions, Racine's Athalie.

French,-III. Compositions, scientific French.

German—I. Otto's Grammar, part first; exercises in writing German; German reading.

German—II. Otto's Grammar, part second, Schiller's Wilhelm Tell, Scientific German and composition.

The students of the lower classes only have regular recitations in history.

MILITARY SCIENCE AND TACTICS

Lieut. Richards U.S. Army, Commandant.

Military Science and Tactics are required to be taught in this Institution by law. This law is faithfully carried out, by imparting to each student, not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion, also in Guard Mountings, Inspections, Dress Parades, Reviews, etc.

Under Section 1225 U. S. Revised Statutes, the College is provided with modern Cadet Rifles and accourrements and two pieces of Field Artillery. Ammunition for practice firing is used under the direction of an experienced officer.

The following uniform of standard cadet gray cloth has been prescribed for dress, viz: Coats and pants as worn at West Point with sack-coat for fatigue, dark blue cadet cap, white helmet for dress occasions.

A very neat and serviceable uniform can be obtained here at \$18. This is less expensive than the usual clothing. All students are required to wear this uniform during the session.

The drills are short, and the military duty involves no hardships. The military drill is a health giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

The entire body of students is divided into companies. The offi-

cers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, one 1st. Lieutenant, one 2nd. Lieutenant and with a proper number of sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the President, on nomination of the Commandant.

Privates of the First Class may be excused by the faculty from all military drill except battalion drill.

The First and Second Classes recite once a week in Military Tac-

>0



POST-GRADUATE DEGREES.

There are three Post-Graduate Degrees—MASTER OF SCIENCE, MINING ENGINEER and CIVIL ENGINEER.

A Post-Graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one years residence at the College, spent in the successful prosecution of a course of study in applied science prescribed by the faculty.

Candidates must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to their course of study.

Applicants for Post-Graduate Degree are by order of the Board permitted to matriculate without payment of fees, except laboratory fees for those who work in the chemical laboratory.

They are subject to the general regulations as other students,

but are exempt from all military duty.

Resident Graduates, who are not candidates for a degree are permitted to matriculate and prosecute the studies in any department of the college, except chemical laboratory, without payment of regular fees.

DISTINCTIONS.

Distinctions will be awarded in the different subjects of each class to those students whose grade is above 90 per cent, and who have satisfactorily passed all the regular examinations of that session.

Certificates of Distinction are awarded in public on Commence ment day to those who obtain three Distinctions.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction, in a form adapted to permanent preservation.

From the record a monthly circular, or statement is sent to the parent or guardian.

EXAMINATIONS.

Written recitations, or monthly examinations on the studies of the month are held at the option of the professor.

At the end of each term writted or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination can be promoted to full standing to the next higher class only on satisfactory examinations at the opening of the next session.

It is required that every student who enters the college shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examinations, except in extreme cases.

Examinations for degrees or certificates of proficiency embrace the entire subject of study in the course.

MUSEUM OF NATURAL HISTORY AND GEOLOGY.

Many valuable additions have been made to the various branches of this Museum within the past few years.

Contributions have been received from different States of the Union, and from foreign countries.

The Geology of Alabama is well illustrated with minerals, fossiliferous and non-fossiliferous rocks from the different formations of the State. The Museum is divided into the department of mineralogy, conchology, geology, zoology and botany. Each department is systematically arranged and catalogued for study and inspection.

The following finely articulated-skeletons of mammals prepared by Prof. Ward of Rochester, N. Y. have been placed in the museum for use of the students in Physiology.

Man (bimana); orang-outan (simia satyrus); spider monkey; cat (felis domestica); dog (canis familiaris); mink (putorius vison); sloth bear (ursus labiatus); California sea-lion (zalophus gillespii); bottle nose dolphin (delphinus tursio); horse (equus caballus); hog (sus scropha); sheep (ovis aries); ox (bos domesticus);

Canada porcupine (erethizon dorsatum); two toed sloth (chalepus didactylus); great-ant-eater (myrmecophaga jubata); giant kangaroo (macropus gigas.) and others.

The entire collection of the Museum. added to the private cabinet belonging to the Professor of Natural History, numbers more than 30.000 specimens.

MUSEUM OF AGRICULTURE.

The Agricultural Museum is intended to illustrate, as far as possible, the agricultural products of this and other countries. It now contains specimens, obtained by donations and by a system of exchanges with other Agricultural Colleges, illustrating varieties of soils, cotton, wheat, oats, corn, peas, grasses etc.

LIBRARY.

A room in the college building is appropriated to the Library, but the number of books at present is not large.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the faculty.

PRÍNTING OFFICE.

The Printing Office is under the charge of Professor Mell, who assisted by D.M. Thrash as foreman, superintends the work of the class in printing at fixed hours during the week. The office occupies a large room in the college building and has a complete outfit consisting of an excellent Gordon press, with fonts of type and stands for twelve students. It is open each afternoon for practice by the cadets. This Department is also furnished with a Caligraph Type-writer where special students have the opportunity of becoming familiar with type writing.

DISCIPLINE.

The government of the College is administered by the President and Faculty in accordance with the code of laws and regulations enacted by the trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, is required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings exerts a wholesome christian influence among the student of the College.

The following students are the officers of the Association:
Fontaine Broun, President. G. H. Lamar, Vice Presdt.
Robertson Riggs, Secretary. Frank Philips, Cor. Sec.
Hugh Taylor, Treasurer.

LOCATION.

The College is situated in the town of Auburn, sixty miles east of Montgomery, directly on the line of the Western Rail-road.

The region is high and healthful, noted for its general good health and entire freedom from malaria, having an elevation of eight hundred and twenty one feet—above tide-water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

THESIS.

Each applicant for a regular degree is required to write and submit to the faculty a thesis on a subject of immediate relation to some study of his course, and deliver the same at commencement, if required by the faculty.

This thesis must be given to the professor of English by the fifteenth day of May.

LITERARY SOCIETIES.

There are two literary Societies, the Wirt and Websterian, connected with the College. Each has a commodious hall, hand-somely fitted up, a library of standard and miscellaneous works

and a reading room. Their weekly exercises add to the facilities afforded by the College for practice in composition, elocution and discussion.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also on Tuesday evening of Commer cement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

SOCIETY OF THE ALUMNI.

The annual Alumni Oration, by a member of the Society, is delivered in the chapel, during Commencement week. ing are officers of the Society: E R. Rivers, President; T. J. Lamar, Vice Pres't; C. C. Thach, Sec. and Treas.; C. H. Lindsev. Orator.

BOARDING.

The college has no barracks or dormitories, and the students board with the families of the town of Auburn, and thus enjoy all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of order,

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President.

EXPENSES.

1 10	\$7.50
Incidental fee, per half session	1.00
Library fee per half session	2.50
Surgeon 5 100 por	\$12 to 14.00
Board, per month, with fuel and lights These fees are payable, \$11. on matriculation	
These fees are payable, \$11. on heart ruary 1st. By order of the Board, no fees can	be remitted.

There is no charge for tuition.

The surgeon is required to visit daily the cadets reported sick, to give all requisite medical attendance without other charge than the regular Surgeon's fee.

By messing, the cost of board has been reduced by a few students to \$8.50 per month. For students entering after January 1st., the fees for half session only are required.

FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the treasurer of the college all funds desired for sons or wards, whether for regular charges of College fees and board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., only when approved by the President.

When funds are deposited, checks are drawn on the treasurer of the college by the cadet to defray his necessary expenses. These checks are paid only when approved by the President. The President will only approve for necessary expenses as stated in the cat alogue, unless specially requested in writing by the parent.

To cover the expenses of fees, books, uniform and board for one. month, not less than \$50 should be deposited with the treasurer on matriculation.

The attention of parents is called to the following law enacted by the trustees:

When a student matriculates, all money required to pay the college fees, and all other moneys in his possession, must be deposited with the Treasurer, unless the President shall receive special instruction from the parent or guardian to the contrary.

ACADEMIC YEAR.

The Academic Year commences on the fifteenth of Sprtember, and ends on the second Wednesday in June following, which is Commencement day.

It is divided into three terms. The first term extends from the opening of the session to the last week in December: the second term begins January 1st and ends May 31st: the third term continues from April 1st to the close of the session.

RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the trustees at their meeting held $\,$ August 27, $\,$ 1885:

"That in view of increased facilities for instruction in Agriculture, and the technical departments of education, now possessed by this college, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the faculty are authorized, in addition to the legal name of this college, to print on the catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the course of education now provided for.



Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1887

```
OCLC: 36819601
                         Rec stat:
  Entered:
                                                  Used:
                                                              19970429
             19970429
                          Replaced:
                                       19970429
 Type: a
             ELvl: I
                          Srce: d
                                      GPub: s
                                                  Ctrl:
                                                              Lang:
  BLvl: s
              Form: a
                          Conf: 0
                                      Freq: a
                                                  MRec:
                                                              Ctry:
                                                                     alu
  S/L: 0
              Orig:
                          EntW:
                                      Regl: r
                                                  ISSN:
                                                              Alph:
  Desc: a
                                      DtSt: d
              SrTp:
                          Cont:
                                                  Dates: 1873,1893 ¶
    1 040
              AAA +c AAA ¶
            h +b c +d b +e f +f u +g b +h a +i u +j p 1
    2 007
            n-us-al ¶
    3 043
             LD271 +b .A76 ¶
    4 090
    5 090
             *b ¶
              AAAA ¶
    6 049
    7 110 2
              Agricultural and Mechanical College of Alabama. ¶
    8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
    9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
▶ 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama ¶
12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama 1
▶ 13 260
              Auburn, Ala. : +b The College, ¶
  14 300
              21 v. ; +c 21 cm. ¶
 15 310
              Annual 1
 16 362 0 1872-73-1892-93. ¶
 17 500
              Title varies slightly. ¶
▶ 18 533
             Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
‡d 1997. ‡c microfilm reels : negative ; 35 mm. ¶
              d +b 1873 +c 1893 +d alu +e u +f u +g a ¶
▶ 19 539
  20 650 0 Universities and colleges +z Alabama +x Periodicals. 1
▶ 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. 1
> 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
> 23 785 00 Agricultural and Mechanical College of Alabama. +t Catalogue of
```

▶ 24 830 0 USAIN State and Local Literature Preservation Project ¶

the Alabama Polytechnic Institute ¶

ALABAMA POLYTECHNIC INSTITUTE CATALOGUE
1887-88

AU LD271 .A76 1887/88 c.2

AUBURN UNIVERSITY LIBRARY



AU LD271 .A76 1887/88 c.2

> g. _

Manufactured by YLORD BROS. Inc. Syracuse, N. Y. Stockton, Calif.

M CIRCUI A

CAT-2-

CATALOGUE

OF THE

State Agricultural and Mechanical College.

ALABAMA POLYTECHNIC INSTITUTE.

1887-'88.

AUBURN, ALABAMA.

BOARD OF TRUSTEES.

HIS EXCELLENCY THOMAS SEAY, President ex-officio
Hon. SOLOMON PALMER, Superintendent of Education . ex-officio
Hon. JONATHAN HARALSON (term expires 1889.)
Hon, R. F. LIGON (term expires 1889.)Tuskegee
Hon, JOHN W. BISHOP (term expires 1889.) Talladega
Hon, J. G. GILCHRIST(term expires 1891.) Montgomery
Hon. M. L. STANSEL (term expires 1891.)Carrollton
Hon. J. N. MALONE(term expires 1891.)Athens
Hon. C. C. LANGDON(term expires 1893.)Mobile
Hon. R. F. KOLB (term expires 1893.) Eufaula
Hon, J. B. MITCHELL(term expires 1893.)Seale

E. T. GLENN, Treasurer.

F. M. REESE, Secretary and Auditor.

Note.—The College Building represented in the engraving is now in process of construction.

FACULTY AND OFFICERS.

FER 28 84

BARKSDALE

WM. LEROY BROUN, M. A., LL.D., President, and Professor of Physics and Astronomy.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, JR., M. E., PH. D., Professor of Natural History and Geology.

JAMES H. LANE, C. E., A. M.,
Professor of Civil Engineering and Drawing.

J. S. NEWMAN,

Professor of Agriculture and Director of the Experiment Station.

CHARLES C. THACH, B. E., Professor of English and Latin.

N. T. LUPTON, A. M., M. D., LL. D.,
Professor of General and Agricultural Chemistry and State Chemist.

LIEUT. M. C. RICHARDS, 2d Artillery, U. S. A. [West Point], Commandant and Professor of Military Science.

GEORGE H. BRYANT, M. E. [Mass. Inst. Technology],

Instructor in Mechanic Arts.

GEORGE PETRIE, M. A. [Univ. Va.],
Adjunct Professor of Modern Languages and History.

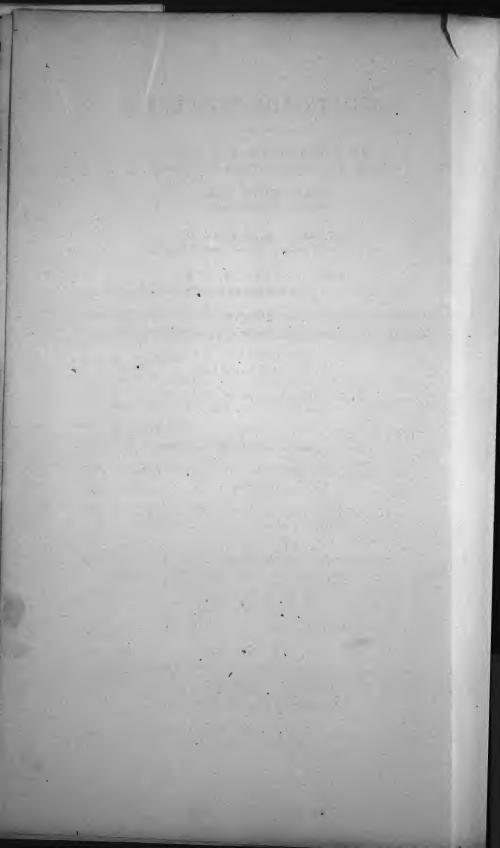
L. W. WILKINSON, B. Sc. B. S. BURTON, B. Sc. Assistants in the Chemical Laboratory.

C. H. ROSS, B. Sc. V. L. ALLEN, B. Sc. Assistants in Mathematics and English.

> J. H. DRAKE, M. D., Surgeon.

C. C. THACH, Librarian and Recording Secretary.

O. D. SMITH, Corresponding Secretary.



OBJECT OF THE COLLEGE.

The leading object of the College, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially those that relate to agriculture and the mechanic arts, so far as the facilities at its disposal will permit; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on a sound general education.

The College in fact has become a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue, and work of great value to the youth of the State is now being accomplished by fitting them, by a thorough science-discipline, in which handcraft in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought and thus qualify them for the duties of life, whatever their vocation may be, their moral and Christian training will always constitute the prominent care and thought of the Faculty.

LABORATORIES AND FACILITIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in applied science in the following departments:

I-IN AGRICULTURE AND HORTICULTURE.

The farm contains 210 acres and is supplied with illustrative specimens of stock of select varieties.

The agricultual experiment station, established in connection with the College, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc., where lectures are delivered in presence of the object discussed, and during the year exercises in practical agriculture and horticulture of an educational character are given the students who enter upon this course of study.

II-IN MECHANIC ARTS.

The Laboratory of Mechanic Arts is used as an auxiliary in industrial education, as a school of manual training in the arts that constitute the foundation of various industrial pursuits. The work performed by the students is *instructive* in character, as in any other laboratory, and the classes are taught in sections by a series of graded lessons under the supervision of the professor. In the lower classes of the College each student enters this school, and is assigned three exercises a week, each exercise being two hours long.

The object of this laboratory is not to teach a trade, but to educate, to discipline and train the eye and the hand, as well as the mind, and thus, by associating manual and mental training, to thoroughly educate the student for the duties of life, whatever his vocation may be. There is no attempt to teach students special skill in constructing articles of commercial value, but all the exercises are systematically arranged and designed for purposes of education.

The wood department is located in a commodious hall 90x50 feet, and is provided with a twenty-five horse power Corliss engine, with indicator, a planer, circular saw, bandsaw, two scrolll saws, a buzz planer, twenty stands with lathes, with full sets of lathe and carpentry tools required for instruction.

A brick building with two rooms, each 30x35 feet, has recently been constructed especially for instruction in working iron.

One room is equipped with twelve forges and tools required for a forge department, the other with a cupola furnace, having a capacity of 400 pounds, a core oven, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant fan and exhauster supplied with power from the engine.

The machine department is equipped with eight engine lathes—one speed lathe, one 20-inch drill press, one post drill, one shaper, one five-foot planer, one universal milling machine, a corundum tool-grinder and small emery grinder.

The chipping and filing department is arranged with benches and vises for twelve students.

The Weston dynamo of five horse power, used at present for lighting the halls, is located in the large hall of the Mechanic Art Laboratory.

It is designed, when the buildings now under construction are completed, to supply the different laboratories with electricity by this dynamo.

III-IN PRACTICAL CHEMISTRY.

The new chemical laboratory will be supplied with new and modern apparatus, and in its entire equipment will afford excellent facilities for instruction in practical chemistry.

The investigations that will be undertaken in this laboratory by scientific experts, in connection with the work of the agricultural experiment station, will be of especial value to advanced students, and will afford them unusual opportunities to learn the methods of scientific research. The building contains a large general laboratory that will accommodate sixty students, and lecture room, and nine other rooms, all appropriated to instruction and research in chemistry.

It will be equipped with the improved modern appliances necessary for instruction and investigation.

IV-IN PHYSICS AND MINERALOGY.

In the main College structure, now being rebuilt, provision will be made for laboratory work in these and in other departments of science. Temporary rooms are now used, and apparatus is supplied as demanded by the work of the College.

V-IN BOTANY, ETC.

In the work of the agricultural experiment station, investigations in botany and entomology will be given special attention, and unusual opportunities will be offered advanced students for practical work in these departments in laboratories especially fitted with appliances for research.

VI-IN ENGINEERING AND SURVEYING.

The necessary apparatus for field work has been provided for the use of students, and the customary exercises in the field are given.

VII-IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution.

VIII-IN MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

This department is under the charge of Lieut. M. C. Richards, 2nd Artillery, U. S. A.

It has recently been supplied with new cadet muskets and accoutrements for the corps, and for artillery practice, with two three-inch rifle guns, carriages and limbers.

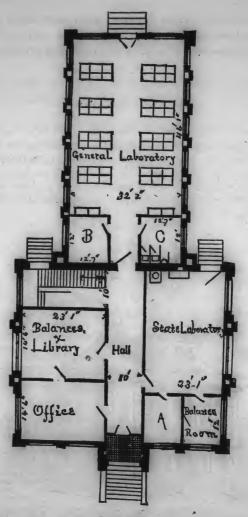
COLLEGE BUILDINGS.

The main College building was destroyed by fire on the 24th of June, 1887. The frontispiece is an engraving of the building, 160 by 71 feet, now in process of construction. It will contain, exclusive of the basement story, thirty-five rooms. This building will not be used for dormitories for students, but will be appropriated for purposes of instruction. It will contain the lecture rooms and offices of the professors, laboratories, library, museum, armory, etc.



CHEMICAL LABORATORY.

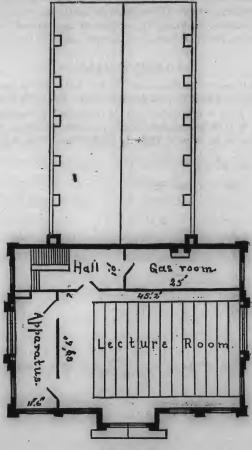
The new chemical laboratory is a handsome two-story structure, 40 by 60 feet, with a rear projection 35 by 60 feet of one story and basement. The exterior is of pressed brick, with cut stone trimmings and terra-cotta ornamentation.



FIRST FLOOR.

A, Spectroscope and polariscope room; B, Assistant's private working-room; C, Combustion-furnace room.

On entering, the first room to the left is the office of the professor, to the rear of which is the library and balance-room. On the right, extending the whole length of the floor, is the State laboratory and laboratory for research. Two small rooms are cut off from this, one a balance-room, and the other for the spectroscope and polariscope. Leading from the rear of the main hall is the door which enters the large laboratory for general work. Two rooms are cut off from this—one for combustion furnaces and the other a private working-room for the assistant.



SECOND FLOOR.

In the basement are ample accommodations for assaying and storage. The main laboratory will accommodate sixty students, and, when the fitting up is completed, will contain the latest improved working-tables, with water, gas and every necessary appliance for chemical work. Niches in the walls opposite each working-table, with hoods where necessary, connect with flues, and furnish the best possible means of

escape for deleterious vapors, while ventilators in the ceiling furnish additional means for getting rid of noxious gases. The pitch is sixteen feet in the clear, with paneled ceiling of oiled Southern pine. The rooms are wainscoted throughout and finished in natural wood.

The second story contains a lecture-room and room for gas-analysis. Around this lecture-room will be cases for containing crude and manufactured products, illustrating the subjects of agricultural and industrial chemistry, which are prominent subjects taught in this institution.

LANGDON HALL.

This is a two-story building ninety by fifty feet. The second story is the audience hall, used for commencement and other public occasions.

The first story is appropriated to the laboratory of mechanic arts. This building is at present temporarily used for recitation rooms, and will continue to be so used until the completion of the new College building.

GRADUATES.

WITH DEGREE OF BACHELOR OF SCIENCE (B. Sc.).

Class of 1887.

Arthur John Alexander,	Thomas Hugh Jones,
Vassar Lyle Allen,	George Holt Lamar,
Henry Clay Armstrong,	Edward Read Lloyd,
Burwell Lee Boykin,	Wilson Herbert Newman,
William Easly Davis,	Frank Howard Perry,
Roger ap Catesby Jones,	Charles Woodard Simmons.

WITH THE DEGREE OF MASTER OF SCIENCE.

Bolling Anthony Blakey, (A. B., Univ. Ala.) Charles Irwin Mell, (A. B., Univ. Ga.)

WITH THE DEGREE OF CIVIL ENGINEER.

James William Morgan, Jr., (Gr., St. N'm'l Col.)

DISTINGUISHED STUDENTS.

Awarded Honor Certificates in 1887.

The students of each class, who secure a grade above 90 in three or more different subjects, are distinguished for excellence in scholarship, and are awarded honor certificates.

FIRST CLASS.

Vassar Lyle Allen, Edward Read Lloyd,
Burwell Lee Boykin, Wilson Herbert Newman,
George Holt Lamar, Frank Howard Perry,
Charles Woodard Simmons.

SECOND CLASS.

Fontaine Broun,
George Fleming Broun,
Alonzo Francis Cory,
John Hodges Drake, Jr.,
William Kerr Terry.

Edmund Wiley Foster,
Edwin Conway McCartney,
Thomas Drake Samford,
Otis Oliver Smith,

THIRD CLASS.

Thomas John Brooks,
Charles Morris Cory,
Bolling Hall-Crenshaw,
Howard Grayson Crowder,
Percival Lewis Dryer,
Walter Davis Dunlap,
Frederick Henry Vernon.

Arthur St. Charles Dunstan,
Pleasant Lee Hutchinson,
John Reuben Irvin,
Oscar Don Killebrew,
Joseph Hugh Moragne,
Hugh McGehee Taylor,

FOURTH CLASS.

Houston Franklin Cooper, Frank Maury Fontaine, William Groce Harrison, Robert Edward Daniel Irvin, William Merriwether Leary,
William Merriwether Leary,
John Hammond Little, Thomas Martin McMillan, Frank Davis Milstead, Herbert Payne Robertson, George Houston Waring, Jr.

CATALOGUE OF STUDENTS.

FOR THE SESSION 1887-88.

GRADUATE STUDENTS.

	/	
NAMES.	5	RESIDENCES.*
Vassar Lyle Allen, B. Sc.,		Montgomery. Blow
Thomas Hugh Jones, B. Sc.,		Lee.
Edward Read Lloyd, B. Sc.,		Lee mem
Wilson Herbert Newman, B. Sc., .		Lee.
Charles Hunter Ross, B. Sc., .		Lee.
Charles Woodard Simmons, B. Sc.,		Dale.
FIRST CLASS		
Cyrus Washington Ashcraft,		Clay.
Robert Love Bennett,		Texas.
George Fleming Broun,		Lee.
Fontaine Broun,		West Virginia.
Henry Lee Broun,		Virginia.
Alonzo Francis Cory,		Autauga.
John Hodges Drake, Jr.,		Lee.
Edmund Wiley Foster,		Mobile.
John Thomas Gregory,	W. 1 . 1	Lauderdale.
Eugene Willis Harris,		Lee.
George Abner Huguley,	•	Georgia.
William Lyman,		Shelby.
Ædwin Conway Macartney,		Mobile.
Thomas Drake Samford,		Lee.
Otis Oliver Smith,	•	Lee.
Samuel Oliver Taylor,	:	Lee.
SECOND CLASS	s.	e well to early
Burton Mell Bishop,	-1 11	Georgia.
Thomas Jefferson Brooks,	. 11	Georgia.
*D -: 3		

^{*}Residence is Alabama when State is not named.

Leslie Dallas Burdett, .							Georgia.
Aaron Jason Burr,							Georgia.
John Robert Clower, .							Lee.
Edmund Collins Cochran,							Montgomery.
Abednego Jackson Crawford	,						Lee.
Bolling Hall Crenshaw, .							Butler.
Arthur Campbell Crowder,							St. Clair.
Howard Grayson Crowder,							St. Clair.
Howard Staten Doster, .							Autauga.
Percival Lewis Dryer,							Macon.
Walter Davis Dunlap, .							Dallas.
Arthur St. Charles Dunstan,							Shelby.
George William Harris, .							Georgia.
Pleasant Lee Hutchinson,							Georgia.
Egbert Jones,							Georgia.
Oscar Don Killebrew,							Dale.
Andrew Manly Lloyd,							Lee.
William Lane Martin, .							Jefferson.
Arthur Wesley Oliver,							Bullock.
Frank Philips,							Florida.
Thomas Alexander Ross,							Lee.
Lawrence Avery Smith, .							Chambers.
Edgar Johnson Spratling,						•	Chambers.
Hugh McGehee Taylor, .					•		Lee.
Daniel Mathew Thrash,						•	Dallas.
Paul Turner Vaughan,							Dallas.
Frederick Henry Vernon,							Chambers.
Thomas Morgan Watlington,					1		Marengo.
Norman Rutherford Weaver,			ľ			•	Dallas.
, , , , , , , , , , , , , , , , , , , ,		ľ		•			Dallas.

THIRD CLASS.

Benjamin Cheny Aberneth	v.					Florida.
James William Bivins,						Georgia.
Benjamin Wilbur Breedlov	ve.		•			Macon.
David Browder,	,	-		•	•	
Wilmer Calloway,	Ů	. 1	•		•	Montgomery.
Mosby Stuart Chandler,		•		•	•	Montgomery.
George Samuel Clarke,	•		•	•		Bullock.
Walter Girard Cook,		•	•		•	Montgomery.
	•			•		Lowndes.

Houston Franklin Cooper,		. Georgia.
Charles White Davis,		. Florida.
George Woodhull Emory,		. Lee.
Stonewall Jackson Emory, .		Lee.
William Francis Feagan, .	41 . 177	. Bullock.
Francis Maury Fontaine,		. Georgia.
Daniel Gillis,		. Georgia.
Charles Bowles Glenn,		. Lee.
Clifford LeRoy Hare,	٠,	. Lee.
John Dixon Harris,		. Chambers
William Groce Harrison, .		. Talladega.
Martin Horst,	.0	. Mobile.
Robert Edward Daniel Irvin,		. Lee.
Hunter Allen Lang,		. Jefferson.
Felix Hope Leslie, .		. Russell.
Lionel Clarence Levy,		. Georgia.
John Hammond Little, .		. Lee.
Louis Vaughn Massey,		. Macon.
Frank Brooks Mathews, .	• 3-	. Georgia.
Wilmot Bivins Mathews,		. Georgia.
Thomas Morton McMillan,		Monroe.
Frank Davis Milstead,		. Elmore.
John Milton, Jr.,		Florida.
Thomas James Molton,		. Elmore.
Robert Ernest Noble, .		. Calhoun.
Polk Keaton Pennington,		. Bullock.
Reuben Hayne Poole, .		Georgia.
Edward Clyde Powers,		. Lee.
Edward Hill Pritchett, .		Lowndes.
William Sylvester Prout,		. Marengo.
James Edward Ray, .	. 0.	Marshall.
Seldon Jasper Riddle,	•	. Etowah.
Herbert Payne Robertson,		Lowndes
Joseph Huguley Robinson, .		. Chambers.
William Walter Robinson,		Tallapoosa.
Archibald Young Sharpe, .		. Marengo.
George Hall Smith, .	· · · .	Georgia.
Charles Cabaniss Tate,		. Marengo.
Percy Willett Terry, .		Jefferson.
0		

Dixon Hamilton Tharin, . . . Georgia.

Thomas Chilton Thorington, . . . Montgomery.

George Houston Waring, . . . Georgia.

William Cameron Weisinger, . . Talladega.

James Fielden Wilkinson, . . . Dale.

Fern Manly Wood, Barbour.

FOURTH CLASS, SECTION A.

	Hunter Holcombe Armstrong,			Lee.
	Lee Ashcraft,			Clay.
	Lawrence Ernest Baker,			Jefferson.
	Armineas Vambery Bennett,			Lee.
	Harmon Benton,			Barbour.
	Frank Jarvis Bivins,			Georgia.
	Leroy Wiley Bowie, . :			Talladega.
	Robert Inge Burke,			Montgomery.
	Howard Evans Bush,			Jefferson.
	Reuben Carr,			Lee.
	Amos Hill Cox,		٠.	Lee.
	James Albert Cox, .			Lee.
	James Nathaniel Dean,			Montgomery
	William Jefferson Dennis,			Montgomery.
	Walter William Drane,			Lowndes.
	Arthur Thomas Dudley,			Georgia.
	Edwin Walton Duke,		•	Chilton.
	Robert Edward Lee Edwards,	.1 1		Mobile.
	Douglas Francis Gordon, .			Louisiana.
	Dorian Hall,			Lowndes.
	Bryant Clower Harvey, .		7.	Lee.
	Beverly Franklin Harwee.			Perry.
	Belus Ephraim Hudso ⁻¹			Lee
	Cadmus Hughes,			Walker.
	Fletcher Moore Hurt		, .	Macon.
	Joel Fletcher Hurt,			Georgia.
-	John Allen Jones,			Lee.
	Hendley Varner Kell, .			Georgia.
	Raphael Semmes Kell, .			Georgia.
	Frank Murray Key, .	•.		Georgia.
	Thomas Dixon Lewis, .			Butler.

Frank Allemong Lupton,		Lee.
William Audley Marshall, .		Georgia.
Julius Marx,		Perry.
Isaac Isaiah Moses,		Georgia.
William Henry Oates, .		Mobile.
Samuel Lawrence Reed,		Limestone.
Charles Rhodes,		Barbour.
Charles Byrum Robinson, .		Lowndes.
Frank Ford Snedecor,		Jefferson.
Joseph Hardie Spence, .		Talladega.
Robert Clanton Smith, .	•	Chambers.
John McCullough Tharin, .		Georgia.
Jordan Emmett Thomason,		Randolph.
Joseph Leslie Tucker,		Shelby.
Horace Turner, .		Mobile.
Daniel Van Antwerp,		Mobile.
Garet Van Antwerp, Jr,		Mobile.
Alva Miles Wade,		Morgan.
Clanton Ware Williams,		Montgomery.
Joseph Archibald Williams,		Jefferson.
-		

FOURTH CLASS, SECTION B.

_	Jacob Thompson Bullen, .					Montgomery.
	Porter Campbell Flanagan,					Lee.
	Raleigh Frederick Hare, .	•				Leė.
	Joseph Andrew Holifield,					Lee.
	Jeremiah Jackson,					Lee.
	John Robert Larkin, .			٠		Sumter.
	George Lathrop,			•		Georgia.
	Johnson Edward McCall,				•	Chambers.
	John William Robinson, .					Lee.
	Walter Daniel Smith,		•			Mobile.
-	Sheldon Lyne Toomer, .					Lee.
	David Lewis Whetstone,				•	Elmore.
	George DeKalb Winston, .					Lee.
	George Alfonzo Wright,					Lee.

20 AGRICULTURAL AND MECHANICAL COLLEGE.

	SUA	MAI	RY.			
Graduates,						6
First Class,						16
Second Class,						31
Third Class,			,			53
Fourth Class,	Section	A,				51
Fourth Class,	Section	В,				14
Total						171

NUMBER OF STUDENTS IN EACH SUBJECT OF STUDY.

English 164	Agriculture, 99
English, 164	,
History, . 74	Physics, 72
French, 33	Natural History & Geology, 89
German, 28	Physiology, 19
Latin, 48	Engineering, 24
Mental Science, . 11	Drawing, 129
Political Economy, . 15	Mechanic Arts, 101
Mathematics, 150	Military Tactics, . 158-
Chemistry, 81	

MILITARY ORGANIZATION.

1887-'88.

President. WM. LEROY BROUN.

Commandant. MELZAR C. RICHARDS, Lieut. 2nd U. S. Artillery.

> Surgeon. J. H. DRAKE, M. D.

Assistant to Commandant with rank of Major. V. L. ALLEN. Cadet Captains.

H. L. BROUN.

T. D. SAMFORD. G. A. HUGULEY.

Cadet 1st Lieut. and Adjutant. J. H. DRAKE, Jr.

Cadet 1st Lieutenants. E. C. MACARTNEY, G. F. BROUN, R. L. BENNETT, E. W. HARRIS.

0. 0. SMITH, E. W. FOSTER.

Cadet Sergeant Major. P. T. VAUGHAN, Jr. Cadet 1st Lieut. and Quartermaster. FONTAINE BROUN.

Cadet 2nd Lieutenants. J. T. GREGORY, WM. LYMAN, S. O. TAYLOR, C. W. ASHCRAFT.

Cadet Q. M. Sergeant. JNO. R. CLOWER.

Cadet Color Sergeant. F. PHILIPS.

Cadet 1st Sergeants. H. M. TAYLOR. B. H. CRENSHAW.

T. M. WATLINGTON.

Cadet Sergeants.

H. CROWDER, F. H. VERNON, E. J. SPRATLING,

P. L. HUTCHINSON, A. M. LLOYD,

G. W. HARRIS. A. C. CROWDER, T. J. BROOKS, Jr., A. J. BURR,

T. A. ROSS, O. D. KILLEBREW, A. ST.C. DUNSTAN.

Cadet Corporals. H. F. COOPER, F. D. MILSTEAD, B. C. ABERNETHY, JOHN MILTON, Jr., F. M. FONTAINE, W. G. HARRISON. R. E. NOBLE, C. THORINGTON, E. H. PRITCHETT. W. CALLOWAY, G. H. WARING, Jr., L. C. LEVY.

Cadet Color Corporals. G. W. EMORY, WM. F. FEAGIN, F. H. LESLIE, D. GILLIS, Jr., J. W. BIVINS, J. F. WILKINSON, W. C. WEISINGER.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character. To enter the fourth class the applicant must be not less than fifteen years of age, and be qualified to pass a satisfactory examination in the following subjects:

- 1. Geography and History of the United States.
- 2. English—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar and division into paragraphs.
- 3. Mathematics—(a) Arithmetic, including fundamental operations; common and decimal fractions; denominate numbers, the metric system; percentage, including interest and discount; proportion; extraction of square and cube roots; (b) Algebra, to quadratic equations.

For admission to the fourth class in the General Course, a satisfactory examination will also be required in Latin

grammar and Cæsar (4 books.)

For admission to the higher classes, students should be prepared to stand a satisfactory examination on all the studies of the lower classes as shown in the courses of study. Where opportunity has not been offered to pursue special studies required at this College, the system of equivalents will be adopted, and studies which denote an equivalent amount of discipline and training will be accepted as satisfactory.

ENTRANCE EXAMINATIONS.

Entrance examinations will be held on the 15th of September, the day on which the session opens.

Applicants who are not fully prepared to stand the entrance examinations for full admission to the fourth class, including those of fourteen years of age, are admitted to the subcollege department, which includes the fourth class, Sec. B.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the second class, and those over twenty-one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty. Regular students who fail to pass satisfactory final examinations in any one study become special students.

They will be classed as regular students pursuing a course for a degree whenever they can pass the examinations in those subjects in which they were found deficient.

COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences with their applications; Agriculture, Mechanics, Astronomy, Mathematics, Engineering, Drawing, English, French, German and Latin Languages, History, Political Economy, Mental and Moral Sciences.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

There are three Degree courses for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

I. COURSE IN CHEMISTRY AND AGRICULTURE.

II. COURSE IN MECHANICS AND ENGINEERING.

III. GENERAL COURSE.

There are also two partial courses, each requiring two years for its completion:

IV. Two YEARS' COURSE IN AGRICULTURE.

V. Two YEARS' COURSE IN MECHANIC ARTS.

Course I. includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II. includes the principles and applications of the sciences that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the profes-

sion of engineering.

Course III. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses IV. and V. have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and take one of the regular degree courses.

Students who complete either of these two year courses will, on passing a satisfactory examination, receive certifi-

cates indicating their attainments.

Students who have completed the general course in each department of the school of Mechanic Arts, and are qualified, can enter upon a more extended technical course in Mechanical Engineering.

PREPARATORY COURSE IN PHARMACY.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all of their time in the laboratories of these departments under the immediate direction of the professors. With the excellent facilities offered in the new chemical laboratory, scientific preparation of great value to the practical pharmacist can be obtained.

COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering, which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry—Assaying, Reduction of Ores, Mineralogy, Economic Geology, Mining Machinery, Drifting, Tunneling, Timbering, Ore Dressing, and the various opera-

tions connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering and Natural History.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this College, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction is given in the following depart-

ments:

I-CHEMISTRY.

II—Engineering, Field Work, Surveying, Etc.

III-AGRICULTURE.

IV-NATURAL HISTORY.

V-Technical Drawing.

VI-MECHANIC ARTS.

(a) Begins March 1st.

I.—COURSE IN CHEMISTRY AND AGRICULTURE.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

First Term.	Second Term.	. Third Term.
5. English.	5. English.	5. English.
2. History.	2. History.	2. History.
5. Mathematics.	5. Mathematics.	6. Mathematics.
3. Elementary Physics.	3. Elementary Physiolog	
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
	THIRD CLASS.	
First Term.	Second Term.	Third Term.
3. English.	3. English.	2. English.
2. History.	2. History.	3. Botany,(a).
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.	3. General Chemistry.
3. Agriculture.	3. Agriculture.	3. Agriculture.
3. Drawing.	3. Drawing.	3. Drawing.
4. Mechanic Art Lab'ry.	4. Mech. Art Lab'ry.	4. Mech. Art Lab'ry.
2. Practical Agriculture.	2. Practical Agriculture.	2. Practical Agriculture.
3. Military Drill.	3. Military Drill.	3. Military Drill.
•	SECOND CLASS.	* · · · · · · · · · · · · · · · · · · ·
First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
3. Physics.	3. Physics.	3. Physics.
3. Industrial Chemistry.	3. Industrial Chemistry.	3. Industrial Chamisters
2. Agriculture.	2. Agriculture.	2. Agriculturo
4. Natural History(lab'y)	4. Natural History(lab'v)	.4. Natural History(lab'y).
1. Millitary Lactics.	1. Military Tactics.	1. Military Tactica
9. Chemical Laboratory.	9. Chemical Laboratory.	9. Chemical Laborators
2. Practical Agriculture.	2. Practical Agriculture.	2. Practical Agriculture.
3. Military Drill.	3. Military Drill.	3. Military Drill.

FIRST CLASS.

First Term.	Second Term.	Third Term.
2. English Literature.	2. Political Economy.	2. Political Economy.
2. Mental Science.	2. Moral Science.	2. Moral Science.
2. Physics.	2. Astronomy.	2. Astronomy,
4. Natural History.	4. Natural History.	4. Natural History.
2. Agriculture.	2. Agriculture.	2. Agriculture.
2. Agricultural Chemistry	2. Agricultural Chemistry	2. Agricultural Chemistry
1. Military Science.	1. Military Science.	1. Military Science.
9. Chemical Laboratory.	9. Chemical Laboratory.	9. Chemical Laboratory.
	2. Practical Agriculture.	•

II.—COURSE IN MECHANICS AND ENGINEERING.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

First Term.	Second Term.	Third Term.
5. English.	5. English.	5. English.
2. History.	2. History.	2. History.
5. Mathematics.	5. Mathematics.	6. Mathematics.
3. Elementary Physics.	3. El. Physiology.	2. Agriculture.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
	THIRD CLASS.	

First Term.	Second Term.	Third Term.
3. English.	3. English.	2. English.
2. History.	2. History.	3. Botany.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.	3. General Chemistry.
3. Agriculture (a).	3. Agriculture (a).	3. Agriculture (a).
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y:
3. Military Drill:	3. Military Drill.	3. Military Drill.

⁽a) For Agriculture may be substituted French or work in the Chemical Laboratory.
(b) For Eng. Lit. and Pol. Econ., may be substituted French or German.

SECOND CLASS.

First Term.	Second Term.	Third Term.
 English or French. Physics. Mathematics. Engineering. Drawing. Military Tactics. Lab'y, Mineralogy. Field Work, Engin'g. Military Drill. 	 English or French. Physics. Mathematics. Engineering. Drawing. Military Tactics. Lab'y, Mineralogy. Field Work, Engin'g. Military Drill. 	 English or French. Physics. Mathematics. Engineering. Drawing. Military Tactics. Field Work, Engin'g. Military Drill.

FIRST CLASS.

	rust lerm.		Secona Term.		Third Term.
2. 2. 3. 5. 5. 1.	Physics. Natural History. Mathematics. Engineering.	 2. 3. 5. 	Political Economy (b) Astronomy. Natural History. Mathematics. Engineering. Drawing. Military Science. Field Work, Engin'g.	 2. 3. 5. 5. 	Political Economy (b). Astronomy. Natural History. Mathematics. Engineering. Drawing. Military Science. Field Work, Engin'g.
-	,		Tiona Work, Ebgin g.		rield Work, Engin g.

III.—GENERAL COURSE.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

First Term.	Second Term.	Third Term.
 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Agriculture. Mechanic Arts. Military Drill.

THIRD CLASS.

First Term.	Second Term.	Third Term.
5. Latin.	5. Latin.	5. Latin.
2. History.	2. History.	3. Botany.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.	3. General Chemistry.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
	SECOND CLASS.	
First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
3. Physics.	3. Physics.	3. Physics.
3. Mathematics.	3. Mathematics.	3. French.
3. French.	3. French.	3. Latin.
3. Latin.	3. Latin.	2. Mathematics.
2. Natural History.	2. Natural History.	2. Natural History.
1. Military Tactics.	1. Military Tactics.	1. Military Tactics.
6. Laboratory Work (a).	6. Laboratory Work (a).	6. Laboratory Work (a).
3. Military Drill.	3. Military Drill.	3. Military Drill.
	FIRST CLASS.	
		m1 · 1 m
First Term.	Second Term.	Third Term.
2. English Literature.	2. Political Economy.	2. Political Economy.
2. Mental Science.	2. Moral Science.	2. Moral Science.
2. Physics.	2. Astronomy.	2. Astronomy.
2. Natural History.	2. Natural History.	2. Natural History.
3. French.	3. French.	3. French.
5. German.	5. German.	5. German.
1. Military Science.	1. Military Science.	1. Military Science.
English Thesis.	English Thesis.	English Thesis.

⁽a) The student may elect the Laboratory of Chemistry, Natural History or Mechanic Arts-

IV.—TWO YEARS' COURSE IN MECHANIC ARTS:

FIRST YEAR.

	First Term.	Second Term.		Third Term.
2.	English. History. Mathematics.	2. History.	2.	English. History.
3.	Elementary Physics. Drawing.	3. Elementary Physiology	2.	Mathematics. Agriculture. Drawing.
6.	Mechanic Art Lab'y. Military Drill.	6. Mechanic Art Lab'y.	6.	Mechanic Art Lab'y. Military Drill.

SECOND YEAR.

	First Term.		Second Term.		Third Term.
	English.		English.	3.	English.
	Mathematics.	5.	Mathematics.	5.	Mathematics.
	Physics.	3.	Physics.		Physics.
	Drawing.	3.	Drawing.	3.	Drawing.
	Mechanic Art Lab'y.	12.	Mechanic Art Lab'y.		Mechanic Art Lab'y.
3.	Military Drill.		Military Drill.		Military Drill.

V.-TWO YEARS' COURSE IN AGRICULTURE.

FIRST YEAR.

	rirst Term.	Second Term.	Third Term.
2. 5. 3. 4. 3.	English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill. Practical Agriculture.	 History. Mathematics. Elementary Physiology2 Drawing. Mechanic Art Lab'y. 	English. History. Mathematics. Agriculture. Drawing. Mechanic Art Lab'y.

SECOND YEAR.

 Eng Mat Gen Agri Prac 	hematics. eral Chemistry. culture.	5. 3. 5. 12.	Agricultu	tics. Chemistry. re. Agriculture.	5. 3. 5. 12.	Third Term. English. Mathematics. General Chemistry. Agriculture. Practical Agriculture. Military Drill.
---	--	-----------------------	-----------	--	-----------------------	--

DEPARTMENTS OF INSTRUCTION.

PHYSICS AND ASTRONOMY.

PRESIDENT BROUN.

The instruction is given by recitations from text-books and lectures, 'illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics treated graphically.

This is followed by a full discussion of Molecular Mechanics; while due prominence is given to principles, frequent

reference is made to the applications of science.

The studies of the second class include the properties of matter, units of measure, force, work, energy, kinematics, kinetics, mechanic powers, friction, pendulum, molecular forces of solids, liquids and gases, theory of undulations, heat, electricity, magnetism, etc.

The studies of the first class include Electricity and its

applications; Optics, Astronomy and Meteorology.

TEXT-BOOKS.—In Physics, Atkinson's Ganot. In Astronomy, Newcomb & White.

MATHEMATICS.

PROF. SMITH.

The general course for the first two years embraces the first year, Algebra and Geometry, six books; second year, Solid Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration.

Two objects are sought to be attained: First, mental discipline. Second, a thorough knowledge of the principles of

pure mathematics and their practical applications.

Theoretical and practical instruction is given in the third class in farm, town and government land surveying, dividing land, mapping, plotting and computing of areas, etc.; also in the theory, adjustment and use of instruments.

The class, in sections of six or eight, devote three afternoons a week during the second and third terms to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvi-

linear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering course. Analytical Geometry, Descriptive Geometry and Calculus are pursued in the Engineering course. Especial attention is given to their practical applications.

During the entire course, instruction in text-books is supplemented by lectures. Solutions of original practical problems are required of the student to make him familiar with

the application of principles and formulæ.

TEXT-BOOKS.

Wentworth's Algebra, Wentworth's Geometry, Schuyler's Surveying, Wentworth's Analytical Geometry, Waldo's Descriptive Geometry, Taylor's Calculus, Olney's and Wentworth's Trigonometry.

NATURAL HISTORY AND GEOLOGY.

PROF. MELL.

Geology.—This subject is studied in the senior class.

Special attention is given to the Geology of Alabama. The course is given by text-books and lectures. Attention is paid to the nature and origin of ore deposits, mineral springs and geological relations of soils.

Zoology.—A systematic arrangement of the Animal Kingdom, in accordance with natural affinities, is made a special feature of the instruction. Particular attention is also given to insects injurious to vegetation, their habits, and the methods best adapted for checking their ravages.

Botany.—The students of the third class begin the study of Botany the 1st of March and continue it through the session. Analytical work is made an important feature. This class is provided with plants from the neighboring fields, and

taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section. All students of the third class are required to study Botany.

In the second class, in the course of Chemistry and Agriculture, an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope in the preparation of specimens showing plant structure; this work is not only sufficient to familiarize the students with the methods of plant building and cellular organization, but also to practise them in detecting the various forms of fungi that are injurious to fruits and vegetables. Excellent microscopes of the most improved patterns and all the necessary chemicals and apparatus for preparing and mounting vegetable tissues are used by the students. A dark room is attached to this laboratory for micro-photographic work.

TEXT-BOOKS.

Le Conte's Geology, Holder's Zoology, Bessey's Botany, Apgar's Plant Analysis, Gray's Botany, Plant Dissection (Arthur, Barnes and Coulter).

ALABAMA WEATHER SERVICE.

The United States Signal Service has established in Alabama a State system for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered throughout the State. An opportunity is thus offered the students in Meteorology of becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

PROFESSOR LANE.

CIVIL ENGINEERING.

The special studies of this department begin in the second class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics. They are as follows:

Second Class—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, location and construction of common roads and railroads.

First Class—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars and their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings; solid and open built beams; classification, construction and mechanics of masonry; foundations on land and in water; bridges and roofs of different kinds; their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads; navigable, irrigation and drainage canals; river and sea-coast improvements.

Theory and practice are combined in both classes.

TEXT-BOOKS.

Second Class—Henck's Field Book for Railway Engineers, Gillespie's Roads and Railroads, Parson's Track.

First Class-Wheeler's Civil Engineering, Von Ott's Graphic Statics.

DRAWING.

All of the students of the third and fourth classes are required to take Drawing; but only the students in Mechanics and Engineering in the first and second classes.

The fourth class is taught linear drawing and elementary graphical mechanics. The third class is instructed in the principles of orthographic and isometric projections,

shades and shadows, practical perspective and tinting. In the second class the instruction embraces a more extended course in orthographic and isometric drawing, perspective shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings. The first class makes topographical drawings and drawings of machines, roofs, bridges, etc., to different scales. Plans, profiles and sections of railroad surveys complete the instruction in this department.

TEXT-BOOKS.

Fourth Class—Davidson's Linear Drawing, Broun's Elementary Graphical Mechanics.

Third Class—Davidson's Projections, Davidson's Practical Perspective, Keuffel & Esser's Alphabet.

Second Class—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the college, Keuffel & Esser's Alphabet.

First Class—French, English and American Plates belonging to the college, Keuffel & Esser's Alphabet.

AGRICULTURE.

PROF. NEWMAN.

The course of instruction in this department embraces, I. soils; II. plants; III. domestic animals. In the fourth class twenty lectures, covering the third term of the session, treat of soils, their classification, physical defects and remedies, causes of diminished fertility, and the means used to protect them from waste and restore fertility, the theory and practice of surface and sub-drainage, etc. The subject is treated with special reference to the different classes of soil in Alabama, omitting as far as possible questions involving a knowledge of chemistry and botany—subjects not taught in the fourth class.

In the third class, in addition to the discussion of the physical properties and mechanical treatment of soils, the methods of studying their chemical defects and their remedies are discussed. The sources of the important elements of plant food and their use upon different soils and plants, the restoration of humus, saving home manures, composts,

commercial fertilizers, the office of different chemical elements in plant development—the relations of plant growth to soil and atmosphere, the theory and practice of restoration of crops, terracing and grading to prevent washing, plows and plowing—indeed everything connected with tilling the soil passes under review as foundation work.

Southern agriculture is then treated in the concrete—the history, nature and cultivation of each of our field crops discussed as regards their adaptation to and treatment upon the soils of Alabama. This occupies the first and second terms. The third term is devoted to domestic and commercial horticulture, poultry, sheep, cattle-breeding and management of the dairy, etc. In the second class stockbreeding and management is completed, and a thorough course in pomology, including the propagation of nursery stock, planting, manuring, pruning, cultivating, harvesting and marketing every species of fruit, treated theoretically and practically, occupies the remainder of the session. Barry's Fruit Garden, corrected for our latitude, is used in this class. In the senior class a series of lectures is delivered upon political economy in its special relations to the pursuit of agriculture, and the relations of capital and labor devoted to agriculture; the selection, purchase, equipment and management of a farm, the ratio between fixed and working capital, the employment and management of labor, etc., etc. The science of cattle feeding occupies the second term, and landscape gardening, treated with special reference to the improvement of country homes, occupies the remainder of the session.

CHEMISTRY.

PROFESSOR LUPTON. ASSISTANTS, WILKINSON AND BURTON.

Instruction in this department embraces—

- 1. A course of lectures in General Chemistry.
- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each course of lectures for the practice of chemical analysis and chemical research.

1. Course in General Chemistry: This consists of a series of lectures (three per week) extending throughout the entire session, and includes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

REFERENCE BOOKS.

Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cook's Chemical Philosophy, Chemical Journals.

2. The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures to the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, heating, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

REFERENCE BOOKS.

Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology, Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week) and includes a thorough discussion of the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock and the vari-

ous operations carried on by the intelligent and successful agriculturist.

BOOKS OF REFERENCE.

Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Departments and Stations.

4. The Course of Systematic Laboratory Work: This course of practical work in the Laboratory is carried on in connection with each course of lectures, and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The Laboratories, which are open from 9 a. m. to 5 p. m. during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

A fee of \$10 per session is charged each student in the nalytical Laboratory for the use of apparatus and for material consumed.

Each student on entering the Chemical Laboratory is required to deposit \$5, and is furnished with a work-table, a set of re-agent bottles, and the common re-agents and apparatus used in qualitative and quantitative analysis. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

BOOKS USED.

In qualitative Analysis-Jones, Fresenius, Plattner.

In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying. In Agricultural Chemical Analysis—Church, Frankland. Official methods of the Association of Agricultural Chemists.

CHEMICAL LABORATORY.

(For description of the building, see page-).

The Chemical Apparatus recently purchased for the new Laboratory consists of a full supply of the latest and most approved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to first-class Laboratories, a new and improved Schmidt and Haensch's Polariscope has been imported, two short-arm Becker Balances of latest pattern, Bunsen Spectroscope, Zeiss' Microscope, and other instruments for delicate and accurate work.

ENGLISH AND LATIN.

PROF. THACH.

ENGLISH.

In this department the students are carried through a systematic course of study in the English language and literature. In the courses of study which do not include the ancient classics, a full course in English is especially important. It is, therefore, designed, as much as the time allotted permits, to familiarize these students by frequent exercises with the standard authors of the language.

The course of study is as follows:

Fourth Class.—Five hours a week; study of Grammar, the principles of special and general composition, with frequent brief papers illustrating the laws studied.

Whitney's Essentials, Launsbury's History of English Language, Hart's Rhetoric.

Third Class.—Three hours a week; study of style, analysis of the selections of prose and poetry, frequent essays on literary and historic themes.

Hart's Rhetoric, Scudder's American Poems. Weekly exercises in declamation are required of members of this class.

Second Class.—Three hours a week; critical study of English Classics, History of English and American Literature, Logic, Essays.

Abbott's How to Write Clearly, Shaw's History of English Literature Abbott's English Lessons, Hale's Longer English Poems.

First Class.—Two hours a week, first term; principles of criticism and study of English Classics; second and third terms, Political Economy. Five hours a week, first and second terms: Mental Science; third term, Moral Science.

Shakespeare's Plays, Chaucer's Canterbury Tales, Wayland's Science of Wealth, Hickok's Mental Science, Gregory's Christian Ethics.

Three original orations are required during the year of each student in the first and second classes.

LATIN.

The subjects taught in this department are the Latin Language and Literature.

The modes of instruction are by translation from the Latin texts into English and from English into Latin. The constant use of black-boards adds much to the progress and accuracy of the student.

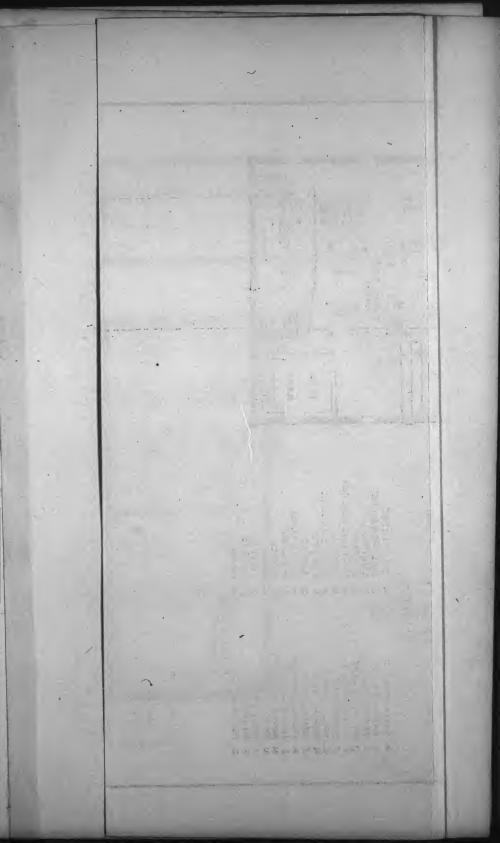
A systematic course of exercises, illustrative of the principles of Latin Etymology and Syntax, is carried on in connection with the reading of the authors prescribed. Special attention is given to English derivatives from the Latin, and to the corresponding idioms of the two languages.

The progress of the student is valued not so much by the number of books read as by his ability to read Latin and explain the principles of interpretation and construction.

Latin authors read:

Fourth Class.—Virgil, Cicero's Orations, Grammar and Composition-Third Class.—Cicero, Composition.

Second Class.—Tacitus, Horace, Selections from Latin Poets and Prose writers, Classical Literature.





ALA. POLY, INST.

BCALE 16-1'

INDEX

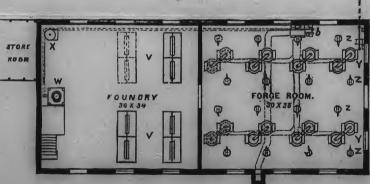
- WORK BENCHES BAND SAW SCROLL SAW
- PATTERN LATHE CIRCULAR SAW
- GRINDSTONE
- BUZT-PLANER SURFACE. "
- DRILL PRESS FILING BENCHES
- ENGINE LATHES
- BENCH GRINDER TOOL "
- POST DRILL SHAPER PLANER

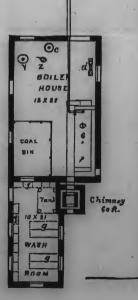
- R SPEED LATHE S MILLING MACHINE T ENGINE U DYNAMO V MOULDING SENCHES

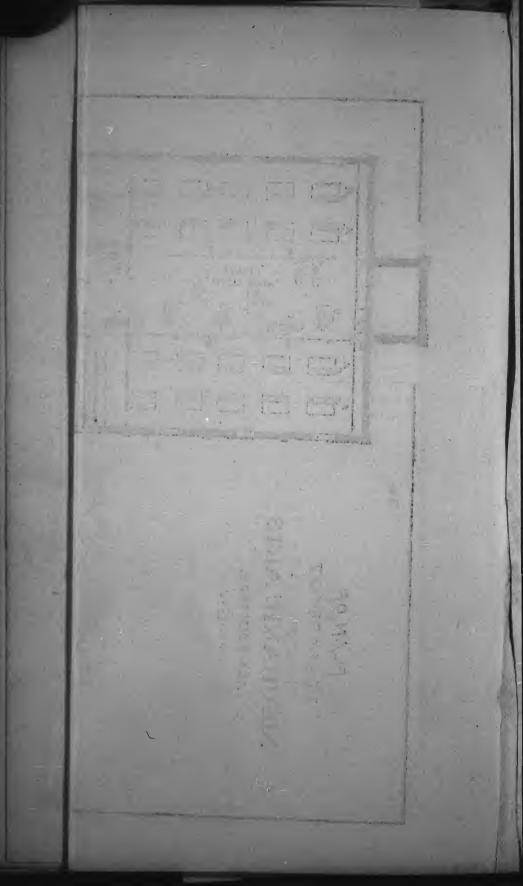
- CUPOLA
- BRASS FURNACE FORGES
- ANVILS WOOD LATHES BLOWERS
- HEATER PUMP
- BOILER
- SINKS
- h BHAFT LINES



MACHINE ROOM.







MECHANIC ARTS.

G. H. BRYANT, B. S., INSTRUCTOR.

The course in Manual Training covers three years, as follows: First year, wood-working-carpentry and turning; second year, pattern-making and foundry and forge workmoulding, casting and smithing; third year, machine shopchipping and filiug and machine work in metals.

This course is obligatory upon the students of the three lower classes (5th, 4th and 3d). For satisfactory reasons a student may be excused from this laboratory work by the

Faculty.

The full work of each class is six hours per week, in three exercises of two hours each.

The power for running the apparatus in this department is derived from a twenty-five horse-power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler. A steam pump and a heater for the feed water form a part of the steam apparatus. For the steam plant a substantial brick boilerhouse and chimney have been erected.

The equipment for the wood-working shop comprises the following: 20 double wood-working benches, each with complete set of carpenter's tools; 20 turning-lathes, 10-inch swing, each with complete set of tools; 1 double circular saw; 1 band saw; 1 board-planing machine; 1 buzz planer; 2 scroll saws (power); 1 large pattern-maker's lathe, 16-inch swing; I 36-inch grindstone. In addition to these, the tool-room is supplied with a variety of extra hand-tools for special work.

The equipment for the foundry consists of moulding-benches for 12 students, each supplied with a complete set of moulder's tools; a 14-inch cupola, with all modern improvements, capable of melting 1,000 pounds of iron per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of crucible tongs, etc. Also a full supply of ladles, large and small moulding flasks, special tools, etc.

The forge shop equipment consists of 12 hand-forges of new pattern. each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola), and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke-flues and forces it out through the chimney.

The machine tools in the machine department are as follows: 6 engine-lathes (screw-cutting) 14-inch swing, 6 foot bed; 2 engine-lathes 16inch swing (one with taper attachment); I speed lathe, Io-inch swing; I 20-inch drill-press (power feed); I 15-inch shaper; I 22-inch x 22-inch x

5-foot friction planer; I universal milling machine; I corundum tool-grinder (14-inch wheel); I bench grinding-machine (small); I post drill press (14-inch). A part of this room is set apart for vise-work—chipping and filing—and benches for 12 students are provided, each with vise and sets of files, chisels, hammers, etc. In the tool-room is to be found a good supply of machinists' tools for general shop use, such as lathe and drill chucks, drills, reamers, taps, dies, gauges, files, cutting and measuring tools, and special appliances for machine work, etc.

The nature of the work in each department is as follows:

1ST YEAR.

I. A course of carpentry (hand work covering the first term and part of the second or about five months).

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, etc., different kinds of joints—timber-splices, cross joints, mortice and tennon, miter and frame work, dovetail work comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof-trusses, etc.

II. A course in turning extending through the three months of the third term. The lessons comprise, first, nature and use of lathe and tools, plain straight turning, caliper work to different diameters and lengths, simple and compound curves, screw-plate and chuck-work, hollow and spherical turning.

2ND YEAR.

I. A course in pattern-making covering the first half of the first term. The work includes a variety of examples of whole and split patterns, core work, etc., giving the students familiarity with the use of patterns for general moulding.

II. A course in moulding and casting in iron and brass occupying ten weeks. The work consists for the most part of small articles, such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two-part flasks; core work is also given, and some three-part flask and some dry sand work is introduced.

The same patterns which have been previously made by students are used, besides special patterns for occasional larger or more complicated work. Instruction and practice is given in working the cupola, each student in turn taking charge of a melting.

III. A course in forge-work in iron and steel occupying the remainder of the year. The lessons are arranged so that the students, in making the series of objects, become familiar with the nature of the metals and the successive steps in working them by hand into simple and complex forms, as drawing, upsetting, bending, cutting, punching, welding by various methods, tool forging, tempering, hardening, etc.

In connection with this second year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel, brass, etc.

3RD YEAR.

1. A course in chipping and filing covering the first term. The lessons comprise work on cast and wrought iron: chipping to line on flat and curved surfaces, key-seating, etc.; filing and finishing to line (straight and curved), surface filing and finishing, fitting, slotting, dovetail work, sliding and tight fits, sawing, pin, screw and key filing, surface finishing with scraper, etc.

II. Machine work occupying the remainder of the year. The work includes cast and wrought iron, steel and brass: Turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling—both in lathe and drill press—reaming, boring, screw cutting in lathe and with taps and dies, planing, slotting, etc., with planer and shaper, milling various forms with the milling machine, fitting, grinding, polishing, etc.

Lectures are also given during the year on various subjects connected with machine work in metals: such as forms, construction and use of the various machines, cutting tools, gearing, gauges, screw threads, etc. Duing the last term some piece of construction work is given the classes.

Instruction is generally given, first, by black-board drawings or sketches which the student copies, with dimensions

in note-book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class; second by inspection and direction at the bench by the instructor.

Students desiring to pursue the study of applied mechanics beyond the above course will take a special course of Steam and Mill Engineering, supplemented by experiment and practice with the apparatus, including steam generation and the forms, construction and use of steam-boilers and accompanying apparatus; steam as a motive power, and forms, construction and use of the steam engine, with the study and use of the indicator; transmission of power—shafting, belting, gearing, etc.; also elementary theoretical mechanism.

Norg. —The work in the forge and foundry rooms was omitted the present session, the rooms being occupied by the professor of chemistry.

MODERN LANGUAGES AND HISTORY.

GEORGE PETRIE, ADJUNCT PROFESSOR.

MODERN LANGUAGES.

The following regular courses are given in French and German:

French.—First year: Three recitations a week. During this year the principal object is to acquire facility in reading ordinary French at sight; and to this end, the student starts reading at an early stage and is practiced continually in sight reading and in previously assigned selections.

Second year: Three recitations a week. During this year more difficult and varied French is read, and careful instruction is given upon the laws of grammar and the construction of the language, while the principles thus learned are illustrated and impressed by frequent exercises in rendering English into French.

German.—One year: Five recitations a week. In this course the aim and the methods are similar to those in the first year in French.

Special Courses.—In addition to these regular courses, additional classes are formed for special study of the literature, or for special study in any particular direction desired, when the number of students desiring it is sufficient.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that History is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. This causal relation of events is closely studied and the students are taught to investigate for themselves the growth of ideas, and to trace particularly their development in the United States, so as to acquire a practical knowledge of the history and present working of our government and institutions. The knowledge acquired is rendered clear and permanent by frequent comparisons of customs and laws, and also by diagrams, charts and maps. Instruction is given by lectures and text-books, while investigation is stimulated by requiring essays and by holding frequent discussions in the class-room.

The course covers one year and part of the next, and embraces the history of the United States, studies on our government and its institutions and on general history.

MILITARY SCIENCE AND TACTICS.

LIEUT. RICHARDS, U. S. ARMY, COMMANDANT.

Military Science and Tactics are required to be taught in this Institution by law. This law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion; also in Guard Mountings, Inspections, Dress Parades, Reviews, etc.

Under Section 1225 U.S. Revised Statutes, the College is provided with modern Cadet rifles and accoutrements and two pieces of field artillery. Ammunition for practice firing is

used under the direction of an experienced officer.

The following uniform of standard cadet gray cloth has been prescibed for dress, viz.: Coats and pants as worn at West Point, with sack coat for fatigue, dark blue cadet cap, white helmet for dress occasions.

A very neat and serviceable uniform can be obtained here This is less expensive than the usual clothing. All students are required to wear this uniform during the session.

The drills are short and the military duty involves no hardships. The military drill is a health-giving exercise. and its good effects in the development of the physique and improvement of the carriage of the cadet are manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, one 1st Lieutenant, one 2nd Lieutenant, and with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of These appointments are conferred by the President on nomination of the Commandant.

Privates of the first class may be excused by the Faculty from all military drill except battalion drill.

The first and second classes recite once a week in Military Tactics.

POST-GRADUATE DEGREES.

There are three Post-Graduate Degrees-MASTER OF SCIENCE, MINING ENGINEER and CIVIL ENGINEER.

A Post-Graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one year's residence at the College, spent in the successful prosecution of a course of study in applied science prescribed by the Faculty.

Candidates must also present to the Faculty a satisfactory thesis, showing independent investigation upon some subject pertaining to their course of study, and must pass a satisfactory examination on the course of study prescribed.

Applicants for Post-Graduate Degree are by order of the Board permitted to matriculate without payment of fees, 3

except laboratory fees for those who work in the chemical laboratory.

They are subject to the general regulations as other students, but are exempt from all military duty.

Resident graduates, who are not candidates for a degree, are permitted to matriculate and prosecute the studies in any department of the College, except chemical laboratory, without payment of regular fees.

DISTINCTIONS.

Distinctions will be awarded in the different subjects of each class to those students whose grade for the entire year is above 90 per cent., and who have satisfactorily passed all the regular examinations of that session.

Certificates of Distinction are awarded in public on Commencement day to those who obtain three Distinctions. For the first class four Distinctions are required.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction, in a form adapted to permanent preservation.

From the record a monthly circular, or statement, is sent to the parent or guardian.

EXAMINATIONS.

Written recitations, or monthly examinations on the studies of the month, are held at the option of the professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination can be promoted to full standing to the next higher class only on satisfactory examinations at the opening of the next session.

It is required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examinations, except in extreme cases.

Examinations for degrees or certificates of proficiency em-

brace the entire subject of study in the course.

LIBRARY.

A temporary room is appropriated to the Library until the completion of the College building, but the number of books at present is not large. Additions are made annually.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the Faculty.

DISCIPLINE.

The government of the College is administered by the President and Faculty in accordance with the code of laws and regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, is required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings exerts a wholesome Christian influence among the students of the College.

The following students are the officers of the Association:

Fontaine Broun, President.

C. H. Ross, Vice-President.

A. C. Crowder, Secretary.

Frank Philips, Corresponding Secretary.

Hugh M. Taylor, Treasurer.

LOCATION.

The College is situated in the town of Auburn, sixty miles east of Montgomery, directly on the line of the Western Railroad.

The region is high and healthful, noted for its general good health and entire freedom from malaria, having an elevation of eight hundred and twenty-one feet above tide-water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

THESIS.

Each applicant for a regular degree is required to write and submit to the Faculty a thesis on a subject of immediate relation to some study of his course, and deliver the same at Commencement, if required by the Faculty.

This thesis must be given to the professor of English by the first day of May.

LITERARY SOCIETIES.

There are two Literary Societies—the Wirt and Websterian—connected with the College.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also on Tuesday evening of Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

SOCIETY OF THE ALUMNI.

The Annual Alumni Oration, by a member of the Society, is delivered in the chapel during Commencement week. The following are officers of the Society:

T. H. Frazer, M. D., President; J. C. Street, Vice-President; C. C. Thach, Treasurer and Secretary; Caleb Lindsey, Mobile, Alabama, Orator 1888; J. E. D. Shipp, Georgia, Alternate.

BOARDING.

The College has no barracks or dormitories, and the students board with the families of the town of Auburn, and

thus enjoy all the protecting and beneficial influences of the

family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of order.

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President.

EXPENSES.	250
Incidental fee, per half session	50
Library fee, per half session	
Surgeon's fee, per half session	2 50
Board per month, with fuel and lights\$12 to 14	4 00
These fees are payable, \$11 on matriculation and \$11	on
February 1st. By order of the Board, no fees can be mitted.	re-

There is no charge for tuition.

The surgeon is required to visit daily the cadets reported sick, and to give all requisite medical attendance without other charge than the regular surgeon's fee.

By messing the cost of board has been reduced by a few students to \$8.50 per month. For students entering after January 1st, the fees for half session only are required.

CONTINGENT FEE.

A contingent fee of five dollars is required, to be deposited by each student on matriculation, to cover any special or general damages to College property for which he may be liable.

At the close of the session the whole of the contingent fee, or the unexpended balance, will be refunded to the student.

FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the Treasurer of the College all funds desired for sons or wards, whether for regular charges of College fees and board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., only when approved by the President.

When funds are deposited, checks are drawn on the Treasurer of the College by the cadet to pay his necessary expenses. These checks are paid only when approved by the President. The President will only approve for necessary expenses, as stated in the catalogue, unless specially requested in writing by the parent.

To cover the expenses of fees, books, uniform and board for one month, not less than \$50 should be deposited with the Treasurer on matriculation.

The attention of parents is called to the following law enacted by the Trustees:

When a student matriculates, all money required to pay the College fees, and all other moneys in his possession, must be deposited with the Treasurer, unless the President shall receive special instruction from the parent or guardian to the contrary.

ACADEMIC YEAR.
The Academic Year commences on the fifteenth of September and ends on the second Wednesday after the first Monday in June following, which is Commencement day.

It is divided into three terms. The first term extends from the opening of the session to the last week in December; the second term begins January 1st and ends March 31st; the third term continues from April 1st to the close of the session.

RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the Trustees:

That in view of increased facilities for instruction in Agriculture and the technical departments of education now possessed by this College, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the Faculty are authorized, in addition to the legal name of this College, to print on the catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the course of education now provided for.

Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1888

```
Rec stat:
  OCLC: 36819601
                        Replaced: 19970429
                                                             19970429
             19970429
                                                  Used:
  Entered:
                         Srce: d GPub: s
                                                 Ctrl:
                                                             Lang: eng
Type: a
            ELvl: I
            Form: a Conf: 0
                                                              Ctry: alu
  BLvl: s
                                     Freq: a
                                                  MRec:
                                                              Alph: a
                          EntW:
                                     Regl: r
                                                  ISSN:
  S/L: 0 Orig:
 Desc: a SrTp:
1 040 AAA +c AAA ¶
                                     DtSt: d
                          Cont:
                                                  Dates: 1873,1893 ¶
           h +b c +d b +e f +f u +g b +h a +i u +j p ¶
   2 007
   3 043
             n-us-al 1
   4 090 LD271 +b .A76 ¶
   5 090
          *b ¶
             AAAA 1
   6 049
   7 110 2 Agricultural and Mechanical College of Alabama. ¶
   8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
   9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
> 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama ¶
12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama 1
             Auburn, Ala. : +b The College, ¶
▶ 13 260
 14 300
             21 v. ; +c 21 cm. ¶
 15 310
             Annual ¶
 16 362 0 1872-73-1892-93. ¶
 17 500
             Title varies slightly. ¶
18 533
             Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
#d 1997. #c microfilm reels : negative ; 35 mm. ¶
             d +b 1873 +c 1893 +d alu +e u +f u +g a 1
19 539
 20 650 0 Universities and colleges +z Alabama +x Periodicals. 1
▶ 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
> 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
▶ 23 785 00 Agricultural and Mechanical College of Alabama. ‡t Catalogue of
the Alabama Polytechnic Institute 1
```

> 24 830 0 USAIN State and Local Literature Preservation Project ¶

ALABAMA POLYTECHNIC INSTITUTE CATALOGUE 1888-89

AU LD271 .A76 1888/89 c.2





AU LD271 .A76 1888/89 C.2

This book must not be taken from the Library building.

CAT.2-

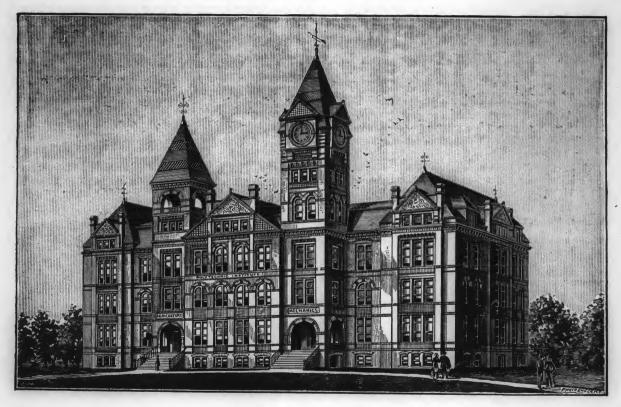
State Agricultural & Mechanical College.



ALABAMA POLYTECHNIC INSTITUTE.

1889.

1888-89



AGRICULTURAL AND MECHANICAL COLLEGE.

Alabama Polytechnic Institute.

CATALOGUE

OF THE

State Agricultural and Mechanical Gollege.

ALABAMA POLYTECHNIC INSTITUTE.

1888-'89.

AUBURN, ALABAMA.

BOARD OF TRUSTEES.

HIS EXCELLENCY THOMAS SEAY, Presidentex-officio
HON. SOLOMON PALMER, Superintendent of Educationex-officio
HON. JONATHAN HARALSON (term expires 1895.)Selma
Hon. R. F. LIGON (term expires 1895.)Tuskegee
Hon. R. F. LIGON
Hon. JOHN W. BISHOP(term expires 1895.)Talladega
Hon. C. C. LANGDON
Hon, R. F. KOLB(term expires 1893.)Eufaula
Hon. J. B. MITCHELL(term expires 1893.)Seale
Hon. J. G. GILCHRIST(term expires 1891.)Montgomery
Hon. M. L. STANSEL(term expires 1891.)Carrollton
HON. C. C. HARRIS(term expires 1891.)Decatur

E. T. GLENN, Treasurer.

F. M. REESE, Secretary and Auditor.

Note.—The College Building represented in the engraving is now in process of construction, and will be completed in October.

c.a FACULTY AND OFFICERS.

BARKSDALE

E 26 84

WM. LEROY BROUN, M. A., LL. D., President, and Professor of Physics and Astronomy.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, M. E., PH. D.,

Professor of Natural History and Geology.

IAMES H. LANE C. F. A. M.

JAMES H. LANE, C. E., A. M.,
Professor of Civil Engineering and Drawing.

J. S. NEWMAN,

Professor of Agriculture and Director of Experiment Station.

CHARLES C. THACH, B. E., Professor of English and Latin.

N. T. LUPTON, A. M., M. D., LL. D.,
Professor of General and Agricultural Chemistry and State Chemist.

LIEUT. JOHN B. McDONALD, 10th Calvary U. S. A., (West Point)

Commandant and Professor of Military Science.

GEORGE H. BRYANT, M. E., (Mass. Inst. Technology)

Director of Laboratory and Instructor of Mechanic Arts.

GEORGE PETRIE, M. A., (Univ. Va.)

Adjunct Professor of Modern Languages and History.

L. W. WILKINSON, B. Sc., Assistant in Chemical Laboratory.

J. J. WILMORE, M. E., B. A. BLAKEY, M. Sc., Assistant Instructors in Mechanic Arts.

S. C. PITTS, B. Sc., *
J. T. GREGORY, B. Sc.,
G. F. BROUN, B. Sc., †
Assistants in Mathematics and English.

J. H. DRAKE, M. D., Surgeon.

C. C. THACH,

Librarian and Recording Secretary.

O. D. SMITH,

Corresponding Secretary.

<sup>Resigned January 1st, 1889.
† Appointed January 1st, 1889.</sup>

OFFICERS

OF THE

Agricultural Experiment Station.

BOARD OF VISITORS.

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION:

J. G. GILCHRIST, R. F. LIGON, J. B. MITCHELL.

OFFICERS OF THE STATION

W. L. BROUN	. 14 2-4
I. S. NEWMAN	griculturist
N. T. LUPTONVice Director and	nd Chemist
*P. H. MELL	Botanist
*P. H. MELL	Biologist.

ASSISTANTS:

ISAAC Ross, First Asst. Agriculturist in	Charge of Live Stock and Dairy
IAC CLAYTON	Second Assistant Agriculturist
T T ANDRECON PU D	First Assistant Chemist
I W WILKINSON M. SC	Second Assistant Chemist
P. L. HUTCHINSON	
T. D. SAMFORD, B. Sc	Assistant Botanist.

^{*}Prof. Mell has also charge of Meteorological Observations.

OBJECT OF THE COLLEGE.

The leading object of the College, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially those that relate to agriculture and the mechanic arts, so far as the facilities at its disposal will permit; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on

a sound, general education.

The College, in fact, has become a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue—and work of great value to the youth of the State is now being accomplished by fitting them, by a thorough science-discipline, in which handcraft in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the Faculty.

LABORATORIES AND FACILITIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in applied science in the following departments:

I. - IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with illustrative specimens of stock of select varieties.

The agricultural experiment station, established in connection with the College, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc., where lectures are delivered in presence of the object discussed, and during the year exercises in practical agriculture and horticulture of an educational character are given the students who enter upon this course of study.

II. - IN MECHANIC ARTS.

The laboratory of Mechanic Arts is used as an auxiliary in industrial education, as a school of manual training in the arts that constitute the foundation of various industrial pursuits. The work performed by the students is *instructive* in character, as in any other laboratory, and the classes are taught in sections by a series of graded lessons under the supervision of the professor. In the lower classes of the College each student enters this school, and is assigned three exercises a week, each exercise being two hours long.

The object of this laboratory is not to teach a trade, but to educate, to discipline and train the eye and the hand, as well as the mind, and thus, by associating manual and mental training, to thoroughly educate the student for the duties of life, whatever his vocation may be. There is no attempt to teach students special skill in constructing articles of commercial value, but all the exercises are systematically arranged and designed for purposes of education.

The wood department is located in a commodious hall 90x50 feet, and is provided with a twenty-five horse power Corliss engine, with indicator, a planer, circular saw, band-saw, two scroll saws, a buzz planer, twenty stands with lathes, with full sets of lathe and carpentry tools required for instruction.

A brick building with two rooms, each 30x35 feet, has been constructed especially for instruction in working iron.

One room is equipped with twelve forges and tools required for a forge department, the other with a cupola furnace, having a capacity of 1,000 pounds, a core oven, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant fan and exhauster, supplied with power from the en-

gine.

The machine department is equipped with eight engine lathes—one speed lathe, one 20-inch drill press, one post drill, one shaper, one five-foot planer, one universal milling machine, a corundum tool-grinder and small emery grinder.

The chipping and filing department is arranged with

benches and vises for twelve students.

The Weston dynamo of five horse-power, used at present for lighting the halls, is located in the large hall of the Mechanic Art laboratory.

It is designed, when the buildings now under construction are completed, to supply the different laboratories with elec-

tricity by this dynamo.

III. -IN PRACTICAL CHEMISTRY.

The new chemical laboratory is supplied with new and modern apparatus, and in its entire equipment affords excellent facilities for instruction in practical chemistry.

The investigations that are undertaken in this laboratory by scientific experts, in connection with the work of the agricultural experiment station, are of especial value to advanced students, and afford them unusual opportunities to learn the methods of scientific research. The building contains a large general laboratory that will accommodate sixty students, and lecture room with capacity for one hundred seats and nine other rooms, all appropriated to instruction and research in chemistry.

It is equipped with the improved modern appliances necessary for instruction and investigation.

IV .- JN PHYSICS AND MINERALOGY.

In the main College structure, now being rebuilt, provision will be made for laboratory work in these and in other departments of science. Temporary rooms are now used, and apparatus is supplied as demanded by the work of the College.

v.-IN BOTANY, ETC.

In the work of the agricultural experiment station, investigations in botany and entomology will be given special attention, and unusual opportunities will be offered advanced students for practical work in these departments in laboratories especially fitted with appliances for research.

VI.-IN ENGINEERING AND SURVEYING.

The necessary apparatus for field work has been provided for the use of students, and the customary exercises in the field are given.

VII .- IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution.

VIII .-- IN MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

This department is under the charge of Lieut. J. B. Mc-Donald, 10th Cavalry, U. S. A.

It has recently been supplied with new cadet muskets and accourrements for the corps, and for artillery practice, with two three-inch rifle guns, carriages and limbers.

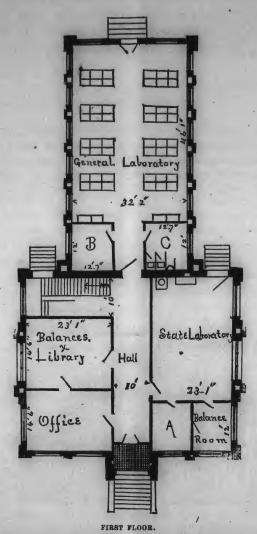
COLLEGE BUILDINGS.

The main College building was destroyed by fire on the 24th of June, 1887. The frontispirce is an engraving of the building, 160 by 71 feet, now in process of construction. It will contain, exclusive of the basement story, thirty-five rooms. This building will not be used for dormitories for students, but will be appropriated for purposes of instruction. It will contain the lecture rooms and offices of the professors' laboratories, library, museum, armory, etc. In October next all the departments of the college will be in their permanent rooms in the new building.



CHEMICAL LABORATORY.

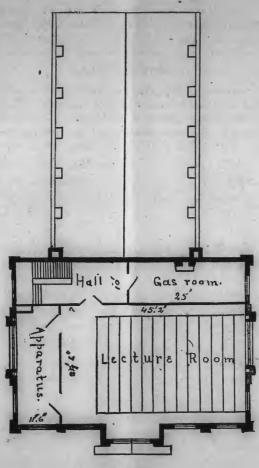
The new chemical laboratory is a handsome two-story structure, 40 by 60 feet, with a rear projection 35 by 60 feet of one story and basement. The exterior is of pressed brick, with cut stone trimmings, and terracotta ornamentation.



A, Spectroscope and polariscope room; B, Assistant's private room; C, Combustion furnace room.

On entering, the first room to the left is the office of the professor, to the rear of which is the library and balance-room. On the right, extending the whole length of the floor, is the State laboratory and laboratory for research. Two small rooms are cut off from this, one a balance-room, and the other for the spectroscope and polariscope. Leading

from the rear of the main hall is the door which enters the large laboratory for general work. Two rooms are cut off from this—one for combustion furnaces and the other a private working-room for the assistant.



SECOND FLOOR.

In the basement are ample accommodations for assaying and storage. The main laboratory will accommodate sixty students, and contains the latest improved working-tables, with water, gas and every necessary appliance for chemical work. Niches in the wall opposite each working-table, with hoods where necessary, connect with flues, and furnish

the best possible means of escape for deleterious vapors, while ventilators in the ceiling furnish additional means for getting rid of noxious gases. The pitch is sixteen feet in the clear, with paneled ceiling of oiled southern pine. The rooms are wainscoted throughout and finished in natural wood.

The second story contains a lecture-room and room for gas analysis. Around this lecture room are cases for containing crude and manufactured products, illustrating the subjects of agricultural and industrial chemistry, which are prominent subjects taught in this institution.

LANGDON HALL.

This is a two story building, ninety by fifty feet. The second story is the audience hall, used for commencement and other public occasions.

The first story is appropriated to the laboratory of Mechanic Arts. This building is at present temporarily used for recitation rooms, and will continue to be so used until the completion of the new College building.

GRADUATES IN 1888.

CLASS OF 1888.

WITH DEGREE OF BACHELOR OF SCIENCE. (B. Sc.)

Cyrus Washington Ashcraft,					Clay.
Robert Love Bennett, .			•		Texas.
George Fleming Broun,					Lee.
Fontaine Broun, .					West Virginia
Henry Lee Broun,	4.	٠			Virginia.
John Hodges Drake, Jr.,				3	Lee.
Edmund Wiley Foster, .					Mobile.
John Thomas Gregory, .					Lauderdale.
Eugene Willis Harris, .					Lee.
George Abner Huguley, .			. 1		Georgia.
William Lyman,					Shelby.
Edwin Conway Macartney,					Mobile.
Thomas Drake Samford, .					Lee.
Otis Oliver Smith, .					Lee.
Samuel Oliver Taylor, .	٠.				Lee.

WITH DEGREE OF MASTER OF SCIENCE. (M. Sc.)

Vassar Lyle Allen, B. Sc.,		Montgomery.
Edward Read Lloyd, B. Sc.,		Lee.
Wilson Herbert Newman, B. Sc.,		Lee.
Charles Woodard Simmons, B. Sc,		Dale.

WITH DEGREE OF CIVIL ENGINEER. (C. E.)

	101					
Charles	Hunter	Ross,	В.	Sc.,		Lee

Distinguished Students.

AWARDED HONOR CERTIFICATES IN 1888.

The students of each class, who secure a grade above 90 in three or more subjects, are distinguished for excellence in scholarship, and are awarded

HONOR CERTIFICATES.

The following students received honor certificates in 1888:

FIRST CLASS.

Cyrus Washington Ashcraft,		Clay.
Robert Love Bennett		Texas.
George Fleming Broun,		Lee.
Fontaine Broun,	•	West Virginia.
Henry Lee Broun,		Virginia.
John Hodges Drake, Jr.,		Lee.
John Thomas Gregory,		Lauderdale.
William Lyman,		Shelby.
Edwin Conway Macartney,		Mobile.
Thomas Drake Samford, .		Lee.
Otis Oliver Smith,		Lee.

SECOND CLASS.

Thomas Jefferson Brooks,	•	•	Georgia.
Aaron Jason Burr,			Georgia.
Bolling Hall Crenshaw,			Butler.
Howard Grayson Crowder,			St. Clair.
Howard Staten Doster, .			Autauga.

Percival Lewis Dryer, Walter Davis Dunlap, Arthur St. Charles Dunstan, Pleasant Lee Hutchinson, Oscar Don Killebrew, Frank Phillips, Hugh McGehee Taylor, Paul Turner Vaughan, Frederick Henry Vernon,		Macon. Dallas. Shelby. Georgia: Dale. Florida. Lee. Dallas. Chambers.
Thomas Morgan Watlington,		Marengo.
THIRD CLASS.		
Benjamin Cheney Abernethy, Houston Franklin Cooper, George Woodhull Emory, William Francis Feagan, Daniel Gillis, William Groce Harrison, Robert Edward Daniel Irvin, Felix Hope Leslie, Frank Davis Milstead, Herbert Payne Robertson, William Walter Robinson, Dixon Hamilton Tharin, George Houston Waring,		Florida. Georgia. Lee. Bullock. Georgia. Talladega. Lee. Russell. Elmore. Lowndes. Tallapoosa. Georgia. Georgia.
James Fielden Wilkinson,		Dale.
FOURTH CLASS.		
Lawrence Earnest Baker, Harmon Benton, Frank Jarvis Bivins, James Albert Cox, Arthur Thomas Dudley, Beverly Franklin Harwood, Hendley Varner Kell, Frank Allemong Lupton, Wm. Audley Marshall,		Jefferson. Barbour. Georgia. Lee. Georgia. Perry. Georgia. Lee. Georgia.
Joseph Hardy Spence,	;	Talledega. Shelby.
OBODII LICAILO I UUACI,	•	OHCIDA.

CATALOGUE OF STUDENTS

FOR THE SESSION 1888-'89.

GRADUATE STUDENTS.

[Residence is Alabama when State is not named.]

NAME.]	RESIDENCE
George Fleming Broun, B. Sc.,		Lee.
John Hodges Drake, Jr., B. Sc.,		Lee.
John Thomas Gregory, B. Sc.,		Lauderdale.
Eugene Willis Harris, B. Sc.,		Lee.
Sterling Chambers Pitts, B. Sc.,		Russell.
Augustus Archilaus Persons, B. Sc., .		Lee.
Thomas Drake Samford, B. Sc.,		Lee.

UNDERGRADUATE STUDENTS.

FIRST CLASS.

Leslie Dallas Burdett,	Georgia.
Aaron Jason Burr,	Georgia.
John Robertson Clower,	Lee.
Edmund Collins Cochran,	Montgomery
Abednego Jackson Crawford,	Lee.
Bolling Hall Crenshaw,	Butler.
Arthur Campbell Crowder,	Jefferson.
Howard Grayson Crowder,	Jefferson.
Howard Staten Doster,	Autauga.
Percival Lewis Dryer,	Macon.
Arthur St. Clair Dunstan,	Virginia.
Pleasant Lee Hutchinson,	Georgia.
Oscar Don Killebrew,	Dale.
Andrew Manly Lloyd,	Lee.
William Lane Martin,	Jefferson.
M. Downer Pace,	Macon.

James Miles Quarles, A. B.,		Clay.
Thomas Alexander Ross,		Lee.
Edgar Johnson Spratling,	" .I=	Chambers.
Hugh McGehee Taylor,		Montgomery.
Paul Turner Vaughan,		Dallas.
Frederick Henry Vernon,		Chambers.
Thomas Morgan Watlington, .		Marengo.
Norman Rutherford Weaver		Dallas.

SECOND CLASS.

Benjamin Cheney Abernethy,	. Florida.
James William Bivins,	Lee.
Benjamin Wilbur Breedlove,	Macon.
Wilmer Calloway,	Montgomery
Edward Lawrence Chambliss,	Wilcox.
George Samuel Clark,	Montgomery
Walter Girard Cook,	Lowndes.
George Woodhull Emory,	Lee.
Stonewall Jackson Emory, .	· Lee.
Francis Maury Fontaine, Jr.,	Georgia.
Daniel Gillis,	Georgia.
William Groce Harrison,	Talladega.
Robert Edward Daniel Irvin,	Lee.
Hunter Allen Lang,	Jefferson,
Lionel Clarence Levy,	Georgia.
John Hammond Little,	Lee.
Francis Brooks Matthews,	Lee.
Wilmot Bivins Matthews,	Lee.
Frank Davis Milstead,	Elmore.
John Milton,	Florida.
Robert Ernest Noble,	Calhoun.
James Turner Persons,	Russell.
Reuben Hayne Poole,	Georgia.
Edward Clyde Powers,	Lee.
Edward Hill Pritchett,	Lowndes.
James Edward Ray,	Marshall.
Herbert Payne Robertson,	Lowndes.
Frank Ford Snedecor,	Jefferson.

Percy Willett Terry,
McKennie Thomas,
Thomas Chilton Thorington,
George Houston Waring,
William Cameron Weisinger,
James Fielder Wilkinson,
Joseph Archibald Williams.
Jefferson.
Jefferson.

THIRD CLASS.

Robert Sidney Adair, Lee. Lawrence Ernest Baker, . Jefferson. Lee. Paul Bedell, . . Harmon Benton, . . . Barbour. Thomas Jefferson Boyd,
Seaborn Jesse Buckel Lee. Seaborn Jesse Buckalew, Chambers. Edgar Duncan Burts, Georgia. James Albert Cox, . . . Lee. James Nathaniel Dean, . . Montgomery. John Christian Driver, Arthur Thomas Dudley, Perry. Georgia. Oscar Eberhart, Georgia. Walter Edward Fitzgerald, Georgia. Jackson Wise Gammill. Chambers. William Thomas Glass, Georgia. Charles Bowles Glenn. Lee. Douglas Francis Gordon, Louisiana. Benjamin Gillis Grant. William Hartman Hahr, Georgia. Dorian Hall, Lowndes. Clifford Le Roy Hare, Lee. Bryant Clower Harvey, Beverly Franklin Harwood, Perry. Belus Ephraim Hudson. Lee. Cadmus Newton Hughes, Walker. Fletcher Moore Hurt, . . Macon. Charles Cicero Johnson, Tallapoosa. John Allen Jones. Lee.

Hendley Varner Kell,						Georgia.
Raphael Semmes Kell, .					-	Georgia.
John Calvin Kimball, Jr.,					0.1	Georgia.
Thomas Dixson Lewis,						Butler.
Frank Allemong Lupton,	•		٠	W.		Lee.
Leonard LeBaron Lyons,						Mobile.
William Audley Marshall, .					٠.	Georgia.
LeRoy Boyd McCrory,				١.		Georgia.
Isaac Isaiah Moses,	4				. 0	Georgia.
Glenn McCulloh,						Lee.
William Henry Oates,						Mobile.
Richard Eugene Oden, .		•	4	٠		Louisiana.
Charles Joseph Owen,						Georgia.
Bryan Homer Powledge,						Lee.
Petit Reynolds,						Macon.
William Edwards Reynolds,			•		. '	Macon.
Dawson Sharman,		.				Lee.
James McCord Skelton, .						Jackson.
Robert Clanton Smith, .			٠			Chambers.
Joseph Hardie Spence, .			-			Talladega.
John McCullough Tharin,						Georgia.
William Augustus Thomas,		•				Chambers.
Jordan Emmett Thomason,						Randolph.
Layton Casey Tucker,				."		Lee.
Horace Turner,				6		Mobile.
Daniel Van Antwerp,						Mobile.
Garet Van Antwerp .*					.1	Mobile.
Clanton Ware Williams,					٠.	Montgomery.

FOURTH CLASS, SECTION A.

Archie Scruggs Averett,					Georgia.
Elbert Cathey Averyt,					Shelby.
Van Clifford Bailey,			77.		Marengo.
Charles Dunwoody Bassett,				. 4	Georgia.
William Wallace Bell, .	1.	,	1. 50		Georgia.
Leigh Stafford Boyd, .					Lee.
Charles Allen Brown,					Sumpter.
Robert Bruce Brovles,	. 0				Russell.

William Oze Broyles,	Russell.
Jacob Thomas Bullen,	Montgomery.
William Plumer Burgett,	Mobile.
Joseph Little Burr,	Georgia.
David Allston Connor,	South Carolina
Amos Hill Cox,	Lee.
Henry Benning Crawford, · · ·	Georgia.
George William Dantzler,	Lowndes.
Stanmore Holstun Darden, · · ·	Chambers.
Henry Ticknor DeBardenleben,	Jefferson.
George Mayo DeReamer,	Florida.
Henry Farris Dobbin,	Florida.
Joseph Quinlan Dowe, · · ·	Montgomery.
Alonzo Stanford Dudley,	Lee,
John Thomas Duncan,	Georgia.
Morton Everett Duson,	Louisiana.
Porter Campbell Flanagan,	Lee.
Charles McKendree Floyd, · · ·	Chambers.
James Edward Gachet,	Lee.
Albert Edward Gilbert,	Clay.
Raleigh Frederick Hare	Lee,
Paul Willis Harrison,	Georgia.
Samuel Pope Calaway Hatchett,	Georgia.
Walter Crafts Hazard, · · · ·	Calhoun.
Joseph Andrew Holifield,	Lee.
Arthur William Holstun,	Tallapoosa.
James Shep Hunt,	Jackson.
Clifton Arthur Jones,	Lee.
Harvey Ellis Jones, · · · ·	Mobile.
Byrd Beauregard Jordan, ·	Russell.
Benjamin Walter McCutchen,	Lee.
Duncan McDougald,	Georgia.
Alfred Huger Moses, Jr.,	Lauderdale,
Louie Sinclair Mumford,	Perry.
Leonidas Warren Payne,	Lee.
Frank Peabody,	Georgia.
Walter Evan Richards,	Chambers,
Harry. Stevens Chase Roberts,	Georgia.

Richard Louis Samford, Lee. Brittain Hunter Saunders, Lee. Forest Bedford Sledge, . Sumter. John Joseph Street, Tallapoosa. Archie Emmet Thomas, Coosa. Sheldon Lyne Toomer, . Lee. James Arthur Tucker, Lee. . Marengo. David Marshal Walker, . Georgia.
Montgomery. Martin DeWitt Waters. Thaddeus Clement Watts, Alfred Anderson Wellborn, Georgia. Richard Werner, . . Georgia. David Lewis Whetstone, . . . Elmore. Richard Law Williams, · Jefferson. Thomas Felton Wimberly, Lee. George De Kalb Winston, Lee. Porter Joshua Woodall, St. Clair. George Alfonzo Wright, . Lee.

FOURTH CLASS, SECTION B.

Robert Clarence Alexander, Autauga. Henry Augustus Andrews, · Hale. Richard Dejane Andrews. . Hale. William Becker, · Lee. Posey Party Brooks, Escambia. James Harris Burns, . Dallas. Harrison Keeler Deale, Mobile. David S. Flanagan, · Lee. Thomas Porter Flanagan, Lee. John David Foster, Lee. Crosland Clarence Hare, Lee. Joseph Andrew Herron, . Montgomery. Cassey Rex Hudson, Lee. Julius Cicero Hudson. . Lee. William Coates Hurt, Macon. William Driskell Kelley, · Dallas, Young Jackson, Elmore, Frank McLemore Moseley, . Montgomery.

22 AGRICULTURAL AND MECHANICAL COLLEGE.

Charles Carter Newman, William Collier Slaughter, Albert Ellington Thornton, Charles Lee Worrell,	
4 4	
SU	MMARY.
	7
Graduates,	24
First Class, Second Class,	. 35
Third Class,	57
	. 64
Fourth Class, Section A, Fourth Class, Section B,	22
Total,	209
NUMBER OF STUDENTS	IN EACH SUBJECT OF STUDY.
English, 180.	
History, · . 113	
French, 42	Natural History & Geology, 106

Physiology, .

Mechanic Arts,

Military Tactics,

Engineering,

Drawing,

34

24

137

121

190

45

59

10

19

181

92

German, .

Mental Science,

Mathematics,

Chemistry,

Political Economy,

Latin,

MILITARY ORGANIZATION.

1888-'89.

President.

WM. LEROY BROUN.

Commandant.

J. B. McDONALD, Lieut. 10th U. S. Cavalry.

Surgeon.

J. H. DRAKE, M. D.

Cadet Captains.

B. H. CRENSHAW.

H. M. TAYLOR. T. M. WATLINGTON.

Cadet 1st Lieut. and Adjutant.

P. T. VAUGHAN, JR.

Cadet 1st Lieut, and Quartermaster,

JOHN R. CLOWER.

Cadet 1st Lieutenants.

H. G. CROWDER,

F. H. VERNON. E. J. SPRATLING,

A. M. LLOYD, A. C. CROWDER,

A. J. BURR.

Cadet 2d Lieutenants.

T. A. ROSS, A. ST. C. DUNSTAN,

H. S. DOSTER.

Cadet Sergeant-Major.

T. C. THORINGTON.

Cadet Q. M. Sergeant,

R. E. NOBLE.

Cadet Corporals.

L. E. BAKER,

J. N. DEAN,

H. V. KELL,

F. A. LUPTON,

C. N. HUGHES,

B. F. HARWOOD,

W. A. MARSSHALL,

R. C. SMITH,

C. L. HARE.

R. S. KELL,

F. J. BIVINS,

T. D. LEWIS.

Cadet Color Sergeant. W. G. HARRISON.

Cadet 1st Sergeants.

F. D. MILSTEAD.

JOHN MILTON, JR. . B. C. ABERNETHY.

Cadet Sergeants.

F. M. FONTAINE, W. CALLOWAY,

G. H. WARING, JR.,

G. W. EMORY.

D. GILLIS,

J. W. BIVINS,

J. F. WILKINSON, W. C. WEISINGER,

W. G. COOK.

G. S. CLARK,

P. W. TERRY,

R. H. POOLE.

Cadet Color Corporals.

J. M. THARIN,

J. H. SPENCE,

W. H. OATES,

D. HALL,

C. B. GLENN.

REQUIREMENTS FOR ADMISSION.

Applicants for admisssion must be of good moral character. To enter the fourth class the applicant must be not less than fifteen years of age, and should be qualified to pass a satisfactory examination in the following subjects:

1. Geography and History of the United States.

2. English—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar and division into paragraphs.

3. Mathematics—(a) Arithmetic, including fundamental operations; common and decimal fractions; denominate numbers, the metric system; percentage, including interest and discount; proportion; extraction of square and cube

roots; (b) Algebra, to quadratic equations.

Those applicants who desire to continue the study of Latin in the Fourth class, should be qualified to pass a satisfactory examination in Latin grammar and the first books of Cæsar, in addition to the above subjects.

For admission to the higher classes, students should be prepared to stand a satisfactory examination on all the studies of the lower classes, as shown in the courses of study. Where opportunity has not been offered to pursue special studies required at this College, the system of equivalents will be adopted, and studies which denote an equivalent amount of discipline and training will be accepted as satisfactory.

ENTRANCE EXAMINATIONS:

Entrance examinations will be held on Wednesday the 11th of September, the day on which the session opens. Candidates will also be examined during the session, when application is made for admission.

Applicants who are not prepared to stand the entrance examinations for full admission to the fourth class, including those of fourteen years of age, are admitted to the subcollege department, which includes the fourth class, Sec. B.

They will be advanced to full admission to the fourth class when they are qualified to pass satisfactorily the required examinations.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week, and in all give twenty-seven exercises per week required.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the second class, and those over twenty one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty. Regular students who fail to pass satisfactory final examinations in any one study become special students.

They will be classed as regular students pursuing a course for a degree, whenever they can pass the examinations in

those subjects in which they were found deficient.

Students who are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greater number of studies, and their names are so placed in the catalogue.

COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences with their applications; Agriculture, Mechanics, Astronomy, Mathematics, Engineering, Drawing, English, French, German and Latin Languages, History, Political Economy, Mental and Moral Sciences.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the

active pursuits of life.

There are three Degree courses for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

I. COURSE IN CHEMISTRY AND AGRICULTURE.

II. COURSE IN MECHANICS AND ENGINEERING.

III. GENERAL COURSE.

There are also two partial courses, each requiring two years for its completion:

IV. Two YEARS' COURSE IN AGRICULTURE.

V. Two YEARS' COURSE IN MECHANIC ARTS.

Course I. includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II. includes the principles and applications of the sciences that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the

profession of engineering.

Course III. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses IV. and V. have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and take one of

the regular degree courses.

Students who complete either of these two year courses will, on passing a satisfactory examination, receive certifi-

cates indicating their attainments.

Those who have completed the general course in each department of the school of Mechanic Arts, and are qualified, can enter upon a more extended technical course in Mechanical Engineering.

PREPARATORY COURSE IN PHARMACY.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all their time in the laboratories of these departments, under the immediate direction of the professors. With the excellent facilities offered in the new chemical laboratory, scientific preparation of great value to the practical pharmacist can be obtained.

COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering, which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry—Assaying, Reduction of Ores, Mineralogy, Economic Geology, Mining Machinery, Drifting, Tunneling, Timbering, Ore Dressing, and the various opera-

tions connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering and Natural History.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this College, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work, are given in

the following departments:

I-CHEMISTRY.

II-Engineering, Field Work, Surveying, Etc.

III-AGRICULTURE.

IV-NATURAL HISTORY.

V-TECHNICAL DRAWING.

VI-MECHANIC ARTS.

I.—COURSE IN CHEMISTRY AND AGRICULTURE.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

First Term.	Second Term.	Third Term.
 English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill. 	 History. Mathematics. Elementary Physiology. Drawing. Mechanic Art Lab'y. 	5. English. 2. History. 6. Mathematics. 2. Agriculture. 3. Drawing. 3. Mechanic Art Lab'y. 3. Military Drill.

THIRD CLASS.

	First Term.	Second Term.	Third Term.
2. 5. 3. 3. 4. 2.	Drawing. Mechanic Art Lab'ry.	 English. History. Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'ry. Practical Agriculture. Military Drill. 	 English. Botany, (a). Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'ry. Practical Agriculture. Military Drill.

SECOND CLASS.

First Term.	Second Term.	Third Term.
 Natural History (lab'y) Military Tactics. Chemical Laboratory. 	 Physics. Industrial Chemistry. Agriculture. Natural History (lab'y). Military Tactics. Chemical Laboratory. Practical Agriculture. 	 English. Physics. Industrial Chemistry. Agriculture. Natural History (lab'y). Military Tactics.

FIRST CLASS.

	First Term.		Second Term.		Third Term.
2.]	English Literature.	2 .	Political Economy.	2.	Political Economy.
2. 1	Mental Science.		Moral Science.	2.	Moral Science.
2. 1	Physics.	2.	Astronomy.	2.	Astronomy.
4.]	Natural History.	4.	Natural History.	4.	Natural History.
2	Agriculture.	2.	Agriculture.	2.	Agriculture.
2.	Agricultural Chemistry	2.	Agricultural Chemistry	2.	Agricultural Chemistry.
1. 1	Military Science.	1.	Military Science.	1.	Military Science.
9.	Chemical Laboratory.	9.	Chemical Laboratory.	9.	Chemical Laboratory.
2.	Practical Agriculture.	2.	Practical Agriculture.	2.	Practical Agriculture.
					· ·

II.—COURSE IN	MECHANICS AND	D ENGINEERING.
The numerals opposit	e the subjects indicate the nu	mber of hours per week.
,	FOURTH CLASS.	
First Term.	Second Term.	Third Term.
. English.	5. English.	5. English.
. History.	2. History.	2. History.
. Mathematics.	5. Mathematics.	6. Mathematics.
. Elementary Physics.	3. El. Physiology.	2. Agriculture.
Drawing.	3. Drawing.	3. Drawing.
. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y
. Military Drill.	3. Military Drill.	3. Military Drill.
	THIRD CLASS.	
First Term.	Second Term.	Third Term.
. English.	3. English.	2. English.
. History.	2. History.	3. Botany.
. Mathematics.	5. Mathematics.	5. Mathematics.
General Chemistry.	· 3. General Chemistry.	3. General Chemistry.
. Agriculture (a).	3. Agriculture (a).	3. Agriculture (a).
Drawing.	3. Drawing.	3. Drawing.
Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y
3. Military Drill.	3. Military Drill.	3. Military Drill.

SECOND CLASS.

First Term.	Second Term.	Third Term.
3. English or French. 3. Physics.	3. English or French. 3. Physics.	3. English or French. 3. Physics.
5. Mathematics.	5. Mathematics.	5. Mathematics.
5. Engineering.5. Drawing.	5. Engineering.5. Drawing.	5. Engineering.5. Drawing.
1. Military Tactics.	1. Military Tactics.	1. Military Tactics.
 Lab'y, Mineralogy. Field Work, Engin'g. 	 Lab'y, Mineralogy. Field Work, Engin'g. 	 Field Work, Engin'g. Military Drill.
3. Military Drill.	3. Military Drill.	

FIRST CLASS.

First Term.	Second Term.	Third Term.
	•	.2. Political Economy (b).
2. Physics.	2. Astronomy.	2. Astronomy.
2. Natural History.	2. Natural History.	2. Natural History.
3. Mathematics.	3. Mathematics.	3. Mathematics.
5. Engineering.	5. Engineering.	5. Engineering.
5. Drawing.	5. Drawing.	5. Drawing.
 Military Science. Field Work, Engin'g. 	1. Military Science. Field Work, Engin'g.	1. Military Science. Field Work, Engin'g.
		, , ,

⁽b) For Eng. Lit. and Pol. Econ. may be substituted French or German.

III.—GENERAL COURSE.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

First Term.	Second Term.	Third Term.
 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Agriculture. Mechanic Arts. Military Drill.

THIRD CLASS.

First Term.	Second Term.	Third Term.
 Latin. History. Mathematics. 	 Latin. History. Mathematics. 	5. Latin.3. Botany.5. Mathematics.
3. General Chemistry. 3. Drawing. 6. Mechanic Art Lab'y.	 General Chemistry. Drawing. Mechanic Art Lab'y. Military Drill. 	 General Chemistry. Drawing. Mechanic Art Lab'y. Military Drill.
3. Military Drill.	SECOND CLASS.	
First Term.	Second Term.	Third Term.

T. 010	L LCI III.	2000100 2071100	
3. English.	3.	English.	3. English.
3. Physics.	3.	Physics.	3. Physics.
3. Mathema	atics. 3.	Mathematics.	3. Mathematics.
3. French.		French.	3. French.
3. Latin.	3.	Latin.	3. Latin.
2. German.	2.	German.	2. German.
1. Military		Military Tactics.	1. Military Tactics.
		Laboratory Work (a).	6. Laboratory Work (a).
3. Military		Military Drill.	3. Military Drill.

FIRST CLASS.

Second Term.	Third Term.
 Political Economy. Moral Science. Astronomy. Natural History. French. German. Latin. Military Science. 	 Political Economy. Moral Science. Astronomy. Natural History. French. German. Latin. Military Science. English Thesis.
	 Political Economy. Moral Science. Astronomy. Natural History. French. German. Latin.

⁽a) The student may elect the Laboratory of Chemistry, Natural History or Mechanic Arts.

IV.—TWO YEARS' COURSE IN MECHANIC ARTS.

FIRST YEAR.

First Term.	Second Term.	Third Term.	
5. English.	5. English.	5: English.	
2. History.		2. History.	
5. Mathematics.	5. Mathematics.	6. Mathematics.	
3. Elementary Physics.	3. Elementary Physiology	2. Agriculture.	
3. Drawing.		3. Drawing.	
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	
3. Military Drill.		3. Military Drill.	
	CROWN WELD		

SECOND YEAR. Second Term.

a	First Term.		Second Term.		Third Term.
3.	English.	3.	English.	. 3.	English.
5.	Mathematics.	5.	Mathematics.	5.	Mathematics.
- 3.	Physics.	3.	Physics.	3.	Physics.
3.	Drawing.	3.	Drawing.	3.	Drawing.
12.	Mechanic Art Lab'y.	12.	Mechanic Art Lab'y	. 12.	Mechanic Art Lab'y.
3	Military Drill.	3.	Military Drill.	3.	Military Drill.

V.—TWO YEARS' COURSE IN AGRICULTURE.

FIRST YEAR.

First Term.	Second Term.	Third Term.
5. English.	5. English.	5. English.
2. History.	2. History.	2. History.
5. Mathematics.	5. Mathematics.	6. Mathematics.
3. Elementary Physics.	3. Elementary Physiology	2. Agriculture.
3. Drawing.	3. Drawing.	3. Drawing.
4. Mechanic Art Lab'y.	4. Mechanic Art Lab'y.	4. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
2. Practical Agriculture.	2. Practical Agriculture.	2. Practical Agriculture.

SECOND YEAR.

	First Term.		Second Term.	1	Third Term.
3.	English.	3.	English.	3.	English.
5.	Mathematics.	5.	Mathematics.		Mathematics.
	General Chemistry.	8.	General Chemistry.		General Chemistry.
	Agriculture.	5.	Agriculture.	5.	Agriculture.
12.	Practical Agriculture.	12.	Practical Agriculture.	12.	Practical Agriculture
3.	Military Drill.	3.	Military Drill.		Military Drill.

DEPARTMENTS OF INSTRUCTION.

PHYSICS AND ASTRONOMY.

PRESIDENT BROUN.

The instruction is given by recitations from text-books and lectures, illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics, treated graphically.

This is followed by a full discussion of Molecular Mechanics; while due prominence is given to principles, frequent

reference is made to the applications of science.

The studies of the second class include the properties of matter, units of measure, force, work, energy, kinematics, kinetics, mechanic powers, friction, pendulum, molecular forces of solids, liquids and gases, theory of undulations, heat, electricity, magnetism, etc.

The studies of the first class include Electricity and its

applications; Optics, Astronomy and Meteorology.

TEXT-BOOKS.—In Physics, Atkinson's Ganot. In Astronomy, White and Young.

MATHEMATICS.

PROF. SMITH.

The general course for the first two years embraces the first year, Algebra and Geometry, six books; second year, Solid Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration.

Two objects are sought to be attained: First, mental discipline. Second, a thorough knowledge of the principles of

pure mathematics and their practical applications.

Theoretical and practical instruction is given in the third class in farm, town and government land surveying, dividing land, mapping, plotting and computing of areas, etc.; also in the theory, adjustment and use of instruments.

The class, in sections of six or eight, devote three afternoons a week during the second and third terms to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvi-

linear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering course. Analytical Geometry, Descriptive Geometry and Calculus are pursued in the Engineering course. Especial attention is given to their practical applications.

During the entire course, instruction in text-books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with

the application of principles and formulæ.

TEXT-BOOKS.

Wentworth's Algebra, Wentworth's Geometry, Schuyler's Surveying, Wentworth's Analytical Geometry, Waldo's Descriptive Geometry, Taylor's Calculus, Olney's and Wentworth's Trigonometry.

NATURAL HISTORY AND GEOLOGY.

PROF. MELL.

Geology.—This subject is studied in the senior class, and extends through the entire session. Special attention is given to the geology of Alabama, and many illustrations are drawn from the coal and iron fields, and other natural deposits of mineral in the State. The origin of ore deposits, mineral springs, and geological relations of soils are carefully studied.

There is also a course of advanced work in practical Geology for the post-graduate students. This subject is pursued by applicants for degrees of Master of Science and Mining Engineering.

The second class in Engineering spend two terms in Mineralogy and blow-pipe work.

Botany.—The students of the third class begin the study

of Botany the first of March and continue it through the session. Analytical work is made an important feature. This class is provided with plants from the neighboring fields, and taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section. All students of the third class are required to study Botany.

In the second class, in the course of Chemistry and Agriculture, an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope in the preparation of specimens showing plant structure; this work is not only sufficient to familiarize the students with the methods of plant building and cellular organization, but also to practise them in detecting the various forms of fungi that are injurious to fruits and vegetables. Excellent microscopes of the most improved patterns, and all the necessary chemicals and apparatus for preparing and mounting vegetable tissues, are used by the students. A dark room is attached to this laboratory for micro-photographic work.

TEXT-BOOKS.

Le Conte's Geology, Bessey's Botany, Apgar's Plant Analysis, Gray's Botany, Plant Dissection (Arthur, Barns and Coulter.)

ALABAMA WEATHER SERVICE.

The United States Signal Service has established in Alabama a State system for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered thoughout the State. An opportunity is thus offered the students in Meteorology of becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

PROFESSOR LANE.

CIVIL ENGINEERING.

The special studies of this department begin in the sec ond class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics. They are as follows:

Second Class.—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, location and construction of common roads and railroads.

First Class.—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars and their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings; solid and open built beams; classification, construction and mechanics of masonry; foundations on land and in water; bridges and roofs of different kinds; their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads; navigable, irrigation and drainage canals; river and sea-coast improvements. Theory and practice are combined in both classes.

TEXT-BOOKS.

Second Class.—Henck's Field Book for Railway Engineers, Gillespie's Roads and Railroads, Parson's Track.

First Class.—Wheeler's Civil Engineering, Von Ott's Graphic Statics.

DRAWING.

All of the students of the third and fourth classes are required to take Drawing; but only the students in Mechanics and Engineering in the first and second classes.

The fourth class is taught linear and free-hand drawing.

The third class is instructed in the principles of orthographic and isometric projections, shades and shadows, practical perspective and tinting. In the second class the instruction embraces a more extended course in orthographic and isometric drawing, perspective, shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings and blue prints. The first class makes topographical drawings, and drawings of machines, roofs, bridges, etc., to different scales and blue prints. Plans, profiles and sections of railroad surveys complete the instruction in this department.

TEXT-BOOKS.

Fourth Class.—Thorne's Junior Course in Mechanical Drawing, and Davidson's Model Drawing.

Third Class.—Davidson's Projections, Davidson's Practical Perspec-

tive, Keuffel & Esser's Alphabet.

Second Class.—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the College, Keuffel & Esser's Alphabet.

First Class.-French, English and American Plates belonging to the

College, Keuffell & Esser's Alphabet.

AGRICULTURE.

PROF. NEWMAN.

The course of instruction in this department embraces, I. soils II. plants; III. domestic animals. In the fourth class twenty lectures, covering the third term of the session, treat of soils, their classification, physical defects and remedies, causes of diminished fertility, and the means used to protect them from waste and restore fertility, the theory and practice of surface and sub-drainage, etc. The subject is treated with special reference to the different classes of soil in Alabama, omitting as far as possible questions involving a knowledge of Chemistry and Botany—subjects not taught in the fourth class.

In the third class, in addition to the discussion of the physical properties and mechanical treatment of soils, the methods of studying their chemical defects and their remedies are discussed. The sources of the important elements of plant food, and their use upon different soils and plants, the restoration of humus, saving home manures, composts, commercial fertilizers, the office of different chemical elements in plant development—the relations of plant growth to soil and atmosphere, the theory and practice of restoration of crops, terracing and grading to prevent washing, plows and plowing—indeed everything connected with tilling the soil passes under review as foundation work.

Southern agriculture is then treated in the concrete—the history, nature and cultivation of each of our field crops discussed as regards their adaptation to and treatment upon the soils of Alabama. This occupies the first and second terms. The third term is devoted to domestic and commercial horticulture, poultry, sheep, cattle-breeding and management of the dairy, etc. In the second class stockbreeding and management is completed, and a thorough course in pomology, including the propagation of nursery stock, planting, manuring, pruning, cultivating, harvesting and marketing every species of fruit, treated theoretically and practically, occupies the remainder of the session, Barry's Fruit Garden, corrected for our latitude, is used in this class. In the senior class a series of lectures is delivered upon political economy in its special relations to the pursuit of agriculture, and the relations of capital and labor devoted to agriculture; the selection, purchase, equipment and management of a farm, the ratio between fixed and working capital, the employment and management of labor, etc., etc. The science of cattle feeding occupies the second term, and landscape gardening, treated with special reference to the improvement of country homes, occupies the remainder of the session.

CHEMISTRY.

PROF. LUPTON. ASSISTANT, L. W. WILKINSON.

Instruction in this department embraces—
1. A course of lectures in General Chemistry.

- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each course of lectures, for the practice of chemical analysis and chemical research.
- 1. Course in General Chemistry: This consists of a series of lectures (three per week) extending throughout the entire session, and includes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements, with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

REFERENCE BOOKS.

Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cook's Chemical Philosophy, Chemical Journals.

2. The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures to the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, heating, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

REFERENCE BOOKS.

Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology, Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week) and includes a thorough discussion of the

origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock and the various operations carried on by the intelligent and successful agriculturist.

BOOKS OF REFERENCE.

Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Departments and Stations.

4. The Course of Systematic Laboratory Work: This course of practical work in the Laboratory is carried on in connection with each course of lectures, and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The Laboratories, which are open from 9 a. m. to 5 p. m. during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the Chemical Laboratory is furnished with a work table, a set of re-agent bottles, and the common re-agents and apparatus used in qualitative and quantitative analysis. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

BOOKS USED.

In Qualitative Analysis—Jones, Fresenius, Plattner.
In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying.
In Agricultural Chemical Analysis—Church, Frankland. Official methods of the Association of Agricultural Chemists.

CHEMICAL LABORATORY.

(For description of the building, see page 11.)

The Chemical Apparatus recently purchased for the new laboratory consists of a full supply of the latest and most approved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to first-class Laboratories, a new and improved Schmidt and Hænsch's Polariscope has been imported, two short-arm Becker Balances of latest pattern, Bunsen Spectroscope, Zeiss' Microscope, and other instruments for delicate and accurate work.

ENGLISH AND LATIN.

PROF. THACH.

ENGLISH.

In this department the students are carried through a systematic course of study in the English Language and literature. In the courses of study which do not include the ancient classics, a full course in English is especially important. It is therefore designed, as much as the time allotted permits, to familiarize these students by frequent exercises with the standard authors of the language.

The course of study is as follows:

Fourth Class.—Five hours a week; study of grammar, the principles of special and general composition, with frequent brief papers illustrating the laws studied.

Whitney's Essentials, Lockwood's Lessons in Rhetoric.

Third Class.—Three hours a week; study of style, analysis of selections of prose and poetry, frequent essays on literary and historic themes.

Genung's Rhetoric, Scudder's American Poems, Abbott's How to Write Clearly. Weekly exercises in declamation are required of this class.

Second Class.—Three hours a week; critical study of English Classics, History of English and American Literature, Logic, Essays. Shaws's History of English Literature, Abbott's English Lessons, Hale's Longer English Poems.

First Class.—Two hours a week, first term. Principles of criticism and study of English Classics; second and third terms, Political Economy. Two hours a week, first and second terms, Mental Science; third term, Moral Science.

Shakespeare's Plays, Chaucer's Canterbury Tales, Wayland's Science of Wealth, Hickok's Mental Science, Gregory's Christian Ethics.

Three original orations are required during the year of each student in the first and second classes.

LATIN.

The subjects taught in this department are the Latin

Language and Literature.

The modes of instruction are by translation from the Latin texts into English and from English into Latin. The constant use of black-boards adds much to the progress and accuracy of the student.

A systematic course of exercises, illustrative of the principles of Latin etymology and syntax, is carried on in connection with the reading of the authors prescribed. Special attention is given to English derivatives from the Latin, and to the corresponding idioms of the two languages.

The progress of the student is valued not so much by the number of books read, as by his ability to read Latin and explain the principles of interpretation and construction.

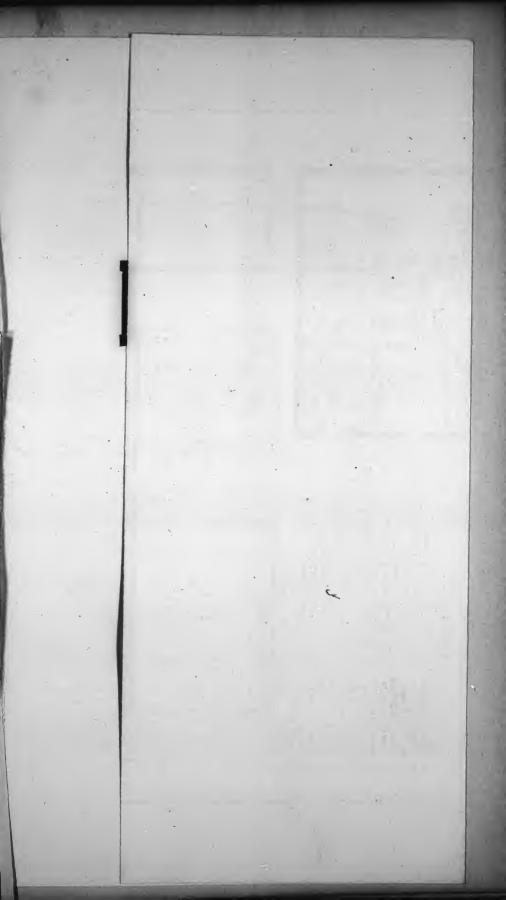
Latin authors read:

Fourth Class.—Virgil, Cicero's Orations, Grammar and Composition.

Third Class.—Cicero, Composition.

Second Class.—Tacitus, Horace, Selections from Latin poets and Prose writers, Classical Literature.

First Class.—Cicero's Tusculan Disputations, Terence, History of Latin Literature.





ALA. POLY. INST.

BCALE 16-1'

INDEX

A WORKBENCHES

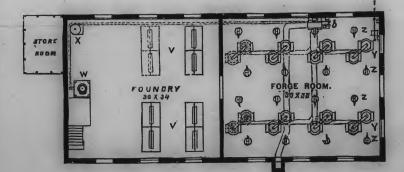
B BAND SAW
C BGROLL SAW
D PATTERN LATHS
C CIRCULAR SAW
F CRINDSTONE
G BUZZ-PLANER
J DRILL PRESS
K EILING BENCHES
L ENGINE E WOOD LATHES
L ENGINE LATHES
M BENCH GRINDER
N TOOL
TOOL
TOOL
G BUZZ-PLANER
J DRILL PRESS
K EILING BENCHES
C HEATER
M BENCH GRINDER
N TOOL
TOOL
G BOILER
G CLOSETS
G PLANER
G SINKS

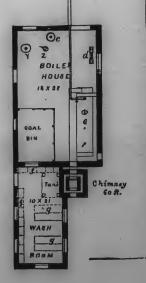
SHAFT LINES

MACHINE ROOM.
WSX48

ROOM

8







MECHANIC ART.

G. H. BRYANT, B. S., INSTRUCTOR.

J. J. WILMORE, B. A. BLAKEY, ASSISTANTS.

The course in Manual Training covers three years, as follows: First year, wood-working—carpentry and turning; second year, pattern-making and foundry and forge work—moulding, casting and smithing; third year, machine shop—chipping and filing and machine work in metals.

This course is obligatory upon the students of the three lower classes (5th, 4th and 3d). For satisfactory reasons a student may be excused from this laboratory work by the Faculty.

The full work of each class is six hours per week, in three exercises of two hours each.

The power for running the apparatus in this department is derived from a twenty-five horse-power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler. A steam pump and a heater for the feed water form a part of the steam apparatus. For the steam plant a substantial brick boiler-house and chimney have been erected.

The equipment for the wood-working shop comprises the following: 20 double wood-working benches, each with complete set of carpenter's tools; 20 turning-laths, 10-inch swing, each with complete set of tools; I double circular saw; I band saw; I board-planing machine; I buzz planer; 2 scroll saws (power); I large pattern-maker's lathe, 16-inch swing; I 36-inch grindstone. In addition to these, the tool-room is supplied with a variety of extra hand-tools for special work.

The equipment for the foundry consists of moulding-benches for 12 students, each supplied with a complete set of moulder's tools; a 14-inch cupola, with all modern improvements, capable of melting 1,000 pounds of iron per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of crucible tongs, etc. Also a full supply of ladles, large and small moulding flasks, special tools, etc.

The forge shop equipment consists of 12 hand-forges of new pattern, each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola), and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke-flues and forces it out through the chimney.

The machine tools in the machine department are as follows: 6 engine-lathes (screw-cutting) 14-inch swing, 6-foot bed; 2 engine-lathes 16-inch swing (one with taper attachment); I speed lathe, 10-inch swing; I 20-inch drill-press (power feed); I 15-inch shaper; I 22-inch x 22-inch x 5-foot friction planer; I universal milling machine; I corundum toolgrinder (14-inch wheel); I bench grinding-machine (small); I post drill press (14 inch). A part of this room is set apart for vise-work—chipping and filing—and benches for 12 students are provided, each with vise and sets of files, chisels, hammers, etc. In the tool-room is to be found a good supply of machinists' tools for general shop use, such as lathe and drill chucks, drills, reamers, taps, dies, gauges, files, cutting and measuring tools, and special appliances for machine work, etc.

The nature of the work in each department is as follows:

1ST YEAR.

I. A course of carpentry (hand work covering the first

term and part of the second, or about five months.)

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, etc., different kinds of joints—timber-splices, cross joints, mortice and tenon, mitre and frame work, dovetail work comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof-trusses, etc.

II. A course in turning extending through the three months of the third term. The lessons comprise, first nature and use of lathe and tools, plain straight turning, caliper work to different diameters and lengths, simple and compound curves, screw-plate and chuck-work, hollow and

spherical turning.

2D YEAR.

I. A course in pattern-making, covering the first half of the first term. The work includes a variety of examples of whole and split patterns, core work, etc., giving the students familiarity with the use of patterns for general moulding.

II. A course in moulding and casting in iron and brass occupying ten weeks. The work consists for the most part of small articles, such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two-part flasks; core work is also given, and some three-part flask and some dry sand work is introduced.

The same patterns which have been previously made by students are used, besides special patterns for occasional larger or more complicated work. Instruction and practice is given in working the cupola, each student in turn taking charge of a melting.

III. A course in forge work in iron and steel occupying the remainder of the year. The lessons are arranged so that the students, in making the series of objects, become familiar with the nature of the metals and the successive steps in working them by hand into simple and complex forms, as drawing, upsetting, bending, cutting, punching, welding by various methods, tool-forging, tempering, hardening, etc.

In connection with this second year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel, brass, etc.

3D YEAR.

I. A course in chipping and filing covering the first term. The lessons comprise work on cast and wrought iron: Chipping to line on flat and curved surfaces, key-seating, etc.; filing and finishing to line (straight and curved), surface filing and finishing, fitting, slotting, dovetail work, sliding and tight fits, sawing, pin, screw and key filing, surface finishing with scraper, etc.

II. Machine work occupying the remainder of the year. The work includes cast and wrought iron, steel and brass: Turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling—both in lathe and drill press—reaming, boring, screw cutting in lathe and with taps and dies, planing, slotting, etc., with planer and shaper, milling various forms with the milling machine, fitting, grinding, polishing, etc.

Lectures are also given during the year on various subjects connected with machine work in metals: Such as forms,

construction and use of the various machines, cutting tools, gearing, gauges, screw threads, etc. During the last term some piece of construction work is given the classes.

Instruction is generally given, first, by black-board drawings or sketches which the student copies, with dimensions in note-book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class; second by inspection and

direction at the bench by the instructor,

Students desiring to pursue the study of applied mechanics beyond the above course will take a special course of Steam and Mill Engineering, supplemented by experiment and practice with the apparatus, including steam generation and the forms, construction and use of steam-boilers and accompanying apparatus; steam as a motive power, and forms, construction and use of the steam engine, with the study and use of the indicator; transmission of power—shafting, belting, gearing, etc.; also elementary theoretical mechanism.

MODERN LANGUAGES AND HISTORY.

GEORGE PETRIE, ADJUNCT PROFESSOR.

MODERN LANGUAGES.

The following regular courses are given in French and German:

French.—First year: Three recitations a week. During this year the principal object is to acquire facility in reading ordinary French at sight; and to this end, the student starts reading at an early stage and is practiced continually in sight

reading and in previously assigned selections.

Second year: Three recitations a week. During this year more difficult and varied French is read, and careful instruction is given upon the laws of grammar and the construction of the language, while the principles thus learned are illustrated and impressed by frequent exercises in rendering English into French.

German.—Two years: Two recitations a week the first year, three a week the second year. In this course the aim and the methods are similar to those in the French.

Special Courses.—In addition to these regular courses, additional classes are formed for special study of the literature, or for special study in any particular direction desired, when the number of students desiring it is sufficient.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that History is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. This causal relation of events is closely studied and the students are taught to investigate for themselves the growth of ideas, and to trace particularly their development in the United States, so as to acquire a practical knowledge of the history and present working of our government and institutions. The knowledge acquired is rendered clear and permanent by frequent comparisons of customs and laws, and also by diagrams, charts and maps. Instruction is given by lectures and text-books, while investigation is stimulated by requiring essays and by holding frequent discussions in the class-room.

The course covers one year and a part of the next, and embraces the history of the United States, studies on our government and its institutions and on general history.

MILITARY SCIENCE AND TACTICS.

LIEUT. J. B. MCDONALD, U. S. ARMY, COMMANDANT.

Military Science and Tactics are required to be taught in this institution by law. This law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms. practical instruction in the School of the Soldier, of the Company and of the Battalion; also in Guard Mountings, Inspections, Dress Parades, Reviews, etc. Under Section 1225 U.S. Revised Statutes, the College is provided with modern Cadet rifles and accourrements and two pieces of field artillery. Ammunition for practice firing is used under the direction of an experienced officer.

The following uniform of standard Cadet gray cloth has been prescribed for dress, viz: Coats and pants as worn at West Point, with sack coat for fatigue, dark blue Cadet cap.

A very neat and serviceable uniform can be obtained here at \$18. This is less expensive than the fisual clothing. All students are required to wear this uniform during the session.

The drills are short and the military duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the Cadet are manifest.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, two 1st Lieutenants, one 2d Lieutenant, and with a proper number of Sergeants and Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are conferred by the President on nomination of the Commandant.

Privates of the first class may be excused by the Faculty

from all military drill,

The first and second classes recite once a week in Military Tactics.

POST-GRADUATE DEGREES.

There are three Post-Graduate Degrees—MASTER OF SCIENCE, MINING ENGINEER and CIVIL ENGINEER.

A Post-Graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one year's residence at the College, spent in the successful prosecution of a course of study in applied science prescribed by the Faculty.

Candidates must also present to the Faculty a satisfactory thesis, showing independent investigation upon some subject

pertaining to their course of study, and must pass a satisfactory examination on the course of study prescribed. The examination is written and oral in presence of the Faculty.

Applicants for Post-Graduate Degree are by order of the Board, permitted to matriculate without payment of fees, except laboratory fees for those who work in the chemical laboratory.

They are subject to the general regulations as other students, but exempt from all military duty.

Resident graduates, who are not candidates for a degree, are permitted to matriculate and prosecute the studies in any department of the College, except chemical laboratory, without payment of regular fees.

DISTINCTIONS.

Distinctions will be awarded in the different subjects of each class to those students whose grade for the entire year is above 90 per cent., and who have satisfactorily passed all the regular examinations of that session.

Certificates of Distinction are awarded in public on Commencement day to those who obtain three Distinctions. For the first class four Distinctions are required.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction. in a form adapted to permanent preservation.

From the record a monthly circular, or statement, is sent to the parent or guardian.

EXAMINATIONS.

Written recitations, or monthly examinations on the studies of the month, are held at the option of the professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final

4

examination, can be promoted to full standing to the next higher class only on satisfactory examinations at the open-

ing of the next session.

It is required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examination, except in extreme cases.

Examinations for degrees or certificates of proficiency em-

brace the entire subject of study in the course.

LIBRARY.

A temporary room is appropriated to the Library until the completion of the College building, but the number of books at present is not large. Additions are made annually.

The Library is open at stated times, when students are permitted to select books according to regulations prescribed by the Faculty.

DISCIPLINE.

The government of the College is administered by the President and Faculty in accordance with the code of laws and regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, is required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

RELIGIOUS SERVICE.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings, exerts a wholesome Christian influence among the students of the College.

The following students are the officers of the Association:

G. S. Clark, President.

W. G. Harrison, Vice-President.

J. F. Wilkinson, Recording Secretary.

J. W. Bivins, Corresponding Secretary.

H. M. Taylor, Treasurer.

LOCATION.

The College is situated in the town of Auburn, sixty miles east of Montgomery, directly on the line of the Western Railroad.

The region is high and healthful, noted for its general good health and entire freedom from malaria, having an elevation of eight hundred and twenty-one feet above tide-water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

THESIS.

Each applicant for a reular degree is required to write and submit to the Faculty a thesis on a subject of immediate relation to some study of his course, and deliver the same at Commencement, if required by the Faculty.

This thesis must be given to the professor of English by the first day of May.

LITERARY SOCIETY.

There are two Literary Societies—the Wirt and Websterian—connected with the College.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

EXERCISES IN ELOCUTION.

On every Saturday morning, immediately after chapel services, oratorical exercises in declamation and in original orations are conducted by the Professor of English, in presence of the faculty and students.

The first and second terms the students of the third class are

exercised in declamation.

The second term the members of the second class deliver original orations.

The third term the members of the first class read essays or deliver original orations.

SOCIETY OF THE ALUMNI.

The Annual Alumni Oration, by a member of the Society, is delivered in the chapel during Commencement week. The following are the officers of the Society:

T. H. Frazer, M. D., President.

J. C. Street, Vice-President.

C. C. Thach, Treasurer and Secretary.

The Alumni Oration will be delivered next Commencement by J. E. D. Shipp, of Georgia.

BOARDING.

The College has no barracks or dormitories, and the students board with the families of the town of Auburn, and thus enjoy all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of order.

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President.

EXPENSES.

Incidental fee, per half session\$2 50

Library fee, per half session\$1	00
Surgeon's fee, per half session 2	50
Board per month, with fuel and lights	00

These fees are payable, \$6.00 on matriculation and \$6.00 on February 1st. By order of the Board no fees can be remitted.

There is no charge for tuition.

The surgeon is required to visit daily the cadets reported sick, and to give all requisite medical attendance without other charge than the regular surgeon's fee.

By messing the cost of board has been reduced by a few students to \$8.50 per month. For students entering after January 1st, the fees for half session only are required.

CONTINGENT FEE.

A contingent fee of five dollars is required, to be deposited by each student on matriculation, to cover any special or general damages to College property for which he may be liable.

At the close of the session the whole of the contingent fee, or the unexpended balance, will be refunded to the student.

AMOUNT OF DEPOSIT.

Each student on entering College should deposit with the Treasurer not less than \$50.00 to pay the expenses of fees, one month's board, uniform, books, etc.

FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the Treasurer of the College all funds desired for sons or wards, whether for regular charges of College fees and board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., when approved.

When funds are deposited, checks are drawn on the Treasurer of the College by the cadet to pay his necessary ex-

penses. These checks are paid only when approved by the President. This approval is given only for necessary expenses, as stated in the catalogue, unless specially requested in writing by the parent.

The attention of parents is called to the following law enacted by the Trustees:

When a student matriculates, all money required to pay the College fees, and all other moneys in his possession, must be deposited with the Treasurer, unless the President shall receive special instruction from the parent or guardian to the contrary.

ACADEMIC YEAR.

The Academic Year commences on Wednesday, 11th September, (second Wednesday after first Monday) and ends on the second Wednesday after the first Monday in June following, 11th, which is Commencement day.

It is divided into three terms. The first term extends from the opening of the session to the last week in December; the second term begins January 1st and ends March 29th; the third term continues from March 31st to the close of the session.

RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the Trustees:

That in view of increased facilities for instruction in Agriculture and the technical departments of education now possessed by this College, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the Faculty are authorized, in addition to the legal name of this College, to print on the catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the course of education now provided for.

DONATIONS TO MUSEUM.

Valuable contributions have been made to the museum by the following persons:

Mr. Albert Strassberger, of Montgomery, Alabama, a large collection of minerals, woods and manufactured products, representing the natural resources of Alabama.

Messrs. Kaldenberg & Co., of New York, beautiful polished specimens of amber containing fossil insects, and a fine piece of ivory representing cross section of a tusk.

Dr. Remus Persons, of the United States Navy, valuable collections of crystalized minerals from the neigborhood of Hot Springs, Arkansas, bitumen, infusorial earth and well preserved specimens of reptiles and other animals.

Dr. Charles Mohr, of Mobile, Alabama, several hundred specimens of woods, representing a large number of species of Alabama growth.

Mr. James Clayton, of Auburn, also a fine collection of Alabama woods.

The Smithsonian Institute, 225 species of the lower forms of invertebrates prepared for class study.

United States Department of Agriculture, a fine collection of well pressed and mounted grasses and other plants from different quarters of the United States.

Mr. James Postell, of St. Simon's Island, Georgia, has donated to the museum his excellent collection of shells and fossils representing about 1,000 species. This collection has not yet been received, but it will be shipped as soon as the cases are ready to preserve the specimens.

Small donations have been received from the following persons:

Mr. J. H. Dunstan, of Virginia, gold ores and jasper from South America.

Mr. W. D. Taylor, of Birmingham.

Rev. P. C. Morton, of Tuskegee.

Mr. Fontaine Broun, of West Virginia.

Dr. George D. Norris, of New Market, Alabama.

Mr. V. M. Fleming, of Virginia.

Mr. Howard Lamar, of Atlanta, Georgia.

A number of the students now in the institution have contributed specimens.

DONATIONS TO LIBRARY.

Secretary of the Interior, Census of 1880, Report of Chief of Engineers, Coast and Geodetic Survey, Education, etc., 64 vols.

Hon. Jno. T. Morgan, Public Document, 6 vols.

Hon. James L. Pugh, Public Document, 8 vols.

Hon. W. C. Oates, War of the Rebellion, Congressional Record, etc., 8 vols.

Hon. N. H. R. Dawson, Reports on Education, Pamphlets, etc., 9 vols.

CALENDAR, 1889-90.

Session begins	Wednesday, Sept. 11, 1889.
Examination for admission	Wednesday, Sept. 11, 1889.
First term begins	
First term ends	
Second term begins	
Second term ends	
Third term begins	
Third class exercises	Thursday, May 1, 1800-
Final examinations begin	Monday, May 19, 1890
Commencement sermon	Sunday, June 8, 1890
Annual meeting of trustees	Monday, June 9, 1890.
Celebration of Literary societies, 8 p. m	Monday, June 9, 1890.
Second class celebration	Tuesday, June 10, 1890.
Alumni oration	Tuesday, June 10, 1890
Address before Literary societies	
	June 10, 1890.
Commencement day	

Agricultural Experiment Station

AGRICULTURAL AND MECHANICAL COLLEGE OF ALABAMA.



Agricultural Experiment Station.

BOARD OF VISITORS.

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION:

Hon. J. G. GILCHRIST, Hon. R. F. Ligon, Hon. J. B. MITCHELL.

BOARD OF DIRECTION-OFFICERS OF THE STATION:

W. L. BROUN	President.
J. S. NEWMAN	
N. T. LUPTON	Vice-Director and Chemist.
†P. H. MELL	Botanist.
	Biologist.

AS	SSISTANTS:
ISAAC Ross, First Asssistant and Dairy.	Agriculturist in charge of Live Stock
JAMES CLAYTON	Second Assistant Agriculturist.
J. T. ANDERSON, PH. D	First Assistant Chemist.
L. W. WILKINSON, M. Sc	Second Assistant Chemist.
P. L. HUTCHINSON	Third Assistant Chemist.
T. D. SAMFORD, B. Sc	Assistant Botanist.
L. W. WILKINSON, M. Sc P. L. HUTCHINSON	Second Assistant Chemist.

†Prof. Mell has also charge of Meteorological Observations.

THE HATCH ACT.

An Act to establish agricultural experiment stations in connection with the colleges established in the several States, under the provisions of an act approved July second, eighteen hundred and sixty-

two, and of the acts supplementary thereto.

Be it enacted in the Senate and House of Representatives of the United States of America in Congress assembled, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges or agricultural department of colleges in each State or Territory established, or which may hereafter be established, in accordance with the provisions of an act approved July second, eighteen hundred and sixty-two, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," or any of the supplements to said act, a department to be known and designated as an "agricultural experiment station:" Provided, that in any State or Territory in which two such colleges have been or may be so established, the appropriation hereinafter made to such States or Territory shall be equally divided between such colleges, unless the Legislature of such State or Territory shall otherwise direct,

SEC. 2. That it shall be the object and duty of said experiment stations to conduct original researches, or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops, the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaption and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiements bearing directly on the agricultural industry of the United States as may in each case be deemed advisa-

ble, having due regard to the varying conditions and needs of the respective States or Territories.

SEC. 3. That in order to secure, as far as practicable, uniformity of methods and results in the work of said stations, it shall be the duty of the United States Commissioner of Agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate from time to time, such lines of inquiry as to him shall seem most important; and, in general, to furnish such advice and assistance as will best promote the purposes of this act. It shall be the duty of each of said stations, annually, on or before the first day of Feburary, to make to the governor of the State or Territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the said Commissioner of Agriculture, and to the Secretary of the Treasury of the United States.

SEC. 4. That bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the States and Territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports and the annual reports of said stations shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the Postmaster General may from time to time prescribe.

SEC. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results as hereinbefore prescribed, the sum of fifteen thousand dollars per annum is hereby appropriated to each. State, to be specially provided for by Congress in the appropriations from year to year, and to each Territory entitled under the provisions of section eight of this act, out of any money in the Treasury proceeding from the sales of public lands, to be paid in equal quarterly payments, on the first day of January, April, July and October in each year, to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same, the first payment to be made on the first day of October, eighteen hundred and eighty-seven: Provided, however, That out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement, or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount

not exceeding five per centum of such annual appropriation may be so

expended,

SEC. 6. That whenever it shall appear to the Secretary of the Treasury from the annual statement of receipts and expenditures of any of said stations, that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the next succeeding annual appropriation to such station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

SEC. 7. That nothing in this act shall be construed to impair or modify the legal relation existing between any of the said colleges and the government of the States or Territories in which they are respec-

tively located.

SEC. 8. That in States having colleges entitled under this section to the benefits of this act, and having also agricultural experiment stations established by law separate from said colleges, such States shall be authorized to apply such benefits to experiments at stations so established by such States; and in case any State shall have established, under the provisions of said act of July second aforesaid, an agricultural department or experimental station, in connection with any university, college or institution not distinctly an agricultural college or school, and such State shall have established or shall hereafter establish a separate agricultural college or school, which shall have connected therewith an experimental farm or station, the Legislature of such State may apply in whole or in part the appropriation by this act made, to such separate agricultural college or school, and no Legislature shall by contract express or implied disable itself from so doing.

SEC. 9. That the grants of money authorized by this act are made subject to the legislative assent of the several States and Territories to the purposes of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature, meeting next after the passage of this act, shall be made upon the assent of the Governor thereof duly certified to the Secretary of the Treasury.

SEC. 10. Nothing in this act shall be held or construed as binding the United States to continue any payments from the Treasury to any or all the States or institutions mentioned in this act, but Congress may at any time amend, suspend, or repeal any or all the provisions of

his act.

Approved, March 2, 1887.

ORGANIZATION OF THE ALABAMA AGRICUL-TURAL EXPERIMENT STATION.

The Board of Trustees of the Agricultural and Mechanical College, met in Montgomery February 24 and 25, 1888, and organized the Agricultural Experiment Station under the provisions of the "Hatch act," as follows:

1. In accordance with the act of Congress, approved March 2d, 1887, to establish experiment stations in the several States, the Governor of this State having given his certified assent to the purposes of the grant, as required in the act, there is hereby established under the provisions of said act, for the purposes therein named, the experiment station of the Agricultural and Mechanical College, of Alabama; and said station is hereby made a department of the Agricultural and Mechanical College, and as such shall, as other departments, be under the general supervision of the president of the college.

2. All moneys received from the United States Treasury under the aforesaid act of Congress, shall be faithfully used for the purposes designated in said act.

3. The president of the college shall present in his annual report to the trustees such recommendations as in his opinion will promote the efficiency of the station; and to him all reports of the several departments of the station shall be made.

4. The president of the college and such other officers attached to the station, as may be appointed by the trustees, shall constitute a board of direction, and to said board all subjects relating to the experiment station shall be referred. And in order to secure unity of purpose in research, the board of direction shall confer together and determine the experimentation and research which shall be undertaken, and adopt each year a definite line of work; it being provided the work undertaken shall, as far as possible, have reference to questions of practical interest to the farmers of Alabama. The board shall meet at regular periods, and at any time subject to the call of the president and shall keep a record of its proceedings.

5. A member of the board of Direction shall be appointed by the trustee officer in charge; who in addition to the special duties of the station to which he may be assigned, shall conduct the general correspondence incidental to the work of the station.

6. It shall be the duty of the station to examine free of charge articles relating to agriculture, sent by citizens of the State, when of

public utility, under such regulations as may be prescribed, and to perform all duties now required of the experiment station established at the college by the trustees under the law of the State.

7. No officer of the station shall engage in any occupation, or accept any position that will in any manner interfere with the faithful performance of his duties; and no property of any character belonging to the experiment station shall be used for private purposes.

- 8. All proceeds arising from sales from the proceeds of the farm shall be paid to the Treasurer of the College, who shall account for the same to the trustees; and when the Director receives any money from farm products, he shall make an itemized statement in writing from what source such money is received, which statement shall, with the money, be turned over to the Treasurer, and no money shall be paid to the Director unless upon warrant signed by the President of the College.
- 9. A committee of visitors composed of three trustees shall be appointed, who shall during the year, as often as they may deem necessary, visit and inspect each department of the experiment Station, and make a special report at the annual meeting of the Board, and no permanent improvement shall be constructed without the approval of the committee.
- 10. The organization of the experiment station herein provided for shall take effect April 1st, 1888, and continue so long as the act of Congress remains in force; and the Agricultural and Mechanical College receives the money therein appropriated.

ASSENT OF THE STATE LEGISLATURE.

Joint Resolutions of the State Legislature to Give Assent to the Purposes of the Grant made, by the Act of Congress, to Establish Agricultural Experiment Stations in Connection with the Land Grant Colleges.

WHEREAS, The Congress of the United States having passed an act, approved March 2, 1887, entitled, "An act to establish Agricultural Experiment Stations in connection with the colleges established in the several States under the provisions of an act approved July 2, 1862, and of the act supplementary thereto," and

WHEREAS, It being provided in said act "That the grants of moneys authorized by this acts are made subject to the legislative assent of the several States and Territories, to the purposes of said grants"; therefore be it

"Resolved, By the House of Representatives, the Senate concurring, That the assent of the General Assembly of Alabama is hereby given to the purposes of the grants made in said act of Congress; and that the trustees of the Agricultural College of Alabama, at Auburn, are hereby authorized and directed to comply with the terms and conditions expressed in the act aforesaid."

Approved February 27th, 1889.

The following is from the act of Congress, making the appropriation for the Agricultural Experimental Station for the fiscal year ending June, 1890, and for other purposes.

The section making the appropriation has this proviso:

"Provided, That as far as practicable, all such stations shall devote a portion of their work to the examination and classification of the soils of their respective States and Territories, with a view to securing more extended knowledge and better development of their agricultural capabilities."

Approved March 2, 1889.

EQUIPMENT AND WORK OF THE STATION.

DEPARTMENT OF AGRICULTURE.

The Agricultural Department of the Experiment Station was organized under State law in July, 1883, and hence there was much work already in progress when it was merged into the Station organized under the Congressional act known as the "Hatch Bill," April 1st, 1888. Its equipment has been very much improved through the Congressional appropriation and its sphere of operation extended. The farm of 226 acres, occupied by the Station under State law, and owned by the State is used by the Station under the present organization. When purchased in 1883 it was in a very dilapidated condition; much of the land having been turned out in the commons, and a large portion washed into gulleys.

THE PERMANENT IMPROVEMENTS

are a dwelling of seven rooms, occupied by the Director; a four room cottage, occupied by the Foreman; a neat, new cottage containing offices for the Director and his assistants, and a museum and preparation room; a substantial two-story barn; a two story gin house, with sides and top covered with corrugated iron; a silo, dairy and ice-house; large cow stable; engine and boiler house; corn-crib, tool rooms, etc.

The water supply for the green-house and horticultural grounds are furnished by two hydraulic rams which utilize the waste from two fish ponds.

THE EQUIPMENT

consists of a twenty-horse power boiler and fifteen horse power engine, the latter placed between the barn and gin house so as to drive with equal facility a line of shafting upon each building.

A forty-saw Pratt gin, with feeder and condenser attached, and a power press, are in position in the gin-house, and afford the means of accurate experimentation with cotton.

A feed mill and cotton-seed crusher has been provided for grinding food for stock, and crushing the green cotton-seed for the purpose of more satisfactorily experimenting with them, both as stock food and as a fertilizer.

A Ross ensilage cutter serves the purpose of cutting ensilage for filling the silo during the summer and dried hay in winter.

A complete grain separator is stationed by the gin-house and is operated by the same shafting that runs the gin and cotton press. A mower, horse-rake and cutaway harrow have been added to the outfit for field work.

Miss Clementine Snow, of Oxford, Alabama, has presented the Station with a sulky plow and cultivator, a rotary-tooth harrow, feed-cutter, etc., thus supplementing with most useful implements the purchased outfit.

A complete dairy equipment has been purchased, including the Cooly creamery and the De Laval separator, and the cow stable has twelve thoroughbred Jerseys.

The pig sties are supplied with thoroughbred Essex and cross-bred Berkshire pigs, and feeding experiments are made to test the comparative value and economy of different Southern field products as pork producers.

The horticultural department has been rapidly developed. A large number of varieties of apples, pears, peaches, plumbs, figs, grapes, strawberries and raspberries are undergoing experimental test as to their comparative productiveness and adaption to this soil and climate. These undergo the most critical observation as to habits of growth, healthfulness, productiveness, character and quality of fruit and liability of plants and fruit to attack of insects or disease.

IN THE FIELD:

A variety of inquiries have been made as to the fertilizers best suited to supply the needs of the soil for the most profitable growth of our field crops, the choice of the plants as to the sources of supply of nitrogen, potash and phosphoric acid, and especially as to the forms in which the latter is presented. Especial attention has been given to the undergrowth of our cultivated plants and the effects of different methods of cultivation upon the development and consequent productiveness of the plant. By means of water under-pressure the soil has been removed from the roots of corn and cotton plants at different stages of growth and under different systems of cultivation.

Experiments have been conducted with cotton, corn, forage plants, small grain, ground-peas, sweet and Irish potatoes.

The results of all experiments are published in bulletins from time to time, and these distributed for the benefit of the farmers.

The interests of the amateur and the commercial gardener have not been overlooked, but a great variety of experiments have been made with melons and vegetables, involving the expenditure of much time in making the daily observations necessary to collect the facts of most interest to the grower of these perishable products. Especial attention has been given to inquiries as to earliness and productiveness of different varieties.

DEPARTMENT OF CHEMISTRY.

The Chemical Department of the Agricultural Experiment Station, in connection with the Agricultural and Mechanical College of Alabama, includes in its present organization, the Chemist and three assistants. The new building for the Department of Chemistry is completed in all its arrangements and admirably adapted to meet the growing demand of modern progress in this department of science. In this building, a description of which is given in this catalogue, is located the State Chemical Laboratory where all the chemical works of the Experiment Station are carried on. The greatest care has been taken to secure the very best form of work tables, niches and hoods for carrying off offensive fumes, sinks, gas, water and other conveniences and necessaries for effective work.

The equipment is the very best that can be secured from manufacturers in this country and in Europe. In addition to the apparatus usually found in chemical laboratories and especially where soils, fertilizers, feed stuffs and dairy products are analyzed and their properties and capabilities investigated, may be mentioned, a new Schmidt & Hænsch's Polariscope for sugar determinations, Zeiss' microscope and Refractometer, and a new and special arrangement for carrying on at the same time a number of nitrogen determinations by the Kjeldahl method. The Library of the Experiment Station contains a large number of standard works of reference and is supplied with the principal French, English and German scientific journals.

In addition to the work directly connected with the Station, the Chemist is Professor of General and Agricultural Chemistry in the Agricultural and Mechanical College and Official Chemist of the State Department of Agriculture. On the application of the Commissioner of Agriculture he is required by law to "analyze and certify the analysis

of all fertilizers, samples of which are furnished him."

The variety and extent of this work can be seen from the following tabular statement of the number and character of the quantitative analyses made during the year 1888. In the analyses of fertilizers only those constituents have been determined which are required under the State law, viz.: water soluble, citrate soluble, and acid soluble phosphoric acid, nitrogen and potash.

Number and character of quantitative analyses made in the State Chemical Laboratory during the year 1888.

SUBSTANCES ANALYZED.	N	UN	BER.
Acid Phosphates with Nitrogen and Potash			84
Acid Phosphates with Potash	•		8
Acid Phosphates			57
Raw bone meal			2
Natural Guanos			18
Phosphatic rocks and deposits			I
Marls and Calcareous rocks			5 °
Tankage			1
Cotton seed meal			3
Cotton see hull ash			1
Cave earths			3
Kainit and potash salts			8
Feed stuffs			3
Nitrogenous materials			5
Carbonaceous matter, or muck			I
Potatoes		٠	9
Soils and sub-soils		•	20
Coal			5
Iron ores			
Clays			4
Waters			I
Gold ores	•		2
Total	•	•	243

In addition to the above, a considerable number of mineralogical specimens, the character of which could be ascertained by simple qualitative tests, were examined and their value determined.

The details of the quantitative work done are to be found in the quarterly bulletins issued during the year.

DEPARTMENT OF BOTANY AND METEOROLOGY.

This department was not organized until the year was about half gone, and little could be done toward collecting plants for study before the early frosts. The assistant, however, was placed in the field as soon as possible, and many of the wild plants of the county, where the college is located, were collected and pressed for future examination. These plants represent species of grasses, weeds and woods,

In the last two quarterly bulletins partial lists of the woods of Alabama were published, with descriptions of some of the most valuable specimens. This work on the woods will be continued from time to time until the entire State is covered. The large number of specimens of grasses and weeds collected since the burning of the college museum have been assorted, and manuscripts have been prepared for publication in future bulletins. Much work has been done toward classifying the noxious weeds of Eastern Alabama, and results of experiments are being collated to show the farmers how to eradicate them from the cultivated fields.

Many experiments under the microscope have been made on twelve varieties of the cotton plant to show the effect produced on the fibre by different methods of cultivation. A number of sections have been made of the plant during its different stages of growth and carefully Measurements have been made of the fibre and its photographed. strength determined.

The Botanical Laboratory of the Experiment Station is now equipped

as follows:

One Zeiss Microscope Stand II a,

Objectives: .16, .8, .4, .2 (immersion),

Oculars: 2, 4, 6, 8, 12, 18,

I micrometer ocular,

Goniometer ocular, Abbe camera lucida,

I Zeiss compound dissecting lens,

I Bausch & Lomb's dissecting microscope,

Laboratory microtome,

Plant presses,

Solar microscope aud camera,

Dissecting instruments,

Turn tables and mounting material and chemicals.

The work in meteorology has been in successful operation in the State since 1884, but since the organization of the Experiment Station, under the Hatch Act, the facilities for observation at the college station have been considerably enlarged. The following instruments comprise the outfit at the station:

70

A mercurial barometer by Green, carefully corrected and compared with the standard at Washington.

Maximum and minimum thermometers by Green.

Hygrometer.

Solar radiator.

Terrestrial radiator.

Rain gauge-standard make.

Anemometer with electrical recorder by Gibbon.

Wind vane—signal service pattern.

Three sets of soil thermometers ranging in depth from one inch to ninety-six inches.

The barometer, maximum and minimum thermometers, hygrometer, rain gauge, and wind vane, belong to the United States signal service.

Besides the college station, reports are received from twenty-six observers in different sections of the State, who are supplied, through the the liberality of the Chief Signal Officer, with maximum and minimum thermometers and rain gauges. From the data obtained from these observers regular monthly bulletins have been issued since 1884, and distributed among the farmers of the State. Weekly bulletins, indicating the effects produced upon the crops by the changes of the weather, are issued on every Saturday during the crop season.



Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1889

And My

```
OCLC: 36819601
                          Rec stat:
           19970429
  Entered:
                          Replaced:
                                       19970429
                                                     Used:
                                                              19970429
Type: a
             ELvl: I
                          Srce: d
                                      GPub: s
                                                  Ctrl:
                                                              Lang: eng
                          Conf: 0
  BLvl: s
            Form: a
                                      Freq: a
                                                  MRec:
                                                               Ctry:
                                                                     alu
  S/L: 0
              Orig:
                          EntW:
                                      Regl: r
                                                   ISSN:
                                                               Alph:
  Desc: a SrTp:
1 040 AAA +c AAA ¶
                          Cont:
                                      DtSt: d
                                                   Dates: 1873,1893 ¶
   2 007 h +b c +d b +e f +f u +g b +h a +i u +j p ¶
   3 043
            n-us-al ¶
   4 090
              LD271 +b .A76 ¶
            *b ¶
   5 090
              AAAA ¶
   6 049
   7 110 2
              Agricultural and Mechanical College of Alabama. ¶
    8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
    9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
> 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
▶ 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama ¶
  12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama ¶
13 260
             Auburn, Ala. : +b The College, ¶
  14 300
              21 v. ; +c 21 cm. ¶
15 310
              Annual ¶
 16 362 0 1872-73-1892-93. ¶
  17 500
              Title varies slightly. ¶
 18 533
             Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
‡d 1997. ‡c microfilm reels : negative ; 35 mm. ¶
              d +b 1873 +c 1893 +d alu +e u +f u +g a ¶
19 539
  20 650 0 Universities and colleges +z Alabama +x Periodicals. ¶
 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
▶ 22 780 00 Agricultural and Mechanical College of Alabama. #t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
> 23 785 00 Agricultural and Mechanical College of Alabama. #t Catalogue of
```

> 24 830 0 USAIN State and Local Literature Preservation Project 1

the Alabama Polytechnic Institute ¶

ALABAMA POLYTECHNIC INSTITUTE CATALOGUE 1889-90

AU LD271 .A76 1889/90 c.2

AUBURN UNIVERSITY LIBRARY



L 271

1899/90

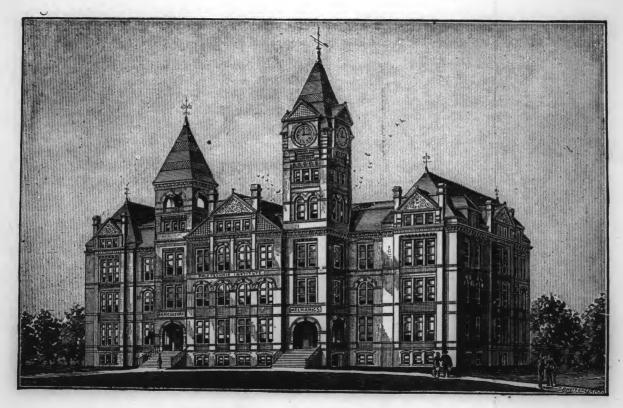
Ind cop

tate Agricultural & Wechanical College.



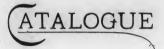
ALABAMA POLYTECHNIC INSTITUTE.

1889- 1890.



AGRICULTURAL AND MECHANICAL COLLEGE.

Alabama Polytechnic Institute.



OF THE

STATE

Agricultural and Mechanical

COLLEGE.

ALABAMA POLYTECHNIC INSTITUTE.

1889-90.

AUBURN, . . . ALABAMA.

BOARD OF TRUSTEES.

HIS EXCELLENCY THOMAS SEAY, Presidente	x-officio
SOLOMON PALMER, Superintendent of Educatione	x-officio
and the state of t	
JONATHAN HARALSON (term expires 1895)	Selma
R. F. LIGON (term expires 1895)	uskegee
JOHN W. BISHOP (term expires 1895)T	
	0
R. F. KOLB	
J. B. MITCHELL (term expires 1893)	Seale
T. G. BUSH(term expires 1893)	.Mobile
Manufacture and the second and the s	
J. G. GILCHRIST (term expires 1891)Mont	
M. T. COLVETTION (term expires 1091)	gomery
M. L. STANSEL(term expires 1891)	rrollton
C. C. HARRIS (term expires 1891)	Decatur

E. T. GLENN, Treasurer.

F. M. REESE, Secretary and Auditor.

AN

BARKSDALE

28 84

FACULTY AND OFFICERS.

WM. LEROY BROUN, M. A., LL. D., 'President and Professor of Physics and Astronomy.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, M. E., Ph. D., Professor of Natural History and Geology.

JAMES H. LANE, C. E., A. M., Professor of Civil Engineering and Drawing.

J. S. NEWMAN,

Professor of Agriculture and Director of Experiment Station.

CHARLES C. THACH, B. E., Professor of English and Latin.

N. T. LUPTON, A. M., M. D., LL. D.,

Professor of General and Agricultural Chemistry and State Chemist.

LIBUT. JOHN B. McDONALD, 10th Cavalry U. S. A. (West Point), Commandant and Professor of Military Science.

GEORGE H. BRYANT, M. E. (Mass. Inst. Technology), Director of Laboratory and Instructor of Mechanic Arts.

> GEORGE F. ATKINSON, Ph. B., Professor of Biology.

CHARLES H. BARNWELL, A. M., '
Adjunct Professor of Modern Languages and History.

L. W. WILKINSON, B. Sc., Assistant in Chemical Laboratory.

J. J. WILMORE, M. E., B. A. BLAKEY, M. Sc., Assistant Instructors in Mechanic Arts.

M. DOWNER PACE,
ARTHUR St. C. Dunstan, B. Sc.,
BOWLING H. CRENSHAW, B. Sc.,
* H. CLAY ARMSTRONG, B. Sc.,
† P. T. VAUGHAN, B. Sc.,
Assistants in Mathematics and English.

J. H. DRAKE, M. D., Surgeon.

C. C. THACH,
Librarian and Recording Secretary.

O. D. SMITH, Corresponding Secretary.

* Resigned March, 1890. † Appointed March, 1890.

109793

Jun 47 Veith

OFFICERS

OF THE

Agricultural Experiment Station.

BOARD OF VISITORS.

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION:

J. G. GILCHRIST,

R. F. LIGON,

J. B. MITCHELL.

OFFICERS OF THE STATION:

W. L. BROUN	President
J. S. NEWMAN	Director and A aminute
N. T. LUPTON	Vice Director and Chemist
*P. H. MELL.	Botanist
G. F. ATKINSON	Botanist
	Biologist

ASSISTANTS:

Isaac Ross, First Asst. Agriculturist	in Charge of Live Stock and Dairy
JAS. CLAYTON	Second Assistant Agriculturist
J. T. Anderson, Ph. D	First Assistant Chamist
L. W. WILKINSON, M. Sc	Second Assistant Chemist
P. L. HUTCHINSON	
A. M. LLOYD, B. S.	Assistant Rotanist

^{*}Prof. Mell has charge of Meteorological Observations.

OBJECT OF THE COLLEGE.

The leading object of the College, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its course of instruction it gives prominence to the sciences and their applications, especially those that relate to agriculture and the mechanicarts, so far as the facilities at its disposal will permit; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on a sound, general education.

The College, in fact, has become a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue—and work of great value to the youth of the State is now being accomplished by fitting them, by a thorough science discipline, in which handicraft in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the Faculty.

LABORATORIES AND FACILITIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in applied science in the following departments:

I .- IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with illustrated specimens of stock of select varieties.

The agricultural experiment station, established in connection with the College, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc., where lectures are delivered in presence of the object discussed, and during the year exercises in practical agriculture are given the students who enter upon this course of study.

II .- IN MECHANIC ARTS.

The laboratory of Mechanic Arts is used as an auxiliary in industrial education, as a school of manual training in the arts that constitute the foundation of various industrial pursuits. The work performed by the students is *instructive* in character, as in any other laboratory, and the classes are taught in sections by a series of graded lessons under the supervision of the professor. In the lower classes of the College each student enters this school, and is assigned three exercises a week, each exercise being two hours long.

The object of this laboratory is not to teach a trade, but to educate, to discipline and train the eye and the hand, as well as the mind, and thus, by associating manual and mental training, to thoroughly educate the student for the duties of life, whatever his vocation may be. There is no attempt to teach students special skill in constructing articles of commercial value, but all the exercises are systematically arranged and designed for purposes of education.

The wood department is located in a commodious hall 90x50 feet, and is provided with a twenty-five horse power Corliss engine, with indicator, a planer, circular saw, bandsaw, two scroll saws, a buzz planer, twenty stands with lathes, with full sets of lathe and carpentry tools required for instruction.

A brick building with two rooms, each 30x35 feet has been constructed especially for instruction in working iron.

One room is equipped with sixteen forges and tools required for a forge department, the other with a cupola furnace, having a capacity of 1,000 pounds, a core oven, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant fan and exhauster, supplied with power from the engine.

The machine department is equipped with eight engine lathes—one speed lathe, one 20-inch drill press, one post drill, one shaper, one five-foot planer, one universal milling machine, a corundum tool-grinder and small emery grinder.

The chipping and filing department is arranged with benches and vises for twelve students.

The Weston dynamo, used at present for lighting the halls, is located in a room adjoining the Mechanic Art laboratory, and is run by a ten-horse power engine, constructed by the students in the Mechanic Arts.

It is designed to supply the different laboratories with electricity by this dynamo.

III.-IN PRACTICAL CHEMISTRY.

The new chemical laboratory is supplied with new and modern apparatus, and in its entire equipment affords excellent facilities for instruction in practical chemistry.

The investigations that are undertaken in this laboratory by scientific experts, in connection with the work of the agricultural experiment station, are of especial value to advanced students, and afford them unusual opportunities to learn the methods of scientific research. The building contains a large general laboratory that will accommodate sixty students, and lecture room with capacity for one hundred seats, and nine other rooms, all appropriated to instruction and research in chemistry.

It is equipped with the improved modern appliances necessary for instruction and investigation.

IV .- IN PHYSICS.

In the new College building provision will be made for laboratory work in the department of physics. Special rooms in the basement are appropriated for this purpose, and it is designed to equip them with all necessary appliances. An improved testing machine, of 35,000 pounds capacity, has recently been purchased of Riehle Bros. for this laboratory.

V .-- IN MINERALOGY.

This laboratory occupies a convenient room in the basement, and is provided with tables and appliances to accommodate twenty students.

VI .-- IN BOTANY.

In the work of the agricultural experiment station, investigations in botany are given special attention, and unusual opportunities are offered advanced students for practical work in a laboratory especially fitted with microscopes, tables, a dark room for photographic work, and appliances needed for instruction and research.

VII .- IN BIOLOGY.

The laboratory in this department adjoins the lecture room of the professor, and is furnished with tables, microscopes and appliances for investigation. Each student of the class works under the supervision of the professor.

VIII .- IN ENGINEERING AND SURVEYING.

The necessary apparatus for field work, including transits, levels, plane table, etc., is provided for the use of the students, and the customary exercises in the field are given.

~ IX.-IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. A large, well-lighted drawing room, that will accommodate fifty students, is provided with tables, lock boxes, etc.

MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

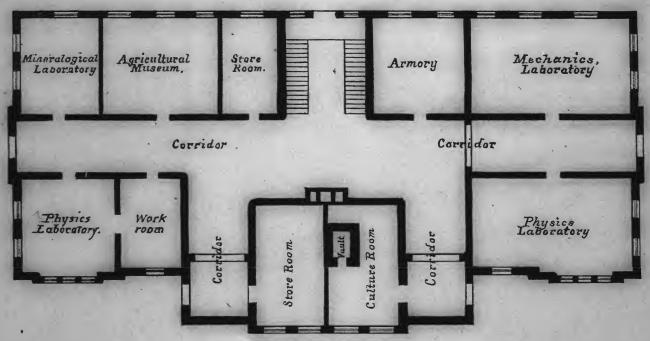
This department is under the charge of Lieut. J. B. McDonald, 10th Cavalry, U. S. A.

It has recently been supplied with new cadet muskets and accourrements for the corps, and, for artillery practice, with two three-inch-rifle guns, carriages and limbers.

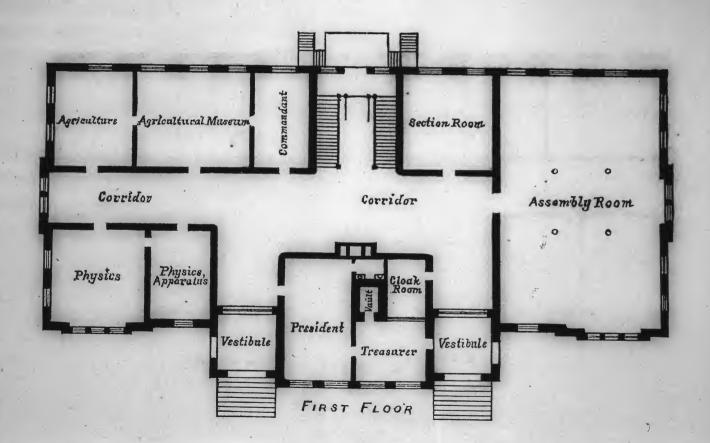
COLLEGE BUILDING.

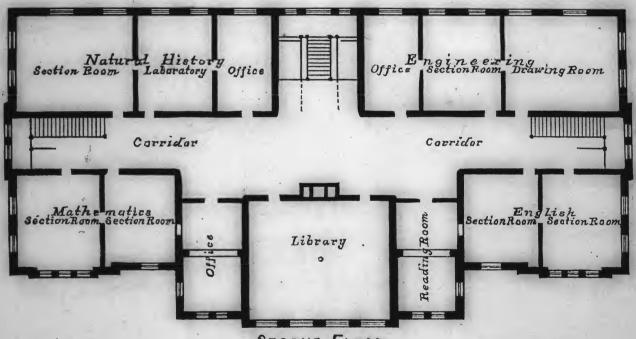
The frontispiece is a representation of the recently constructed main college building. It is 160 by 71 feet, and contains, exclusive of the basement floor, thirty-five rooms. This building is not used for dormitories for students, but is appropriated for purposes of instruction and investigation.

It contains the lecture rooms and offices of the professors, laboratories, library, museum, armory, etc. The illustrations of the four floors on the following pages indicate the uses to which the rooms have been assigned.

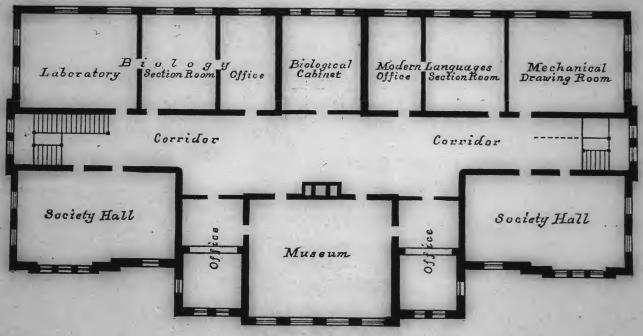


BASEMENT FLOOR





SECOND FLOOR

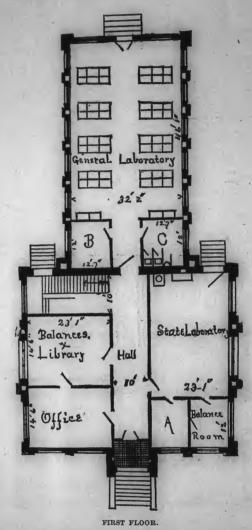


THIRD FLOOR



CHEMICAL LABORATORY.

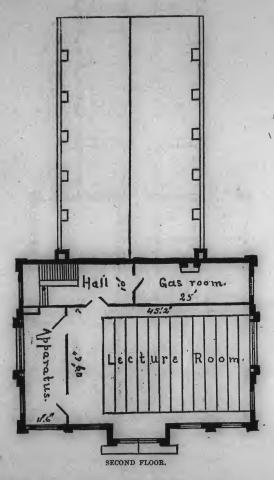
The new chemical laboratory is a handsome two-story structure, 40 by 60 feet, with a rear projection 35 by 60 feet of one story and basement. The exterior is of pressed brick, with cut stone trimmings, and terra-cotta ornamentation.



A, Spectroscope and polariscope room; B, Assistant's private room; C, Combustion-furnace room.

On entering, the first room to the left is the office of the professor, to the rear of which is the library and balance-room. On the right, extending the whole length of the floor, is the State laboratory and laboratory for research. Two small rooms are cut off from this, one a balance-room, and the other for the spectroscope and polariscope.

Leading from the rear of the main hall is the door which enters the large laboratory for general work. Two rooms are cut off from this—one for combustion furnaces and the other a private working-room for the assistant.



In the basement are ample accommodations for assaying and storage. The main laboratory will accommodate sixty students, and contains the latest improved working-tables, with water, gas and every necessary appliance for chemical work. Niches in the wall opposite each working-table, with hoods where necessary, connect with flues, and furnish the best possible means of escape for deleterious vapors, while

ventilators in the ceiling furnish additional means for getting rid of noxious gases. The pitch is sixteen feet in the clear, with paneled ceiling of oiled southern pine. The rooms are wainscoted throughout and finished in natural wood.

The second story contains a lecture-room and room for gas analysis. Around this lecture room are cases for containing crude and manufactured products, illustrating the subjects of agricultural and industrial chemistry, which are prominent subjects taught in this institution.

LANGDON HALL.

This is a two-story building, ninety by fifty feet. The second story is the audience hall, used for Commencement and other public occasions.

The first story is appropriated to the laboratory of Mechanic Arts.

GRADUATES IN 1889.

CLASS OF 1889.

WITH DEGREE OF BACHELOR OF SCIENCE. (B. Sc.)

Georgia. Leslie Dallas Burdett, Georgia. Aaron Jason Burr, Edmond Collins Cochran, Montgomery. Abednego Jackson Crawford, Lee. Bolling Hall Crenshaw, . Butler. Arthur Campbell Crowder, Jefferson. Howard Grayson Crowder, . . Jefferson. Howard Staten Doster, Autauga. Arthur St. Charles Dunstan, Virginia. Pleasant Lee Hutchinson, . . . Georgia. Oscar Don Killebrew, . . . Dale. Oscar Don Killebrew, . Lee. Andrew Manley Lloyd, William Lane Martin, . Jefferson. . Lee. Thomas Alexander Ross, . Edgar Johnson Spratling, Chambers. Ohambers.
Montgomery. Hugh McGhee Taylor, Dallas.
Chambers. Paul Turner Vaughan, . Frederick Henry Vernon, . Thomas Morgan Watlington, Marengo.

WITH DEGREE OF MASTER OF SCIENCE. (M. Sc.)

George Fleming Broun, B. Sc., Lee. Eugene Willis Harris, B. Sc., Lee. Augustus Archilaus Persons, B. Sc., Lee.

WITH DEGREE OF CIVIL ENGINEER. (C. E.)

John Thomas Gregory, B. Sc., Lauderdale. Sterling Chambers Pitts, Russell.

Distinguished Students.

AWARDED CERTIFICATES IN 1889.

The students of each class who secure a grade above 90 in three or more subjects are distinguished for excellence in scholarship, and are awarded

HONOR CERTIFICATES.

The following students received honor certificates in 1889:

FIRST CLASS.

Aaron Jason Burr,		• 1		Georgia.
Bolling Hall Crenshaw,				Butler.
Howard Grayson Crowder				Jefferson.
Howard Staten Doster, .				Autauga.
Arthur St. Charles Dunstan.				Virginia.
Pleasant Lee Hutchinson.				Georgia.
Oscar Don Killebrew,	.• .			Dale.
Thomas Alexander Ross.				Lee.
Hugh McGhee Taylor,				Montgomery.
Paul Turner Vaughan,				Dallas.
Frederick Henry Vernon,				Chambers.
Thomas Morgan Watlington,.				Marengo.

SECOND CLASS.

Benjamin Cheney Abernethy,			Florida.
James William Bivins,	:		Lee.
George Samuel Clark,		*	Montgomery.

George Woodhull Emory, .	٠.		• ,	Lee.
Stonewall Jackson Emory,			-	Lee.
Daniel Gillis,		,		Georgia.
Francis Brooks Matthews,				Lee.
Wilmot Bivins Matthews.				Lee.
Frank Davis Milstead,		. 1		Elmore.
John Milton,				Florida.
George Houston Waring,				Georgia.
William Cameron Weisinger	, .			Talladega.
James Fielder Wilkinson,	*		. :	Dale.

THIRD CLASS.

Lawrence Ernest Baker,			•	Jefferson.
Harmon Benton,				Barbour.
Frank Jarvis Bivins.				Lee.
James Albert Cox,	_		To 0	Lee.
James Nathaniel Dean,	.]			Montgomery.
Walter Edward Fitzgerald,				Georgia.
William Thomas Glass,				Georgia.
Beverly Franklin Harwood,				Perry.
Cadmus Newton Hughes,			- 1	Walker.
Charles Cicero Johnson,				Tallapoosa.
Hendley Varner Kell,				Georgia.
John Calvin Kimball, Jr.	. 12			Georgia.
Thomas Dixon Lewis, .		•		Butler.
Frank Allemong Lupton,			٠.	Lee.
William Audley Marshall			otr 'Hab	Georgia.
Isaac Isaiah Moses,				Georgia.
Robert Clanton Smith,				Chambers.
Joseph Hardie Spence, .				Talladega.
Jordan Emmett Thomason,			.,	Randolph.

FOURTH CLASS.

Elbert Cathey Averyt.	. ,		Shelby.
Leigh Stafford Boyd,			Lee.
Charles Allen Brown, .			Sumter.

Jacob Thomas Bullen,	,	Montgomery.
Amos Hill Cox,		Lee.
Henry Ticknor DeBardeleben,		Jefferson.
Henry Farris Dobbin, .		Florida.
James Edward Gachet,		Lee.
Raleigh Frederick Hare,		Lee.
Leonidas Warren Payne,		 Lee.
Richard Werner,		Georgia.
David Lewis Whetstone, .		Elmore,

CATALOGUE OF STUDENTS

FOR THE SESSION 1889-90.

GRADUATE STUDENTS.

[Residence is Alabama when State is not named.]

NAME.]	RESIDENCE.
Henry Clay Armstrong, B. Sc.,		Lee.
Bolling Hall Crenshaw, B. Sc.,		Butler.
Arthur St. Charles Dunstan, B. Sc.,	. "	Virginia.
Pleasant Lee Hutchinson, B. Sc.,		Georgia.
M. Downer Pace,		Macon.
James Miles Quarles, A. B.,		Clay.
Paul Turner Vaughan, B. Sc.,		Dallas.

UNDERGRADUATE STUDENTS.

FIRST CLASS.

Benjamin Cheney Abernethy,		. Florida.
James William Bivins,		Lee.
Thomas Jefferson Brooks,	٠.	. Georgia.
Wilmer Callaway,		Lee.
Walter Girard Cook,		. Lowndes.
George Woodhull Emory, .		Lee.
Stonewall Jackson Emory,		. Lee.
Francis Maury Fontaine, .		Georgia.
Daniel Gillis,		Georgia.
William Groce Harrison, .		Talladega.
Robert Edward Daniel Irvin,		Lee.
John Hammond Little,		Lee.

	Wilmot Bivins Matthews,				Lee.
	Frank Davis Milstead.				Elmore.
•	John Milton,				Florida.
	Americus Mitchell, .				Russell.
	Robert Ernest Noble				Calhoun.
	Reuben Hayne Poole				Georgia.
	Percy Willett Terry, .		•		Jefferson.
	McKennie Thomas,				Coosa.
	Thomas Chilton Thorington,		• 1	. 1	Montgomery.
	George Houston Waring, .				Georgia.
	James Fielden Wilkinson,	.=			Jefferson.

SECOND CLASS.

· · · · · · · · · · · · · · · · · · ·	
Lawrence Ernest Baker,	Jefferson.
Harmon Benton,	Barbour.
Frank Jarvis Bivins,	Lee.
John Postelle Buchanan,	Lowndes.
Seaborn Jesse Buckalew,	Chambers,
Edgar Duncan Burts,	Géorgia.
James Albert Cox,	Lee.
James Nathaniel Dean,	
John Christian Driver,	Montgomery Perry.
Arthur Thomas Dudley,	
Walter Edward Fitzgerald,	Georgia.
William Thomas Glass,	Georgia.
Charles Bowls Glenn,	Georgia.
Clifford Leroy Hare,	Lee.
Bryant Clower Harvey,	Lee.
Beverly Franklin Harwood,	Lee.
Charles Cicero Johnson.	Perry.
Egbert Jones,	Tallapoosa.
	Georgia.
John Allen Jones,	Lee.
Hendley Varner Kell	Georgia.
John Calvin Kimball.	Georgia.
Thomas Dixon Lewis,	Butler.

Frank Allemong Lupton, .			Lee.
William Audley Marshall,			Georgia.
Alexander Dowling McLennan,			Georgia.
Isaac Isaiah Moses,			Georgia.
William Henry Oates,			Mobile.
Edward Clyde Powers,			Lee.
John Larcus Ray,			Clay.
Petit Reynolds,			Macon.
William Edward Reynolds,			Macon.
Robert Clanton Smith,			Chambers.
John McCullough Tharin,			Georgia.
Walter Augustus Thomas, .			Chambers.
Layton Casey Tucker, · ·	9	٠.	Lee.
		9. 19	Mobile.
Horace Turner,	1.1		Montgomery.
Clanton Ware Williams,			

THIRD_CLASS.

				Mteamony
William Sayre Allen, .	•	•	•	Montgomery.
Walter Lampkin Anthony.				Bullock.
Archie Scruggs Averett,				Georgia.
				Jefferson.
Earl Averitt,			•	Shelby.
Elbert Cathey Averyt, .				Georgia.
Charles Dunwoody Bassett,	•		•	
Louis Alexander Bize,		•	•	Georgia.
Leigh Stafford Boyd,				Lee.
Frank Manson Brannon.			•	Russell.
				Sumter.
Charles Allen Brown,				Montgomery.
Jacob Thompson Bullen,				Georgia.
Joseph Little Burr, · ·	0.			Montgomery.
Walter Bartow Clay,				
Alpheus David Connor, .			. 4	South Carolina.
Amos Hill Cox,				Lee.
Amos Hill Coa,	3.			Georgia.
Henry Benning Crawford,		= "		Montgomery.
John Gereardt Crommelin,				Montgomery.
Henry Lee Davidson, .			•	

George William Dantzler,	· Autauga.
William Caleb Dean,	Chambers.
Henry Ticknor Debardeleben,	· Jefferson.
Henry Farris Dobbin,	Florida.
Robert Sedgwick Edwards,	Massachusetts
Ashby Floyd,	Lee.
Charles McKendree Floyd, .	. Chambers.
James Edward Gachet,	Lee.
Howard Glover,	Georgia.
Eugene Hamiter Graves,	Barbour.
Raleigh Williams Greene,	. Lee.
Raleigh Frederick Hare,	Lee.
Walter Crafts Hazard,	Calhoun.
Louis Philip Heyman,	Georgia.
Arthur William Holstun.	. Tallapoosa.
Andrew Silous Horn,	Clay.
Thomas Pearson Hutchinson.	Georgia.
Mims Lamar Howard,	Autauga.
Arthur Lynn Jones,	Autauga.
Clifton Arthur Jones,	Lee.
Neely Forsyth Jones,	Russell.
Harvey Ellis Jones, .	Mobile.
Frank Keen,	Georgia.
Charles Leonard Ledbetter,	Jefferson.
Harold Magruder, .	Georgia.
Robert Dibrell McAllister, .	Georgia.
Glen McCulloh,	Lee.
Benjamin Walter McCutchen,	Lee.
Duncan McDougald,	Georgia.
Alfred Huger Moses,	Colbert.
Frank McLemore Mosely,	Montgomery.
Louis Sinclair Munford,	Hale.
Leonidas Warren Payne,	Lee.
Frank Peabody,	Georgia.
James Wesley Pierce,	Lee.
Walter Evan Richards,	Chambers.
	THE OUT OF THE PARTY OF THE PAR

William Cincler Roberson,				Chilton.
Robert Lee Shipp,	٠.			Georgia.
Joseph Augustus Speed,			,	Greene.
John Joseph Street.				Tallapoosa.
Signor Sidney Strong, .				Georgia.
George Adams Thomas, .				Montgomery.
William Augustus Thomas,				Chambers.
Sheldon Lynn Toomer,				Lee.
Robert Jefferson Trammell,			٠.	Lee.
Sydenham Benjamin Trapp,				Calhoun.
David Marshall Walker,				Marengo.
Richard Werner, · ·				Georgia.
David Lewis Whetstone,				Elmore.
Richard Lane Williams,				Jefferson.
Thomas Felton Wimberly,				Lee.
David Edwin Wilson,	4	٠		Jefferson.
Alfred Anderson Wellborn,				Georgia.
		100		

FOURTH CLASS, SECTION A.

Andrew Jackson Abercrombie,		•		٠	Jefferson.
Wallace Reverdy Bishop, .	• (Talladega.
Robert Lee Gordon Bivins,					Lee.
James Marion Blanton,			-		Winston.
Posey Party Brooks,				19.1	Escambia.
Lee Callaway,					Montgomery.
Thomas Eugene Chambless,					Georgia.
Clifford Fontaine Clopton,					Montgomery.
Charles Henry Crowder,					Montgomery.
Walter Scott Crump,					St. Clair.
Joseph Franklin Curtis,					Shelby.
Octavius DeShields Davis,					Madison.
George Alpheus Dennis,					Chilton.
Richard Augustus Drake,	-				Georgia.
Milton Reese Dudley,			-	**	Lowndes.
	6-	,		•	Wilcox.
Joel Dumas, · · ·					

Thomas Martin Edwards, Jefferson. Ralph Ussery Falkner, Montgomery. Porter Campbell Flanagan, Lee. David Sylus Flanagan, Lee. Thomas Preston Flanagan, . Lee. Milton Tucker Floyd,. Chambers. John David Foster. Lee. Thomas Gardner Foster, Montgomery. John Flynn, . Marshall. Crossland Clarence Hare, Lee. John Wethersby Hatcher, Georgia. Joseph Andrew Herron; Montgomery. Joseph Andrew Holifield. Lee. John Henry Holt. Montgomery. William Bostwick Howard, . Montgomery. Casey Rex Hudson, . Lee. Jeremiah Jackson, Lee. Young Jackson, Elmore. Hamilton Rowan Johnstone, Mobile. Byron Watts Jones, . Lee. William Driskell Kelley, Dallas. Charles David Kline, Texas. James Monroe Little, . Lee. Nimrod Lunsford Long. Russell. Thomas Francis Long, . Sumter. Edward Baker Mell, . Georgia. Hillory Herbert Milner, Jefferson. John Kennedy Moore, Lee. Charles Carter Newman, Lee. Minor Evan Nicholson, Georgia. John Austin Norton, Montgomery. Joseph Samuel Pou, . Sidney Powell Reaves, . Georgia. Charles Dodson Robertson, Jefferson. William Chappell Ross, Lee. Rufus William Rotton, Chambers.

William Joseph Holt Shrews,				Montgomery.
Guy Allen Shafer,				
Logan Abner Siebold,	·			Marshall.
William Gulley Simpson, .				Wilcox.
Charles Henry Smith, '.			•	Georgia.
Linton Sparks Smith,				Georgia.
James Howard Smith,	.0	0.		Georgia.
Henry Williamson Sparks,				Georgia.
Rosser Colbert Spratling, .			•=	Chambers.
William Simeon Street, .				Tallapoosa.
Wyeth Todd,	•			Marshall.
George Augustus Tonsmeire,				Mobile.
William Van Antwerp, .				Mobile.
Charles Hutchinson Weston,				Colbert.
Walter Roy Weedon,				Barbour.
William Dunbar Wills,				Mississippi.
Thomas Chalmers Wilson, .				Jefferson.
Allie Walter Williams, .		,		Georgia.
Clifton Hall Williamson,				Montgomery.
George DeKalb Winston, .				Lee.
John Mitchell Woolley,				Georgia.

FOURTH CLASS, SECTION B.

Felix Reuben Allison,	Lee.
Harvey Armstrong,	Missouri.
Andrew Hamilton Ayres,	South Carolina.
Richard Isaac Betts,	Conecuh.
Wade Hampton Blake,	Georgia.
James Walker Bone,	Madison.
	Montgomery.
William DeLamar Clayton,	Lee.
James Rufus Dear,	Wilcox.
James Lee Denney,	Chambers.
Julius Confree Dunham,	Montgomery.
John Thomas Eckford,	Mississippi.

Benjamin Hardy Foster,	Tuscaloosa.
William Thomas Garner	Madison.
John Samuel Godwin,	Barbour.
Harry Holgate,	Georgia.
Donald Calvin Hayden	South Carolina.
Norman Crapster Jone	Jefferson.
Daniel Gray Mayes,	Greene.
Orrin Joseph McCarley,	Chambers.
John Robert McNab,	Barbour.
Moses James McKinzie,	Lowndes.
Patrick Roland Cleburne McFarland, .	Lauderdale.
Andrew Hammil Milstead,	Elmore.
William Washington Moore,	Blount.
Lauriston Green Moore.	Lee.
Thomas Winfrey Oliver.	Montgomery.
Benjamin Glover Perry.	Greene.
Henry Lee Porter,	St. Clair.
Charles Moss Powell,	Bullock.
James Harris Pride,	Madison.
John Dupree Roquemore,	Montgomery.
George Noble Ross,	Lee.
Philip Jacob Roth,	Dallas.
William Pinckney Shuler,	South Carolina.
Robert Otis Stone,	Mobile.
William Collier Slaughter,	Madison.
Henry O'Neil James Speir,	Wilcox,
Allen Campbell Tyson,	Montgomery.
Urbie Lewis Weston,	Colbert.
Andrew Hearne Whitman,	Lowndes.
	Lee.
Cary Oscar Wright,	Lee.

Agricultural a	nd Mechanical College. 31
·	UMMARY.
Graduates, · · ·	7
First Class,	23
Second Class,	37
Third Class,	71
Fourth Class, Section A,	
Fourth Class, Section B,	43
Total,	
NUMBER OF STUDENT	S IN EACH SUBJECT OF STUDY.
English, 28	Biology, 17
History, . 12	
	87 Physics, 108
I Tollong	24 Natural History and
dorman,	58 Geology, 107
Liami,	17 Engineering, 28
Inchical Colored	20 Drawing, 184
i. Ollotoal Boolions,	
In a control of the c	in the state of th
Chemistry, 10	Military Tactics, 238
3	

MILITARY ORGANIZATIONS.

1889-'90.

President.

WM. LEROY BROUN.

Commandant.

J. B. McDONALD, 1st Lieut. 10th U. S. Cavalry.

Surgeon.

J. H. DRAKE, M. D.

Cadet Captains.

1. F. D. MILSTEAD,

3. JOHN MILTON,

2. B. C. ABERNETHY,

4. F. M. FONTAINE.

Cadet 1st Lieutenants.

1. W. G. HARRISON, QR. MR.

6. D. GILLIS,

2. R. E. NOBLE, ADJ.

7. J. W. BIVINS,

3. W. CALLAWAY,

8, W. G. COOK,

4. G. H. WARING, 5. G. W. EMORY,

9. P. W. TERRY, 10. R. H. POOLE.

Cadet 2d Lieutenants.

1. T. J. BROOKS,

2. W. B. MATTHEWS.

Cadet 1st Sergeants.

1. L. E. BAKER, 2. J. N. DEAN,

3. F. A. LUPTON,

4. B. F. HARWOOD.

Cadet Sergeants.

1. R. C. SMITH, SGT. MAJ. 2. W. A. MARSHALL, QR. MR. SGT.

3. C. L. HARE, COLOR SGT.

4. F. J. BIVINS,

5. W. H. OATES,

6. C. B. GLENN.

7. C. C. JOHNSON,

8. J. C. KIMBALL,

9. C. W. WILLIAMS,

10. J. A. COX

11. W.E. FITZGERALD,

12. S. J. BUCKALEW,

13. H. BENTON,

14. E. D. BURTS,

15. P. REYNOLDS.

16. E. C. POWERS.

Cadet Corporals.

1. F. PEABODY,

2. C. A. BROWN,

3. L. S. MUNFORD,

4. C. L. LEDBBETTER,

5. J. L. BURR, 6. J. E. GACHET,

7. H. B. CRAWFORD,

8. D. McDOUGALD,

9. C. D. BASSETT,

10. B. W. McCUTCHEN,

12. J. T. BULLEN,

11. H. F. DOBBIN,

13. G. W. DANTZLER. 14. D. L. WHETSTONE.

*15. R. WERNER,

*16. E. C. AVERYTT,

*17. R. F. HARE,

*18. A. S. AVERETT,

*19. G. A. THOMAS.

20. G. McCULLOH,

21. H. F. DEBARDELEBEN.

22. A. L. JONES,

23. W. B. CLAY,

24. R. D. MCALLISTFR.

Note.-Numbers indicate the relative rank of the officer.

* Denotes color corporal.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character. To enter the fourth class the applicant must be not less than fifteen years of age, and should be qualified to pass a satisfactory examination on the following subjects:

1. Geography and History of the United States.

2. English—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar and division into paragraphs.

3. Mathematics—(a) Arithmetic, including fundamental operations; common and decimal fractions; denominate numbers, the metric system; percentage, including interest and discount; proportion; extraction of square and cube roots. (b) Algebra, to quadratic equations.

Those applicants who desire to continue the study of Latin in the fourth class, should be qualified to pass a satisfactory examination in Latin grammar and the first books of Cæsar, in addition to the above subjects.

For admission to the higher classes, students should be prepared to stand a satisfactory examination on all the studies of the lower classes, as shown in the courses of study. Where opportunity has not been offered to pursue special studies required at this College, the system of equivalents will be adopted, and studies which denote an equivalent amount of discipline and training will be accepted as satisfactory.

ENTRANCE EXAMINATIONS.

Entrance examinations will be held on Wednesday, the 10th of September, the day on which the session opens. Candidates will also be examined during the session, when application is made for admission.

Applicants who are not prepared to stand the entrance

examinations for full admission to the fourth class are admitted to the sub-college department, which includes the fourth class, sec. B.

They will be advanced to full admission to the fourth class when they are qualified to pass satisfactorily the required examinations.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week, and in all give twenty-seven exercises per week required.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the second class, and those over twenty—one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty.

Regular students who fail to pass satisfactory final examinations in any one study become special students. They will be classed as regular students pursuing a course for a degree, whenever they can pass the examinations in those subjects in which they were found deficient.

Students who are not in full standing in all the prescribed studies of a class rank in the military department with that class in which they have the greater number of studies, and their names are so placed in the Catalogue.

COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences, with their applications; Agriculture, Biology, Mechanics, Astronomy, Mathematics, Engineering, Drawing, English, French, German and Latin Languages, History, Political Economy, Mental and Moral Sciences.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

There are three degree courses for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

- I. COURSE IN CHEMISTRY AND AGRICULTURE.
- II. COURSE IN MECHANICS AND ENGINEERING.
- III. GENERAL COURSE.

There are also two partial courses, each requiring two years for its completion:

- IV. Two YEARS' COURSE IN AGRICULTURE.
- V. Two YEARS' COURSE IN MECHANIC ARTS.

Course I. includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II. includes the principles and applications of the sciences that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the profession of engineering.

Course III. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses IV. and V. have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and take one of the regular degree courses.

Students who complete either of these two year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

Those who have completed the general course in each department of the school of Mechanic Arts, and are qualified, can enter upon a more extended technical course in Mechanical Engineering.

PREPARATORY COURSE IN PHARMACY.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all their time in the laboratories of these departments, under the immediate direction of the professors. With the excellent facilities offered in the chemical and botanical laboratories, scientific preparation of great value to the practical pharmacist can be obtained.

COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering, which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry, Assaying, Reduction of Ores, Mineralogy, Economic Geology, Mining Machinery, Drifting, Tunnelling, Timbering, Ore Dressing, and the various operations connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering and Natural History.

SPECIAL ONE YEAR COURSE IN AGRICULTURE.

Young men over twenty-one years of age who desire to study Agriculture will be permitted, without examination, to enter any class under the Professor of Agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied.

They can attend the lectures in Agriculture in all the classes, and engage in the practical work at the experimental station, in the field, stock-yard, dairy, garden, orchard and vineyard, etc., and may thus, in one year, acquire valuable practical knowledge of Scientific Agriculture.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this College, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in the following departments:

I.—CHEMISTRY.

II .- Engineering, Field Work, Surveying, etc.

III .- AGRICULTURE.

IV .- BOTANY.

V.—MINERALOGY.

VI.—Brology.

VII.—TECHNICAL DRAWING.

VIII.-MECHANIC ARTS.

(*)IX.—Physics.

^(*) It is designed to equip the Physical Laboratory for regular work next session

I.—COURSE IN CHEMISTRY AND AGRICULTURE.

The numerals opposite the subjects indicate the number of hours per week

FOURTH CLASS.

5. English. 5. English. 5. English. 2. History. 2. History. 2. History. 5. Mathematics. 5. Mathematics. 6. Mathematics. 3. Elementary Physics. 3. Elem'tary Physiology. 2. Agriculture. 3. Drawing. 3. Drawing. 6. Mechanic Art Lab'y. 6. Mechanic Art Lab'y. 6. Mechanic Art Lab'y. 6. Mechanic Art Lab'y.	First Term.	Second Term.	Third Term.	
3. Military Drill. 3. Military Drill.	 History. Mathematics. Elementary Physics. Drawing. 	 History. Mathematics. Elem'tary Physiology. Drawing. 	 5. English. 2. History. 6. Mathematics. 2. Agriculture. 3. Drawing. 	

THIRD CLASS.

2 0.00 20116.	secona Term.	Third Term.
 English. History. Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'y. Practical Agriculture. Military Drill. 	 English. History. Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Labyr 	 English. Botany (a). Mathematics. General Chemistry. Agriculture. Drawing.
		,

SECOND CLASS.

First Term.	Second Term.	Third Term.
 Industrial Chemistry. Agriculture. Natural History (lab'y) Military Tactics. Chemical Laboratory. Practical Agriculture. 	 A. Natural History(lab'y) Military Tactics. Chemical Laboratory. Practical Agriculture. 	 English. Physics. Industrial Chemistry. Agriculture. Natural History (lab'y) Military Tactics,

⁽a) Begins March 1st.

First Term

FIRST CLASS.

First Term.	Second Term.	Third Term.
 Military Science. Chemical Laboratory. 	 Military Science. Chemical Laboratory. 	 Political Economy. Moral Science. Astronomy. Natural History. Biology. Agricultural Chemistry Military Science. Chemical Laboratory. Practical Agriculture.

II.—COURSE IN MECHANICS AND ENGINEERING.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

Second Term.

First Term.

 English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Mathematics. El. Physiology. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Mathematics. Agriculture. Drawing. Mechanic Art Lab'y. Military Drill.
First Term.	THIRD CLASS. Second Term.	Third Term.
 English. History. Mathematics. General Chemistry. Agriculture (a). Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Mathematics. General Chemistry. Agriculture (a). Drawing. Mechanic Art Lab'y. Military Drill. 	 English. Botany. Mathematics. General Chemistry. Agriculture (a). Drawing. Mechanic Art Lab'y. Military Drill.

⁽a) For Agriculture may be substituted French or German or work in the Chemical Laboratory.

Third Term.

SECOND CLASS.

First Term.	Second Term.	Third Term.
 English or French. Physics. Mathematics. Engineering. Drawing. Military Tactics. Lab'y, Mineralogy. Field Work, Enging. Military Drill. 	 English or French. Physics. Mathematics. Engineering. Drawing. Military Tactics. Lab'y, Mineralogy. Field Work, Engin'g. Military Drill. 	 English or French. Physics. Mathematics. Engineering. Drawing. Military Tactics. Field Work, Engin'g. Military Drill.
The same of the sa	FIRST CLASS.	Y

First Term.	Second Term.		Third Term.
2. Natural History. 3. Mathematics. 5. Engineering. 5. Drawing.		 2. 3. 5. 5. 	Political Economy (b). Astronomy. Natural History. Mathematics. Engineering. Drawing. Military Science. Field Work, Engin'g.

III.—GENERAL COURSE.

The numerals opposite the subjects indicate the number of hours per week.

FOURTH CLASS.

First Term.	Second Term.	Third Term.
 3. English. 2. History. 5. Latin. 5. Mathematics. 3. Drawing. 6. Mechanic Art Lab'y. 3. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Agriculture. Mechanic Arts. Military Drill.

⁽b) For Eng. Lit. and Pol. Econ. may be substituted French or German.

THIRD CLASS.

First Term.	Second Term.	Third Term.
5. Latin.	5. Latin.	4. Latin.
2. History.	2. History.	3. Botany.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.	3. General Chemistry.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
First Term.	SECOND CLASS. Second Term.	Third Term.
3. English.	3. English.	3. English.
3. Physics.	3. Physics.	3. Physics.
3. Mathematics.	3. Mathematics.	3. Mathematics.
3. French.	3. French.	3. French.
3. Latin.	3. Latin.	3. Latin.
2. German.	2. German	2. German.
1. Military Tactics.	1. Military Tactics.	1. Military Tactics.
6. Laboratory Work (a)	TYY 1- (-)	6. Laboratory Work (a)
3. Military Drill.	3. Military Drill.	3. Military Drill.

FIRST CLASS.

First Term. 2. English Literature. 2. Mental Science. 2. Physics. 2. Natural History. 3. French. 3. German. 2. Latin. 1. Military Science. English Thesis. Second Term. 2. Political Economy. 2. Moral Science. 2. Astronomy. 3. French. 3. German. 2. Latin. 1. Military Science. English Thesis.	 Political Economy. Moral Science. Astronomy. Natural History. French. German. Latin. Military Science. English Thesis.
--	--

⁽a) The student may elect the Laboratory of any department for which he may be qualified.

IV.—TWO YEARS' COURSE IN MECHANIC ARTS.

FIRST YEAR.

		,
First Term.	Second Term.	Third Term.
6. Mechanic Art Lab'y.	 English. History. Mathematics. Elem'tary Physiology. Drawing. Mechanic Art Lab'y. 	5. English.2. History.6. Mathematics.
	CECCOM	

		SECOND YEAR.		
First Term. 3. English. 5. Mathematics. 3. Physics. 3. Drawing. 12. Mechanic Art Lab'y. 3. Military Drill.	5. 3. 3. 12.	Second Term. English. Mathematics. Physics. Drawing	5. 3. 3. 12.	Third Term. English. Mathematics. Physics. Drawing. Mechanic Art Lab'y. Military Drill.

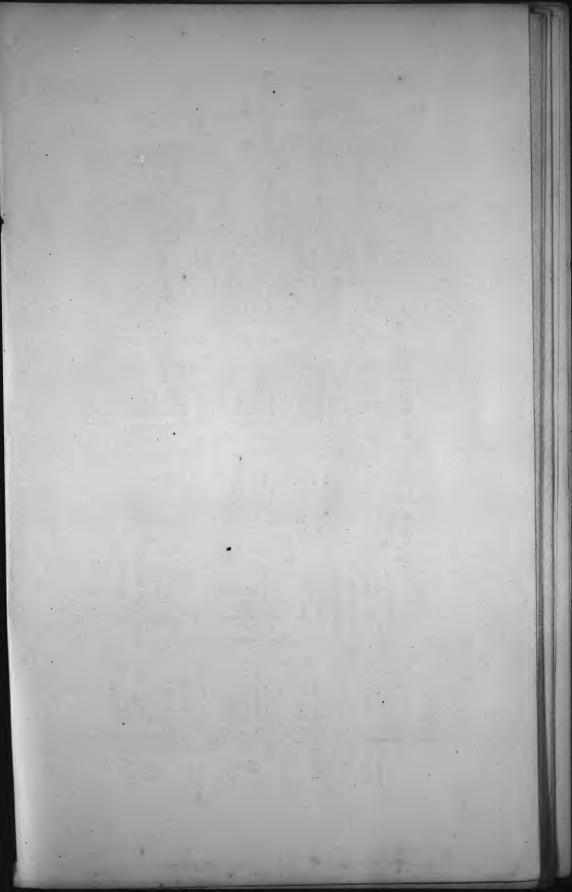
V.—TWO YEARS' COURSE IN AGRICULTURE.

FIRST YEAR.

First Term. 5. English. 2. History. 5. Mathematics. 3. Elementary Physics. 3. Drawing. 4. Mechanic Art Lab'y. 3. Military Drill. 2. Practical Agriculture.	3. Drawing. 4. Mechanic Art Lab'y.	 Drawing. Mechanic Art Lab'y.
---	------------------------------------	---

SECOND YEAR.

First Term. 3. English. 5. Mathematics. 3. General Chemistry.	CHEMINITY.	Third Term. 3. English. 5. Mathematics. 3. General Chemistry.
3. General Chemistry. 5. Agriculture.	3. General Chemistry.	5. Mathematics.3. General Chemistry.
3. Military Drill.	3. Military Dril!	 Agriculture. Practical Agriculture. Military Drill.



SCHEDULE OF EXERCISES.

HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
I. `18–9	4. Algebra. 3. Latin. 2. French. 1 a 2. Drawing. 4. Mech. Arts.	4. Geometry. 3. Latin. 2. German. 1 & 2. Drawing. 2. Botany.	4. Algebra. 3. Latin. 2. French. 1 & 2. Drawing. 2. Practical Agr. 4. Mech. Arts.	4. Geometry. 3. Latin. 2. German. 1.4.2. Drawing. 2. Botany.	4. Algebra. 3. Latin. 2. French. 1 & 2. Drawing. 2. Practical Agr. 4. Mech. Arts. 1. Biology.	Exercises in Elocution.
II. 9–10	4. English. 3. Chemistry. 2. Engineering. 1. Calculus. 1. French. 4. Mech. Arts.	4. History. 3. Agriculture. 2. Engineering 2. Botany. 1. Physics.	4. English. 3. Chemistry. 2. Engineering. 1. Calculus. 1. French. 4. Mech. Arts. 2. Practical Agr.	4. History. 3. Agriculture. 2. Engineering. 2. Botany. 1. Physics.	4. English. 3. Chemistry. 2. Engineering. 1. Biology. 1. Calculus. 1. French. 2. Latin. 4 Mech. Arts. 2. Practical Agr.	Military Drill.
	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
III. 10–11	3. English. 2. Physics. 1. German. 1. Engineering. 1. Biology.	3. History (1.2). 3. Botany (2.3). 2. Agriculture. 2. Latin. 1. Engineering. 4. English.	3. English. 2. Physics. 1. German. 1. Engineering. 1. Biology.	3. History (1. 2). 3. Botany (2. 3). 2. Agriculture. 2. Latin. 1. Engineering. 4. English.	3. English. 2. Physics. 1. German. 1. Engineering.	4. Mech. Arts. 1 Sec. 3. Mech. Arts. 2 Sec. 1.2. Machine Work. Laboratory. Field Work, Eng'ng.

IV. 11–12	4. Physics (1). 4. Physiology (2). 4. Agriculture (3). 4. Latin. 3. Drawing. 2. Mathematics. 2. Chemistry. 1. English (1). 1. Political Economy (2.3).	4. Mechanic Arts 1 Sec 4. Latin. 3. Drawing. 2. Mathematics. 1. Chemistry. 1, Latin.	4. Physics (1). 4. Physiology (2). 4. Latin. 4. Agriculture (3). 3. Agriculture (1. 2). 2. Mathematics. 2. Chemistry. 1. English (1). 1. Political Economy (2. 3).	4. Mechanic Arts I Sec 4. Latin. 3. Agriculture (3). 2. Mathematics. 1. Chemistry. 1. Latin.	4. Physics (1). 4. Physiology (2). 4. Agriculture (3). 4. Latin. 3. Drawing. 2. Mathematics. 2. Chemistry. 1. Military Science.	4. Mech Arts 1 Sec. 3. Mech. Arts 2 Sec. 1 4 2. Machine Work, Field Work, Eng'ng. Laboratory
V. 12-1	4. Drawing. 3. Mathematics. 2. English.	4. Mechanic Arts 1 Sec 3. Mathematics. 2. English. 1. Geology.	4. Drawing. 3. Mathematics. 1. Mental Science.	4. Mechanic Arts 1Sec 3. Mathematics. 2. English. 1. Geology.	4. Drawing. 3. Mathematics. 1. Mental Science.	Mechanical Arts.
P. M.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
VI VII	4. Mech. Arts 2 Sec. 3. Mech. Arts 1 Sec. 3. Field Work Agr. 1 & 2. Laboratory. 1 & 2. Field Work Enging.	3. Mech. Arts 2d & 3d Sec. 2. Mineralogy Laboratory. 2. Mech. Arts. Military Drill.(*)	4. Mech. Arts 2 Sec. 3. Mech. Arts 1 Sec. 3. Field Work Agr. 142 Laboratory Chem Exer's in Elocution. 1 & 2. Field Work Eng'ng.	3. Mech. Arts 2.1 & 3d Sec. 2. Mineralogy Laboratory. 1.2 Mech. Arts. Military Drill.(*)	4. Mech. Arts 2 Sec. 3. Mech. Arts 1 Sec. 3. Field Work Agr. 1&2. Laboratory Chem 1&2. Field Work Enging Exer's in Elocution.	

Chapel services daily at 7.50 A. M. Numbers prefixed denote classes, affixed (1), (2), (3) denote terms. *From 4.30 to 5.30 P. M.

DEPARTMENTS OF INSTRUCTION.

PHYSICS AND ASTRONOMY.

PRESIDENT BROUN.

The instruction is given by recitations from text-books and lectures, illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics, treated graphically.

This is followed by a full discussion of Molecular Mechanics; while due prominence is given to principles, frequent reference is made to the applications of science.

The studies of the second class include the properties of matter, units of measure, force, work, energy, kinematics, kinetics, mechanic powers, friction, pendulum, molecular forces of solids, liquids and gases, theory of undulations, heat, electricity, magnetism, etc.

The studies of the first class include Electricity and its applications; Optics, Astronomy and Meteorology.

Text-Books.—In Physics, Atkinson's Ganot. In Astronomy, Young.

MATHEMATICS.

PROF. SMITH.

The general course for the first two years embraces the first year, Algebra and Geometry, six books; second year, Solid Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration.

Two objects are sought to be attained: First, mental discipline; second, a thorough knowledge of the principles of pure mathematics and their practical applications.

Theoretical and practical instruction is given in the third class in farm, town and government land surveying, dividing land, mapping, plotting and computing of areas, etc.; also in the theory, adjustment and use of instruments.

The class, in sections of six or eight, devote three afternoons a week during the second and third terms to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering course. Analytical Geometry, Descriptive Geometry and Calculus are pursued in the Engineering course. Especial attention is given to their practical applications.

During the entire course, instruction in text-books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with the application of principles and formulæ.

TEXT-BOOKS.

Wentworth's Algebra, Wentworth's Geometry, Schuyler's Surveying, Wentworth's Analytical Geometry, Waldo's Descriptive Geometry, Taylor's Calculus, Olney's and Wentworth's Trigonometry.

NATURAL HISTORY AND GEOLOGY.

PROF. MELL.

Geology.—This subject is studied in the senior class, and extends through the entire session. Special attention is given to the geology of Alabama, and many illustrations are drawn from the coal and iron fields and other natural deposits of mineral in the State. The origin of ore deposits, mineral springs and geological relations of soils are carefully studied.

There is also a course of advanced work in practical Geology for the post-graduate students. This subject is pursued by applicants for degrees of Master of Science and Mining Engineering.

The second class in Engineering spend two terms in Mineralogy and blow-pipe work.

Botany.—The students of the third class begin the study of Botany the first of March and continue it through the session. Analytical work is made an important feature. This class is provided with plants from the neighboring fields, and taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section. All students of the third class are required to study Botany.

In the second class, in the course of Chemistry and Agriculture, an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope in the preparation of specimens showing plant structure; this work is sufficient to familiarize the students with the methods of plant building and cellular organization. Excellent microscopes of the most improved patterns, and all the necessary chemicals and apparatus for preparing and mounting vegetable tissues, are used by the students. A dark room is attached to this laboratory for micro-photographic work.

TEXT-BOOKS.

Le Conte's Geology, Gray's Botany, Dana's Mineralogy, Goodale's Physiological Botany, Nelson's Herbarium and Plant Descriptions.

ALABAMA WEATHER SERVICE.

The United States Signal Service has established in Alabama a State system for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled from reports sent the Director from numerous stations scattered throughout the State. An opportunity is thus offered the students in Meteorology of becoming familiar with the system so long successfully operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

PROF. LANE.

CIVIL ENGINEERING.

The special studies of this department begin in the second class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics. They are as follows:

Second class.—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, location and construction of common roads and railroads.

First class.—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars and their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings; solid and open built beams; classification, construction and mechanics of masonry; foundations on land and in water; bridges and roofs of different kinds; their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads; navigable, irrigation, and drainage canals; river and sea-coast improvements. Theory and practice are combined in both classes.

TEXT-BOOKS.

Second Class.—Henck's Field Book for Railway Engineers, Gillespie's Roads and Railroads, Parson's Track.

First Class.—Wheeler's Civil Engineering, Von Ott's Graphic Statics.

DRAWING.

All of the students of the third and fourth classes are required to take Drawing; but only the students in Mechanics and Engineering in the first and second classes. The fourth class is taught linear and free-hand drawing. The third class is instructed in the principles of orthographic and isometric p rojections, shade and shadows, practical, perspective and tinting. In the second class the instruction embraces a more extended course in orthographic and isometric drawing, perspective, shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings and blue prints. The first class makes topographical drawings, and drawings of machines, roofs, bridges, etc., to different scales and blue prints. Plans, profiles and sections of railroad surveys complete the instruction in this department.

TEXT-BOOKS.

Fourth Class.—Kitchener's Geometrical Note Book, Thorne's Junior Course in Mechanical Drawing, and Davidson's Model Drawing.

Third Class.—Davidson's Projections, Davidson's Practical Perspective, Keuffel & Esser's Alphabet.

Second Class.—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the College, Keuffel & Esser's Alphabet.

First Class.—French, English and American Plates belonging to the College, Keuffel & Esser's Alphabet.

AGRICULTURE.

PROF. NEWMAN.

The course of instruction in this department embraces: I., soils; II., plants; III., domestic animals. In the fourth class twenty lectures, covering the third term of the session, treat of soils, their classification, physical defects and remedies, causes of diminished fertility, and the means used to protect them from waste and restore fertility, the theory and practice of surface and sub-drainage, etc. The subject is treated with special reference to the different classes of soil in Alabama, omitting as far as possible

questions involving a knowledge of Chemistry and Botany—subjects not taught in the fourth class.

In the third class, in addition to the discussion of the physical properties and mechanical treatment of soils, the methods of studying their chemical defects and their remedies are discussed. The sources of the important elements of plant food, and their use upon different soils and plants, the restoration of humus, saving home manures, composts, commercial fertilizers, the office of different chemical elements in plant development—the relations of plant growth to soil and atmosphere, the theory and practice of restoration of crops, terracing and grading to prevent washing, plows and plowing—indeed everything connected with tilling the soil passes under review as foundation work.

Southern agriculture is then treated in the concretethe history, nature and cultivation of each of our field crops discussed as regards their adaptation to and treatment upon the soils of Alabama. This occupies the first and second terms. The third term is devoted to domestic and commercial horticulture, poultry, sheep, cattle-breeding and management of the dairy, etc. In the second class stock breeding and management is completed, and a thorough course in pomology, including the propagation of nursery stock, planting, manuring, pruning, cultivating, harvesting and marketing every species of fruit, treated theoretically and practically, occupies the remainder of the session. Barry's Fruit Garden, corrected for our latitude, is used in this class. In the senior class a series of lectures is delivered upon political economy in its special relations to the pursuit of agriculture and the relations of capital and labor devoted to agriculture; the selection, purchase, equipment and management of a farm, the ratio between fixed and working capital, the employment and management of labor, etc., etc. The science of cattle feeding occupies the second term, and landscape gardening, treated with special reference to the improvement of country homes, occupies the remainder of the session.

CHEMISTRY.

PROF. LUPTON. ASSISTANT, L. W. WILKINSON.

Instruction in this department embraces-

- 1. A course of lectures in General Chemistry.
- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each course of lectures, for the practice of chemical analysis and chemical research.
- 1. Course in General Chemistry: This consists of a series of lectures (three per week) extending throughout the entire session, and includes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements, with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

REFERENCE BOOKS.

- Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cook's Chemical Philosophy, Chemical Journals.
- 2. The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures to the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, heat-

ing, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

REFERENCE BOOKS.

Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology, Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week), and includes a thorough discussion of the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock and the various operations carried on by the intelligent and successful agriculturist.

BOOKS OF REFERENCE.

Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Departments and Stations.

4. The Course of systematic Laboratory Work: This course of practical work in the laboratory is carried on in connection with each course of lectures, and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The laboratories, which are open from 9 A.M. to 5 P.M. during six days in the week, are amply supplied with everything necessary for instruction in chemical manipula-

tion, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the Chemical Laboratory is furnished with a work table, a set of re-agent bottles, and the common re-agents and apparatus used in qualitative and quantitative analysis. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

BOOKS USED.

In Qualitative Analysis-Jones, Fresenius, Plattner.

In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying.

In Agricultural Chemical Analysis—Church, Frankland. Official methods of the Association of Agricultural Chemists.

.

(For description of the building, see page 11.)

CHEMICAL LABORATORY.

The Chemical Apparatus recently purchased for the new laboratory consists of a full supply of the latest and most approved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to first-class laboratories, a new and improved Schmidt and Hænsch's Polariscope has been imported, two short-arm Becker Balances of latest pattern, Bunsen Spectroscope, Zeiss' Microscope, and other instruments for delicate and accurate work.

ENGLISH AND LATIN.

PROF. THACH.

ENGLISH.

In this department the students are carried through a systematic course of study in the English Language and literature In the courses of study which do not include

the ancient classics, a full course in English is especially important. It is therefore designed, as much as the time allotted permits, to familiarize these students by frequent exercises with the standard authors of the language.

The course of study is as follows:

Fourth Class.—Five hours a week; study of grammar, the principles of special and general composition, with frequent brief papers illustrating the laws studied.

Whitney's Essentials, Lockwood's Lessons in Rhetoric.

Third Class.—Three hours a week; study of style, analysis of selections of prose and poetry, frequent essays on literary and historic themes.

Genung's Rhetoric, Scudder's American Poems, Abbott's How to Write Clearly. Weekly exercises in declamation are required of this class.

Second Class.—Three hours a week; critical study of English Classics, History of English and American Literature, Logic, Essays.

Shaw's History of English Literature, Abbott's English Lessons, Hale's Longer English Poems.

First Class.—Two hours a week, first term. Principles of criticism and study of English Classics; second and third terms, Political Economy. Two hours a week, first and second terms, Mental Science; third term, Moral Science.

Shakespeare's Plays, Chaucer's Canterbury Tales, Wayland's Science of Wealth, Hickok's Mental Science, Gregory's Christian Ethics.

Three original orations are required during the year of each student in the first and second classes.

LATIN.

The subjects taught in this department are the Latin Language and Literature.

The modes of instruction are by translation from the Latin texts into English and from English into Latin.

The constant use of black-boards adds much to the progress and accuracy of the student.

A systematic course of exercises, illustrative of the principles of Latin etymology and syntax, is carried on in connection with the reading of the authors prescribed. Special attention is given to English derivatives from the Latin, and to the corresponding idioms of the two languages.

The progress of the student is valued not so much by the number of books read, as by his ability to read Latin and explain the principles of interpretation and construction.

Latin author read:

Fourth Class.—Virgil, Cicero's Orations, Grammar and Composition.

Third Class.—Cicero's Composition.

Second Class.—Tacitus, Horace, Selections from Latin poets and Prose writers, Classical Literature.

First Class.—Cicero's Tusculan Disputations, Terence, History of Latin Literature.

MECHANIC ARTS.

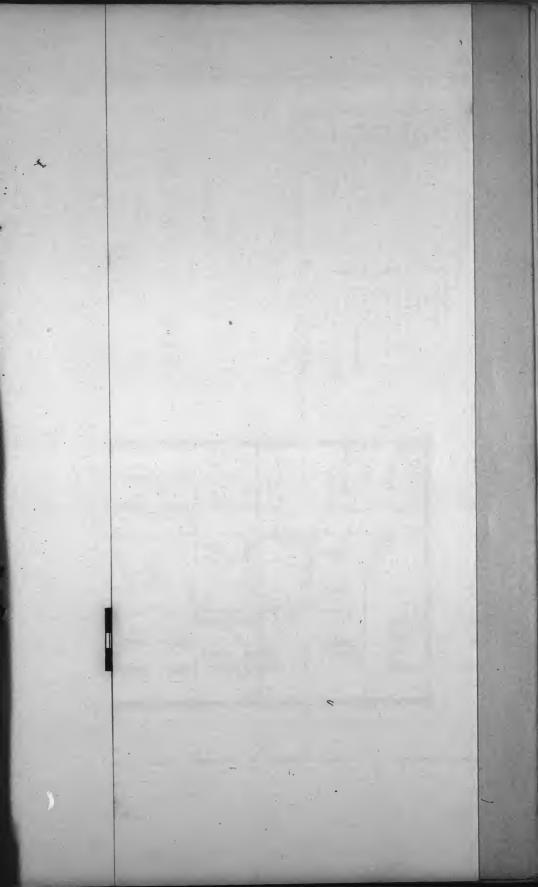
G. H. BRYANT, B. S. INSTRUCTOR.

J. J. WILMORE, B. A. BLAKEY, ASSISTANTS.

The course in Manual Training covers three years, as follows: First year, wood-working—carpentry and turning; second year, pattern-making and foundry and forge work—moulding, casting and smithing; third year, machine shop—chipping and filing and machine work in metals.

This course is obligatory upon the students of the three lower classes (5th, 4th and 3d). For satisfactory reasons a student may be excused from this laboratory work by the Faculty.

The full work of each class is six hours per week, in three exercises of two hours each.



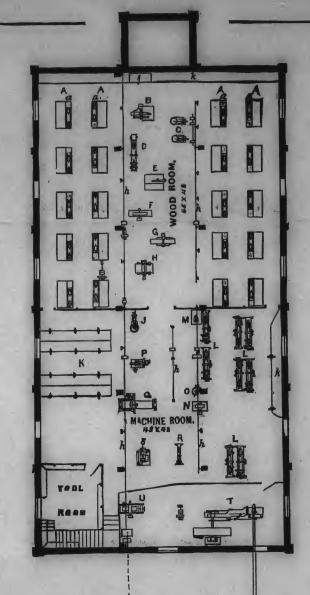


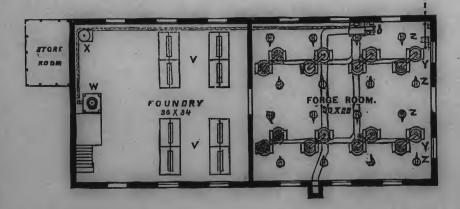
ALA. POLY. INST.

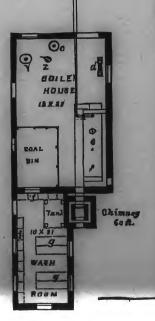
BCALE 16-1'

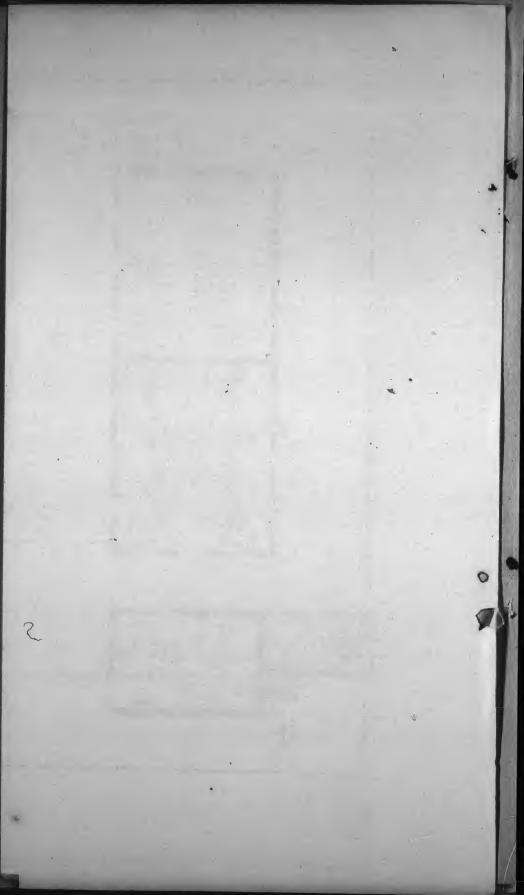
INDEX

- SPEED LATHE MILLING MACHINE ENGINE DYNAMO MOULDING BENGHER WORK BENCHES
 BAND SAW
 BGROLL SAW
 PATTERN LATHS
 CIRCULAR SAW
 GRINDSTONS
 BUZZ-PLANER
 SURFACE "
 DRILL PHESS
 EILING BENCHES
 ENGINE LATHES
 BENCH GRINDER
 TOOL "
 POST DEILL
 BRAPER
 FLANER WORK BENCHES MOULDING BENCHE
 CUPOLA
 BRASS FURNAME
 FORGES
 ANVILS
 WOOD LATHES
 BLOWERS
 HEATER
 PUMP BOILER CLOSETS SINKS
 - h BHAFT LINES.









The power for running the apparatus in this department is derived from a twenty-five horse power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler. A steam pump and a heater for the feed water form a part of the steam apparatus. For the steam plant a substantial brick boiler-house and chimney have been erected.

The equipment for the wood-working shop comprises the following: 20 double wood-working benches, each with complete set of carpenter's tools; 20 turning-lathes, 10-inch swing, each with complete set of tools; 1 double circular saw; 1 band saw; 1 board-planing machine; 1 buzz planer; 2 scroll saws (power); 1 large pattern-maker's lathe, 16-inch swing; 1 36-inch grindstone. In addition to these, the tool-room is supplied with a variety of extra hand-tools for special work.

The equipment for the foundry consists of moulding-benches for 12 students, each supplied with a complete set of moulder's tools; a 14-inch cupola, with all modern improvements, capable of melting 1,000 pounds of iron per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of crucible tongs, etc. Also a full supply of ladles, large and small moulding flasks, special tools, etc.

The forge shop equipment consists of 16 hand-forges of new pattern, each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola), and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke-flues and forces it out through the chimney.

The machine tools in the machine department are as follows: 6 engine-lathes (screw-cutting), 14-inch swing, 6-foot bed; 2 engine-lathes, 16-inch swing (one with taper attachment); 1 speed lathe, 10-inch swing; 1 20-inch drill-press (power-feed); 1 15-inch shaper; 1 22-inch x 22-inch x 5-foot friction planer; 1 universal milling machine; 1 corundum tool-grinder (14-inch wheel); 1 bench grinding-machine (small); 1 post drill press (14-inch). A part of this room is set apart for vise-work—chipping and filing—and benches for 12 students are provided, each with vise and sets of files, chisels, hammers, etc. In the tool-room is to be found a good supply of machinists' tools for general shop use, such as lathe and drill chucks, drills, reamers, taps, dies, gauges, files, cutting and measuring tools, and special appliances for machine work, etc.

The nature of the work in each department is as follows:

1ST YEAR.

I. A course of carpentry (hand work covering the first term and part of the second, or about five months).

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, different kinds of joints, timber-splices, cross joints, mort e and tenon, mitre and frame work, dovetail work, comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof trusses, etc.

II. A course in turning, extending through the three months of the third term. The lessons comprise, first, nature and use of lathe and tools, plain straight turning caliper work to different diameters and lengths, simple and compound curves, screw plate and chuck-work, hollow and spherical turning.

2D YEAR.

I. A course in pattern-making, covering the first half of the first term. The work includes a variety of examples of whole and split patterns, core work, etc., giving the students familiarity with the use of patterns for general moulding.

II. A course in moulding and casting in iron and brass occupying ten weeks. The work consists for the most part of small articles, such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two part flasks; core work is also given, and some three-part flask and some dry sand work is introduced.

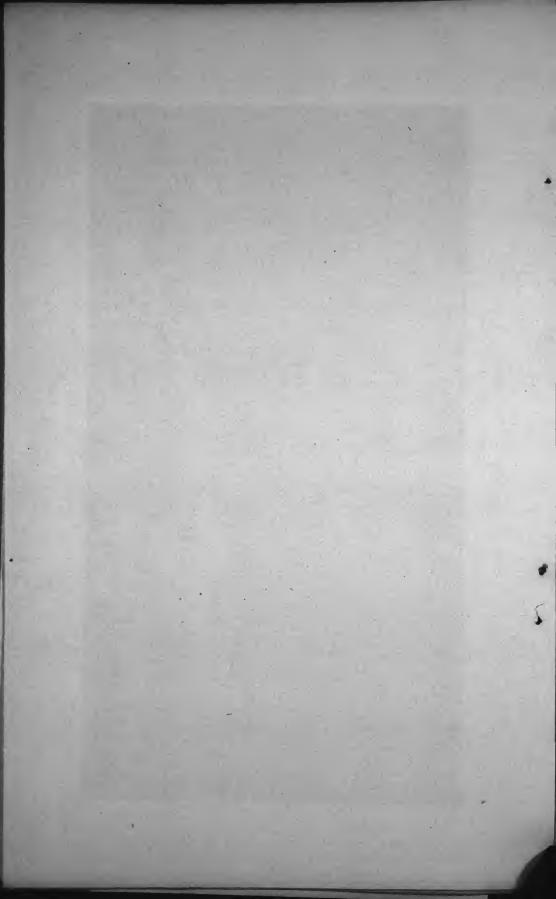
The same patterns which have been previously made by students are used, besides special patterns for occasional larger or more complicated work. Instruction and practice is given in working the cupola, each student in turn taking charge of a melting.

III. A course in forge work in iron and steel occupying



VIEWS OF MACHINE ROOM,

LABORATORY OF MECHANIC ARTS.



the remainder of the year. The lessons are arranged so that the students, in making the series of objects, become familiar with the nature of the metals and the successive steps in working them by hand into simple and complex forms, as drawing, upsetting, bending, cutting, punching, welding by various methods, tool-forging, tempering, hardening, etc.

In connection with this second year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel, brass, etc.

3D YEAR.

I. A course in chipping and filing covering the first term. The lessons comprise work on cast and wrought iron; chipping to line on flat and curved surfaces, key-seating, etc.; filing and finishing to line (straight and curved), surface filing and finishing, fitting, slotting, dove-tail work, sliding and tight fits, sawing, pin, screw and key filing, surface finishing with scraper, etc.

II. Machine work occupying the remainder of the year. The work includes cast and wrought iron, steel and brass: Turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling—both in lathe and drill press—reaming, boring, screw cutting in lathe and with taps and dies, planing, slotting, etc., with planer and shaper, milling various forms with the milling machine, fitting, grinding, polishing, etc.

Lectures are also given during the year on various subjects connected with machine work in metals: Such as forms, construction and use of the various machines, cutting tools, gearing, gauges, screw threads, etc. During the last term some piece of construction work is given the classes.

Instruction is generally given, first, by black-board drawings or sketches which the student copies, with di-

mensions in note-book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class, second by inspection and direction at the bench by the instructor.

Students desiring to pursue the study of applied mechanics beyond the above course will take a special course of Steam and Mill Engineering, supplemented by experiment and practice with the apparatus, including steam generation and the forms, construction and use of steam-boilers and accompanying apparatus; steam as a motive power, and forms, construction and use of the steam engine, with the study and use of the indicator; trans. mission of power—shafting, belting, gearing, etc.; also elementary theoretical mechanism.

BIOLOGY.

PROFESSOR ATKINSON.

Elementary Biology. Three lectures a week during the second term will be given to the fourth class upon the elementary principles of biology. The course will include a discussion of the fundamental physiological properties of animal and plant life. The lectures will be supplemented by experiments, demonstrations and microscopic illustrations before the class.

Practical Biology. This subject is presented by lectures twice a week to the senior students in Agriculture and Chemistry. The first part of the year will be devoted to the study of fungi, giving prominence to those which cause diseases of cultivated plants. This will be followed with the study of insects, including those injurious and beneficial to Agriculture. Special attention will be given to methods employed in combating the attacks of fungi and insects upon plants.

The reference books will be announced to the classes. The department contains a carefully selected library of the standard works on biology and many rare and valuable works, besides current periodicals adopted to aid in the special investigations carried on in the laboratory.

MODERN LANGUAGES AND HISTORY.

C. H. BARNWELL, JR., ADJUNCT PROFESSOR.

MODERN LANGUAGES.

The following regular courses are given in French and German:

French.—First Year: Three recitations a week. During this year the principal object is to acquire a thorough knowledge of the elements of grammar, and a correct pronunciation, together with facility in translating ordinary French. Reading is begun at an early stage, and the principles of grammar are illustrated and impressed by frequent exercises in rendering English into French.

Second Year: Three recitations a week. During this year, the same line of work is pursued as that begun in the previous year. More difficult and varied French is read, and careful instruction is given upon the laws of grammar and the construction of the language.

German.—Two Years: Two recitations a week the first year, three a week the second year. In this course the aim and the methods are similar to those in French.

Special Courses.—In addition to these regular courses, additional classes are formed for special study in the literature, or for special study in any particular direction desired, when the number of students desiring it is sufficient.

TEXT-BOOKS.

French—First Year: Joynes-Otto's French Grammar and Introductory Reader.

Second Year: Super's French Reader, Jeanne d'Arc, and d'Avare. Heath's French Dictionary recommended.

German—First Year: Joynes-Meissner's German Grammar, and Joynes' Reader.

Second Year: Hauff's Karavane, Peter Schlemihl, Die Journalisten, Heath's German Dictionary recommended.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that History is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. This causal relation of events is closely studied and the students are taught to investigate for themselves the growth of ideas, and to trace particularly their development in the United States, so as to acquire a practical knowledge of the history and present workings of our government and institutions. The knowledge acquired is rendered clear and permanent by frequent comparison of customs and laws, and also by diagrams, charts and maps. Instruction is given by lectures and text-books.

The course covers one year and a part of the next, and embraces the History of the United States, studies on our government and its institutions and on general history.

TEXT-BOOKS.

First year: Johnston's U.S. History, and Swinton's "Outlines of the World's History."

Second Year: Myers' Mediæval and Modern History.

MILITARY SCIENCE AND TACTICS.

LIEUT. J. B. McDONALD, U. S. ARMY, COMMANDANT.

Military Science and Tactics are required to be taught in this institution by law. This law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms practical instruction in the School of the Soldier, of the Company and of the Battalion; also in Guard Mountings, Inspections, Dress Parades, Reviews, etc.

Under section 1225, U. S. Revised Statutes, the College is provided with modern Cadet rifles and accourrements and two pieces of field artillery. Ammunition for practice firing is used under the direction of an experienced officer.

The following uniform of standard Cadet gray cloth has been prescribed for dress, viz.: Coats and pants as worn at West Point, with sack coat for fatigue, dark blue Cadet cap. A neat and serviceable uniform can be obtained here at \$18. This is less expensive than the usual clothing. All students are required to wear this uniform during the session.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one Captain, two 1st Lieutenants, one 2d Lieutenant, and with a proper number of Corporals. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are confirmed by the President on nomination of the Commandant.

The Second Class recites once a week in the United Stats Infan try Tactics.

The First Class recites once a week in "Notes on Military Science."

POST-GRADUATE DEGREES.

There are three Post-Graduate Degrees—MASTER OF SCIENCE, MINING ENGINEER and CIVIL ENGINEER.

A Post-Graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one year's residence at the College, spent in the successful prosecution of a course of study in applied science prescribed by the Faculty.

Candidates must also present to the Faculty a satisfactory thesis, showing independent investigation upon some subject pertaining to their course of study, and must pass a satisfactory examination on the course of study prescribed. The examination is written, and also oral, in presence of the Faculty.

Applicants for Post-Graduate Degree are, by order of the Board, permitted to matriculate without payment of fees.

They are subject to the general regulations as other students, but are exempt from all military duty.

Resident graduates, who are not candidates for a degree, are permitted to matriculate and prosecute the studies in any department of the College, except chemical laboratory, without payment of regular fees.

DISTINCTIONS.

Distinctions are awarded in the different subjects of each class to those students whose grade for the entire year is above 90 per cent.

Certificates of Distinction are awarded in public on Commencement day to those who obtain an average of 90 per cent. in all the prescribed studies of a regular class, and also to those who obtain three distinctions in the fourth class, four in the third or second class, and five in the first class, provided they have satisfactorily passed all the regular examinations of that session.

TOUR OF OBSERVATION.

At the close of the second term an opportunity will be given members of the senior class to inspect, under the supervision of a member of the Faculty, some of the mines, furnaces and manufactories of Alabama, accessible to the College.

This inspection will prove an object lesson of value to students who have prosecuted studies allied to engineering.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction, in a form adapted to permanent preservation.

From the record a monthly circular, or statement, is sent to the parent or guardian.

EXAMINATIONS.

Written recitations, or monthly examinations on the studies of the month, are held at the option of the professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination, can be promoted to full standing to the next higher class only on satisfactory examinations at the opening of the next session.

It is required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges

will, therefore, not be granted within six weeks of the examination, except in extreme cases.

Examinations for degrees or certificates of proficiency embrace the entire subject of study in the course.

LIBRARY.

A commodious room in the new building has been appropriated to the library. Having suffered severely by the fire, it now needs a large supply of books, and the hope is entertained that these will soon be provided. When this is done, it is designed to make it an important educational feature of the college. At present it has valuable reference books and a limited number suitable for students. It is open daily, when students are permitted to select books under prescribed regulations.

DISCIPLINE.

The government of the College is administered by the President and Faculty, in accordance with the code of laws and regulations enacted by the 'l'rustees.

Attention to study, and punctuality in attendance on recitations and all other duties, is required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapacitated to bear arms, are required to engage in these exercises.

The drills are short, and the duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the Cadet are manifest.

Privates of the first class may be excused by the President from all military drills, and also students over twenty-one years of age, who are permitted to matriculate and devote their time to one special study, as chemistry, agriculture, etc.

RELIGIOUS SERVICE.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings exerts a wholesome Christian influence among the students of the College.

The following students are the officers of the Associa-

W. G. Harrison, President.

J. F. Wilkinson, Vice-President.

D. Gillis, Corresponding Secretary.

J. W. Bivins, Treasurer.

LOCATION.

The College is situated in the town of Auburn, sixty miles east of Montgomery, on the line of the Western Railroad.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty one feet above tide water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

THESIS.

Each applicant for a degree is required to write and submit to the Faculty a thesis on a subject of immediate relation to some study of his course, and deliver the same at Commencement, if required by the Faculty.

This thesis must be given to the Professor of English by the first of May.

LITERARY SOCIETIES.

There are two Literary Societies connected with the College—the Wirt and Websterian. Each has a hall in the College building.

These Societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

EXERCISES IN ELOCUTION.

On every Saturday morning, immediately after chapel services, oratorical exercises in declamation and in original orations are conducted by the Professor of English, in presence of the Faculty and students.

The first and second terms the students of the third class

are exercised in declamation.

The second term the members of the second class deliver original orations.

The third term the members of the first class read essays or deliver original orations.

SOCIETY OF THE ALUMNI.

The Annual Alumni Oration, by a member of the Society, is delivered in the chapel during Commencement week. The following are the officers of the Society:

T. H. Frazer, M. D., President.

J. C. Street, Vice-President.

C. C. Thach, Treasurer and Secretary.

The Alumni Oration will be delivered next Commencement by J. C. Street.

BOARDING.

The College has no barracks or dormitories, and the students board with the families of the town of Auburn, and thus enjoy all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of order.

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President.

EXPENSES.

Incidental fee, per half session	\$ 2	50
Library fee, per half session	1	00
Library fee, per hair session	3)	50
Surgeon's fee, per half session	14	00
Board per month, with fuel and lights \$12 to	14	00

These fees are payable, \$6.00 on matriculation and \$6.00 on February 1st. By order of the Board no fees can be remitted.

There is no charge for tuition.

For students entering after January 1st, the fees for half session only are required.

CONTINGENT FEE.

A contingent fee of five dollars is required to be deposited by each student on matriculation, to cover any special or general damage to College property for which he may be liable.

At the close of the session the whole of the contingent fee, or the unexpended balance, will be refunded to the student.

AMOUNT OF DEPOSIT.

Each student on entering College should deposit with the Treasurer not less than \$50.00, to pay the expenses of fees, one month's board, uniform, books, etc.

UNIFORM.

A uniform of Cadet gray cloth is prescribed which all under graduate students are required to wear during the session. The uniforms are made at Auburn, of cloth manufactured at the Charlottesville mills. The suit, including cap, costs about \$19.00; the dress coat \$10.00 to \$11.00. It is neat and serviceable and less expensive than ordinary clothing.

SURGEON.

The Surgeon is required to be present at the College daily, to visit the Cadets at their quarters who are reported sick, and to give all requisite medical attention without other charge than the regular Surgeon's fee, paid on entering College.

FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the Treasurer of the College all funds desired for sons or wards, whether for regular charges of College fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., when approved.

When funds are deposited, checks are drawn on the Treasurer of the College by the cadet to pay his necessary expenses. These checks are paid only when approved by the President. This approval is given only for necessary expenses, as stated in the Catalogue, unless specially requested in writing by the parent.

The attention of parents is called to the following law enacted by the Trustees:

When a student matriculates, all money required to pay the College fees and other moneys in his possession must be deposited with the Treasurer, unless the President shall receive special instruction from the parent and guardian to the contrary.

ACADEMIC YEAR.

The Academic Year commences on Wednesday, 10th September (second Wednesday after first Monday), and ends on Wednesday, 10th June (the second Wednesday after the first Monday), which is Commencement day.

It is divided into three terms. The first term extends from the opening of the session to the 23d of December; the second term begins January 1st and ends March 28th; the third term continues from March 30th to the close of the session.

RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the Trustees:

That in view of increased facilities for instruction in Agriculture and the technical departments of education now possessed by this College, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the Faculty are authorized, in addition to the legal name of this College, to print on the Catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the course of education now provided for.

DONATIONS TO MUSEUM.

Valuable contributions have been made to the museum by the following persons:

Mr. Albert Strassburger, of Montgomery, a number of excellent specimens of minerals to be added to the "Strassburger collection."

The Smithsonian Institute, by the request of Senator John T. Morgan, fifty-seven specimens of well selected minerals

The Department of Agriculture, pressed and mounted specimens of grasses and grapes.

Mr. V. Frankperter, of Montgomery, Ala., a specimen of quartz

Dr. Jerome Cochran, of Montgomery, Ala., specimens of Indian relics and sea-shells donated to the "Strassburger collection."

Mr. George H. Lamar, specimens of crystalized gypsum from the West.

42 vols.

University of Alabama, a collection of fossils from the Tertiary of the State.

Mr. Erskine Ramsay, mining engineer of the Pratt mines, specimens of diamond drill borings and coal specimens.

DONATIONS TO LIBRARY.

Smithsonian Institute, Reports, 4 vols.

Chief of Engineers, Reports of Department, 2 vols.

Secretary of Interior, Education, Coasts and Geodetic Survey, etc.,

Hon. Jno. T. Morgan, Public Documents, 8 vols. Hon. James L. Pugh, Public Documents, 12 vols.

Hon. W. C. Oates, Congressional Record, War of Rebellion, etc., 10 vols.

CALENDAR 1890-91.

Session begins	Wednesday, Sept. 10, 1890.
Examination for admission	. Wednesday, Sept. 10, 1890.
First term begins	. Wednesday, Sept. 10, 1890.
First term ends	
Second term begins	Thursday, Jan 1, 1891.
Second term ends	Saturday, March 28, 1891.
Third term begins	Monday, March 30, 1891.
Third class exercises	
Final examinations begin	Monday, May 18, 1891.
Commencement sermon	Sunday, June 7, 1891.
Annual meeting of Trustees	Monday, June 8, 1891.
Military exercises	Monday, June 8, 1891.
Celebration of Literary Societies 8 P. M	Monday, June 8, 1891.
Second class celebration	Tuesday, June 9, 1891.
Alumni oration	Tuesday, June 8, 1891.
Address before Literary societies	
	[June 10, 1891.
Commencement day	.Wednesday, June 10, 1891.

业

AGRICULTURAL

→|Experiment Station|

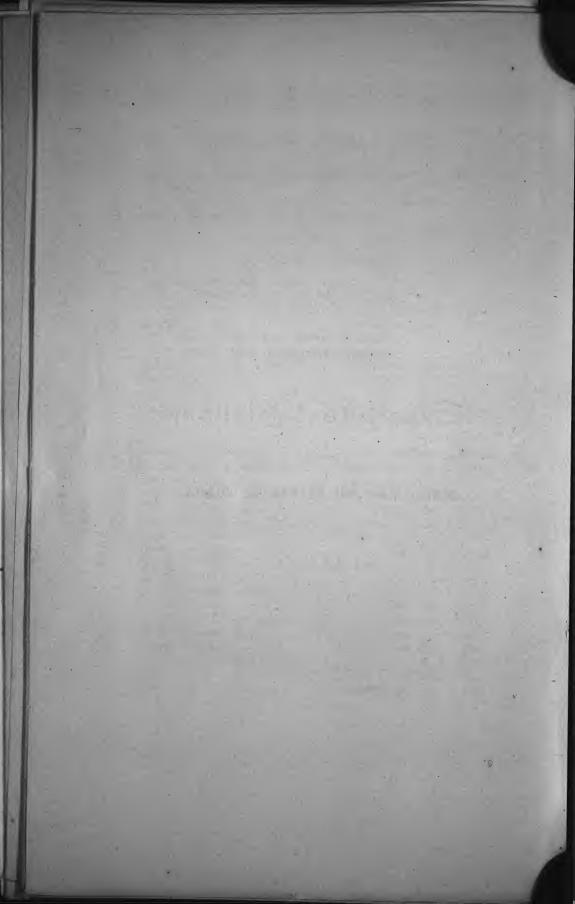
-OF THE-

AGRICULTURAL AND MECHANICAL COLLEGE

__OF___

ALABAMA.





Agricultural Experiment Station.

BOARD OF VISITORS,

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION:

J. G. GILCHRIST,

R. F. LIGON,

J. B. MITCHELL.

BOARD OF DIRECTION-OFFICERS OF THE STATION:

W I. RROHN	President.
I S NEWMAN	Director and Agriculturist.
N T LUPTON	Vice-Director and Chemist.
*P H MELL	Botanist.
G. F. ATKINSON	Biologist.

ASSISTANTS.

ISAAC Ross, First Assistant Ag	griculturist in charge of 1110 sees
and Dairy.	
TARRE CLAYTON	Second Assistant Agriculturist.
JAMES CHAITCH	First Assistant Chemist.
J. T. ANDERSON, PH. D	First Assistant Chemist.
T W WILKINSON M. Sc	Second Assistant Chemist.
L. W. WILLEINSON, 222 Detroit	Third Assistant Chemist.
P. L. HUTCHISON, B. Sc	Third Assistant Chemist.
A M. LLOYD. B. Sc	Assistant Botanist.

^{*}Prof. Mell has also charge of Meteorological Observations.

WORK OF THE STATION.

J. S. NEWMAN, DIRECTOR AND AGRICULTURIST.

The work of the year 1889 has been partly printed in eight bulletins.

Bulletin No. 3, January, 1889, reported experiments with corn, sweet patatoes, ground peas, turnips and grapes, analyses of fertilizers, soils, feed stuffs, a continued classification and description of the woods of the State, and a meteorological report.

Bulletin No. 4 contained practical instructions for the cultivation and management of strawberries, grapes and raspberries.

Bulletin No. 5 contained experiments with fertilizers under cotton, a comparison of the productiveness and general merits of different varieties of cotton, and an inquiry as to the needs of typical soils of the State. These were collected, soil and subsoil, placed under identical circumstances, and treated with different elements and combinations of elements of plant food, and the response in the growth and productiveness of the cotton plants noted. It also contained results of experiments in pig feeding, description of barn and dairy, the report of experiments with different home products, as butter-producers, analyses of soils, fertilizers and feed stuffs, and a report of the temperature of the soil at depths from one inch to ninety inches, and atmospheric conditions and rainfall.

Bulletin No. 6 embodied a report of the Botanist upon "grasses and their cultivation," with an account of their economic value as shown by their nutritive constituents found by chemical analyses.

Bulletin No. 7 contained report of experiments with different species of vegetables, and their classification with reference to the merits of the respective varieties; results of some practical experiments with different methods of setting milk, and a comparison of the economy of the DeLaval separator with the Cooly system of creamery, with results in favor of the DeLaval; a report of the meteorological conditions, and a circular announcement of the Biologist, indicating the line of work to be pursued.

Bulletin No. 8 contained a discussion of the formation and composition of soils; the composition of plants; the sources of phosphoric acid, potash and nitrogen employed in the manufacture of commercial fertilizers; the value and uses of several home manurial resources; the manufacture of fertilizers; the manipulation of composts; analyses of commercial fertilizers and some natural guanos.

Bulletin No. 9 consisted of a preliminary report of the investigations of nematode root-galls, the injury effected by them to certain cultivated plants and noxious weeds, with some suggestions as [to means to be used to diminish the injurious effects of this insidious enemy.

Bulletin No. 10 embodied a report of progress in grape culture upon the station grounds, including methods of preparing, fertilizing and cultivating the soil for this fruit, with a practical classification and description of the varieties which have fruited during the last two years.

DEPARTMENT OF CHEMISTRY.

N. T. LUPTON.

The working force in the Chemical Department consists of the chemist in charge and three assistants. In addition to the regular work in connection with the Station, this Department is charged with the chemical work of the State Department of Agriculture. This includes the analyses of such fertilizers, minerals and products of all description as, in the judgment of the Commissioner of Agriculture, are necessary for the development of the industrial resources of the State.

ANALYSES MADE.

Substances.	No. of Samples.
Acid phosphates with nitrogen and potash	171
Acid phosphates with potash	3
Acid phosphates	
Natural phosphates	47
Marls	11
Miscellaneous substances	
Feeding stuff	20
Milk	76
Butter	8
Pea vines	
Roots of pea vines	4
Soils	
. Total	459

Under the head of miscellaneous substances are included cottonseed, cotton-seed meal, cotton-seed ash, kainit, muriate, nitrate, ammonia, sulphate, tankage, etc.

In addition to the quantitative work above mentioned, a large number of mineralogical specimens, the character of which could be ascertained by simple qualitative tests, were examined and their values determined.

A special bulletin was prepared during the year on commercial fertilizers. It embraced a brief discussion of the composition and formation of soils, their deterioration, the composition of plants, of commercial fertilizers, the sources of materials used in the manufacture of fertilizers, the estimation of commercial values, and the preparation of composts.

DEPARTMENT OF BOTANY AND METEOROLOGY.

P. H. MELL.

The work conducted in this department was of the following char-

I .- A large number of species of grasses were collected during the summer and spring, analyzed and studied, and descriptions, with methods of cultivation, were published.

II.—Sections of the wooded plants of the State are being prepared and studies made of them.

III.-During the year many experiments have been made on the cotton plant by means of the microscope and frequent field observations. Twenty-three varieties were included in these investigations. A number of cross sections were made of the fibres, to determine the degree of maturity. Careful examinations were made, also, to determine the effect produced upon the cellular structure of the plant by certain kinds of fertilization and cultivation; to note, also, if any material difference actually existed between the various brands of cotton sold in the market under the many different names.

IV.-Much material has been collected during the past year for a bulletin on "Noxious Weeds;" the work of examining and classifying these plants has been undertaken.

V.—Daily observations of meteorological instruments, and on the changes of the atmosphere, have been carried on during the entire year. The meteorological outfit consists of the following instruments:

- 1. Maximum thermometer.
- 2. Minimum thermometer.
- 3. Dry-bulb thermometer.
- 4. Wet-bulb thermometer.

- 5. Barometer.
- 6. Anemoscope.
- 7. Rain Gauge.
- 8. Solar Radiator.
- 9. Terrestrial Radiator.
- 10. Thirty soil thermometers, ranging in depth from one to ninety-six inches.
- 11. Anemometer, Robinson's make, with electric recording attachment.

DEPARTMENT OF BIOLOGY.

GEORGE F. ATKINSON.

Organization.—The Department of Biology was organized during the latter part of the year. Owing to the necessity for the careful selection and importation of special apparatus and books, together with the fact that the suite of rooms for the biologist has but recently been in a condition for occupation, few investigations could be at tempted. There are four rooms in the new building devoted to this department; a suite of three rooms on the third floor, as follows: an office, laboratory room and lecture room, where subjects of practical interest are presented to the classes, and a room in the basement devoted to the manipulation of coarser material from collections in preparing it for the laboratory and cabinet, and for special cultures. The work of furnishing these rooms and mounting the special apparatus is in progress.

The office, besides the ordinary furniture, contains cases for an herbarium, where will be preserved specimens illustrating the fungi injurious to plants, and a cabinet illustrating the insects collected; also a well selected small library of special literature on these practical subjects

The more prominent pieces of apparatus in the laboratory are as

One Rohrbeck's No. 10 Vegetative apparatus.

One Rohrbeck's Steam Sterilizing apparatus, No. 1, D.

One dry oven.

One Pasteur water filter.

One balance.

- Micrometer.

Four Leitz microscopes, No. 6.

One Zeiss microscope, No. 2a stand, with the 2 m m a apochromatic objective, a series of compensation oculors and objectives, triple nose piece, Abbe Condenser, long arm camera, etc.

Besides there is a large list of vessels and smaller pieces of apparatus, reagents, etc., essential in such a laboratory.

On one side of the laboratory is partitioned off a culture room occupied by the apparatus for use in growing certain fungi in connection with the investigations.

There has been made quite an extended original preliminary study of a root-gall nematode, *Heterodera* radicicola, which is doing serious damage to some crops in various parts of the South. The results of this study were published in a bulletin, as a preliminary report on Nematode Root-Galls, including the life history and metamorphosis of the worm which is the cause of the disease.

GAYLAMOUNT
PAMPHLET BINDER
~

Manufactured by GAYLCRD BROS. Inc. Syracuse, N.Y. Stockton, Ca'if. Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1890

OCLC: 36819601 Rec stat: 19970429 Entered: Replaced: 19970429 Used: 19970429 Srce: d GPub: s Type: a ELvl: I Ctrl: Lang: eng BLvl: s Conf: 0 Freq: a Form: a MRec: Ctry: alu S/L: 0 Orig:
Desc: a SrTp:
1 040 AAA +c AAA ¶ EntW: Regl: r ISSN: Alph: a DtSt: d Cont: Dates: 1873,1893 ¶ 2 007 h +b c +d b +e f +f u +g b +h a +i u +j p ¶ 3 043 n-us-al ¶ 4 090 LD271 +b .A76 ¶ *b ¶ 5 090 6 049 AAAA ¶ 7 110 2 Agricultural and Mechanical College of Alabama. ¶ 8 245 10 Catalogue of the State Agricultural and Mechanical College of Alabama +h [microform] ¶ 9 246 10 Catalogue of the State Agricultural and Mechanical College, Alabama Polytechnic Institute ¶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical College at Auburn, Alabama ¶ 11 246 10 Catalog of the State Agricultural and Mechanical College of Alabama ¶ 12 246 10 Catalogue of the State Agricultural & Mechanical College, Auburn, Alabama 1 Auburn, Ala. : *b The College, ¶ 13 260 14 300 21 v. ; +c 21 cm. ¶ 15 310 Annual ¶ 16 362 0 1872-73-1892-93. ¶ 17 500 Title varies slightly. ¶ 18 533 Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology, ‡d 1997. ‡c microfilm reels : negative ; 35 mm. ¶ d +b 1873 +c 1893 +d alu +e u +f u +g a ¶ 19 539 20 650 0 Universities and colleges +z Alabama +x Periodicals. ¶ ▶ 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x Periodicals. 1 > 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and circular of the Agricultural and Mechanical College of Alabama ¶ > 23 785 00 Agricultural and Mechanical College of Alabama. +t Catalogue of the Alabama Polytechnic Institute ¶

> 24 830 0 USAIN State and Local Literature Preservation Project 1

ALABAMA 'OLYTECHNIC INSTITUTE CATALOGUE 1890-91

AU LD271 .A76 1890/91 c.2



AGRICULTURAL AND MECHANICAL COLLEGE.

Alabama Polytechnic Institute,

CATALOGUE

OF THE

STATE

Agricultural and Mechanical

COLLEGE.

ALABAMA POLYTECHNIC INSTITUTE.

1890-91.

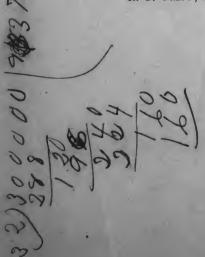
AUBURN, ALABAMA.

MONTGOMERY, ALA.: THE BROWN PRINTING CO., PRINTERS AND BINDERS. 4891

BOARD OF TRUSTEES.

His Excellency Thomas G. Jones, President ex-offici	io io
J. G. HARRIS, Superintendent of Education	
J. G. GILCHRIST)11
JONATHAN HARALSON	ee
R. F. Kolb	ile

E. T. GLENN, Treasurer. | F. M. REESE, Secretary.



ou

BARKSDALE

FACULTY AND OFFICERS.

WM. LEROY BROUN, M. A., LL. D.,

President and Professor of Physics and Astronomy.

OTIS D. SMITH A. M.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, M. E., Ph. D., Professor of Natural History and Geology. JAMES H. LANE, C. E., A. M., LL. D., Professor of Civil Engineering and Drawing.

J. S. NEWMAN,

Professor of Agriculture and Director of Experiment Station.

CHARLES C. THACH, A. M., Professor of English and Latin.

N. T. LUPTON. A. M., M. D., LL. D., Professor of General and Agricultural Chemistry and State Chemist.

LIEUT. JOHN B. McDONALD, 10th Cavalry U. S. A (West Point), Commandant and Professor of Military Science.

GEORGE H. BRYANT, M. E. (Mass. Inst. Technology), Director of Laboratory and Instructor of Mechanic Arts.

GEORGE F. ATKINSON, PH. B., Professor of Biology.

CHARLES H. BARNWELL, A. M.,
Adjunct Professor of Modern Languages and History.

L. W. WILKINSON, B. Sc., Assistant in Chemical Laboratory.

J. J. WILMORE, M. E., B. A. BLAKEY, M. Sc., Assistant Instructors in Mechanic Arts.

M. DOWNER PACE, M. Sc., ARTHUR St. C. DUNSTAN, C. E., H. CLAY ARMSTRONG, B. Sc., DANIEL GILLIS, B. Sc., Assistants in Mathematics and English.

> J. H. DRAKE, M. D., Surgeon.

O. C. THACH,
Librarian and Recording Secretary.
O. D. SMITH,
Corresponding Secretary.

OFFICERS

OF THE

AGRICULTURAL EXPERIMENT STATION.

BOARD OF VISITORS.

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION:

HON. J. G. GILCHRIST, HON. R. F. LIGON, HON. J. B. MITCHELL.

OFFICERS OF THE STATION.

W. L. Broun		President
J. S. NEWMAN	Director and	Agriculturist
N. T. Lupton.	. Vice-Director	and Chemist
P. H: Mell*	• • • • • • • • • • • • •	Botanist
G. F. Atkinson.		Biologist

ASSISTANTS.

ISAAC Ross, First Asst. Agriculturist in	Charge of Live Stock and Dairy
JAS. CLAYTON	Second Assistant Agriculturist
J. T. Anderson, Ph. D	First Assistant Chemist
L. W. WILKINSON, M. Sc	Second Assistant Chemist
J. F. WILKINSON, B. Sc	Third Assistant Chemist
R. E. Noble, B. Sc	Fourth Assistant Chemist
A, M. LLOYD, B. Sc	Assistant Botanist

^{*} Prof. Mell has charge of the Meteorological Observations.

OBJECT OF THE COLLEGE.

The leading object of the College, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its course of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts, so far as the facilities at its disposal will permit; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on a sound, general education.

The College, in fact, has become a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue—and work of great value to the youth of the State is now being accomplished by fitting them, by a thorough science-discipline, in which handicraft in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christion training will always constitute the prominent care and thought of the Faculty.

LABORATORIES AND FACILITIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in applied science in the following departments:

I .- IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with illustrated specimens of stock of select varieties.

The agricultural experiment station, established in connection with the College, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc., where lectures are delivered in presence of the objects discussed, and during the year exercises in practical agriculture are given the students who enter upon this course of study.

II .- IN MECHANIC ARTS.

The laboratory of Mechanic Arts is used as an auxiliary in industrial education, as a school of manual training in the arts that constitute the foundation of various industrial pursuits. The work performed by the students is *instructive* in character, as in any other laboratory, and the classes are taught in sections by a series of graded lessons under the supervision of the professor. In the lower classes of the College each student enters this school, and is assigned three exercises a week, each exercise being two hours long.

The object of this laboratory is not to teach a trade, but to educate, to discipline and train the eye and the hand, as well as the mind, and thus by associating manual and mental training, to thoroughly educate the student for the duties of life, whatever his vocation may be. There is no attempt to teach

students special skill in constructing articles of commercial value, but all the exercises are systematically arranged and designed for purposes of education.

The wood department is located in a commodious hall 90 x 50 feet, and is provided with a twenty-five horse power Corliss engine, with indicator, a planer, circular saw, band saw, two scroll saws, a buzz planer, twenty stands with lathes, with full sets of lathe and carpentry tools required for instruction.

A brick building with two rooms, each 30x35 feet has been constructed especially for instruction in working iron.

One room is equipped with sixteen forges and tools required for a forge department, the other with a cupola furnace, having a capacity of 1,000 pounds, a core oven, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant fan and exhauster, supplied with power from the engine.

The machine department is equipped with eight engine lathes, one speed lathe, one 20-inch drill press, one post drill, one shaper, one five-foot planer, one universal milling machine, a corundum tool-grinder and small emery grinder.

The chipping and filing department is arranged with benches and vices for twelve students.

The Weston dynamo, used at present for lighting the halls, is located in a room adjoining the Mechanic Art laboratory, and is run by a ten-horse power engine, constructed by the students in the Mechanic Arts.

It is designed to supply the different laboratories with electricity by this dynamo.

III .- IN PRACTICAL CHEMISTRY.

The new chemical laboratory is supplied with new and modern apparatus, and in its entire equipment affords excellent facilities for instruction in practical chemistry.

The investigations that are undertaken in this laboratory by scientific experts, in connection with the work of the agricultural experiment station, are of especial value to advanced students, and afford them unusual opportunities to learn the methods of scientific research. The building contains a large general laboratory that will accommodate sixty students, and lecture room with capacity for one hundred seats, and nine other rooms, all appropriated to instruction and research in chemistry.

It is equipped with the improved modern appliances necessary for instruction and investigation.

IV.-IN PHYSICS.

In the new College building provision will be made for laboratory work in the department of physics. Special rooms in the basement are appropriated for this purpose, and it is designed to equip them with all necessary appliances. An improved testing machine, of 35,000 pounds capacity, has recently been purchased of Riehle Bros. for this laboratory.

V .- IN MINERALOGY.

This laboratory occupies a convenient room in the basement, and is provided with tables and appliances to accommodate thirty students, with an excellent collection of minerals.

VI.-IN BOTANY.

In the work of the agricultural experiment station, investigations in botany are given special attention, and opportunities are offered advanced students for practical work in a laboratory especially fitted with microscopes, tables, a dark room for photographic work, and appliances needed for instruction and research. This department is provided with Auzoux's clastic models of seeds and flowers for teaching botany.

VII. -IN BIOLOGY.

The laboratory in this department adjoins the lecture room of the professor, and is furnished with tables, microscopes and appliances for investigation. Each student of the class works under the supervision of the professor.

VIII .-- IN ENGINEERING AND SURVEYING.

The necessary apparatus for field work, including transits, levels, plane table, etc., is provided for the use of the students, and the customary exercises in the field are given.

IX.-IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. A large, well-lighted drawing room, that will accommodate fifty students, is provided with tables, lock boxes, etc.

MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

This department is under the charge of Lieut. J. B. McDonald, 10th Cavalry, U. S. A.

It has recently been supplied with new cadet muskets and accoutrements for the corps, and, for artillery practice, with two three-inch rifle guns, carriages and limbers.

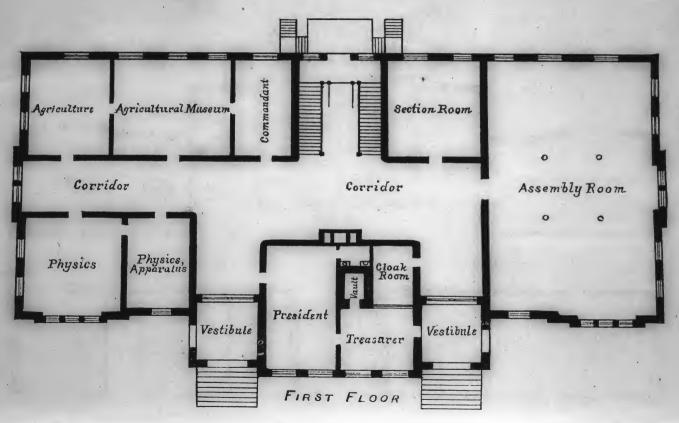
COLLEGE BUILDING.

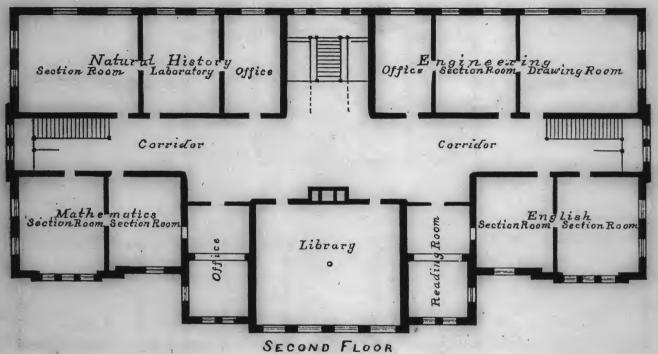
The frontispiece is a representation of the recently constructed main college building. It is 160 by 71 feet, and contains, exclusive of the basement floor, thirty-five rooms. This building is not used for dormitories for students, but is appropriated for purposes of instruction and investigation.

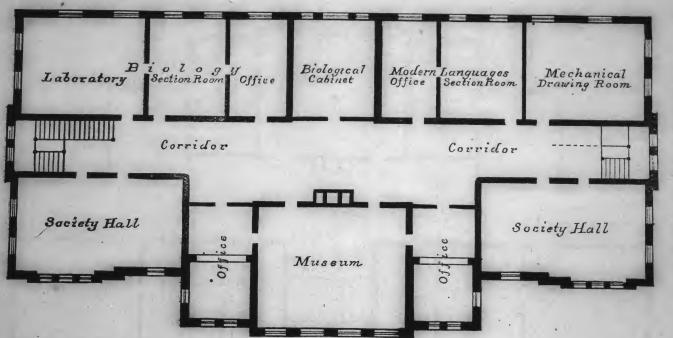
It contains the lecture rooms and offices of the professors. laboratories, library, museum, armory, etc. The illustrations of the four floors on the following pages indicate the uses to

which the rooms have been assigned.

E







THIRD FLOOR



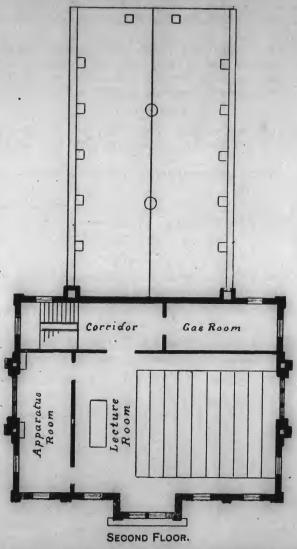
CHEMICAL LABORATORY.

The chemical laboratory is a handsome two-story structure, 40 by 60 feet, with a rear projection 35 by 60 feet of one story and basement. The exterior is of pressed brick, with cut stone trimmings, and terracotta ornamentation.

47

FIRST FLOOR

The first room to the left is the office of the professor, to the rear of which is the balance-room. On the right, extending the whole length of the floor, is the State laboratory and laboratory for research. Two small rooms are cut off from this, one a balance-room, and the other for the spectroscope and polariscope. Leading from the rear of the main hall is the door which enters the large laboratory for general work. Two rooms are cut off from this—one for combustion furnaces and the other a private working-room.



In the basement are ample accommodations for assaying and storage. The main laboratory will accommodate sixty students, and contains improved working-tables, with water, gas and every necessary appliance for chemical work. Niches in the wall opposite each working-table, with hoods, where necessary, connect with flues, and furnish the best possible means of escape for deleterious vapors, while ventilators in the ceiling furnish additional means for getting rid of noxious gases.

The pitch is sixteen feet in the clear, with paneled ceiling of oiled southern pine. The rooms are wainscotted throughout and finished in natural wood.

The second story contains a lecture-room and room for gas analysis. Around this lecture room are cases for containing crude and manufactured products, illustrating the subjects of agricultural and industrial chemistry, which are prominent subjects taught in this institution.

LANGDON HALL.

This is a two-story building, ninety by fifty feet. The second story is the audience hall, used for Commencement and other public occasions.

The first story is appropriated to the laboratory of Mechanic Arts.

GRADUATES IN 1890.

CLASS OF 1890.

WITH DEGREE OF BACHELOR OF SCIENCE. (B. Sc.)

· · · · · · ·	
Benjamin Cheney Abernethy	Florida.
James William Bivins	Lee.
Wilmer Callaway	Lee.
Walter Girard Cook	Lowndes.
George Woodhull Emory	Lee.
Stonewall Jackson Emory	Lee.
Francis Maury Fontaine	Georgia.
Daniel Gillis	Georgia.
William Groce Harrison	Talladega.
Robert Edward Daniel Irvin	Lee.
John Hammond Little	Lee.
Wilmot Bivins Matthews	Lee.
Frank Davis Milstead	Elmore.
John Milton	Florida.
Robert Earnest Noble	Calhoun.
Rephen Havne Poole	Georgia.
Percy Willett Terry	Jefferson.
George Houston Waring	Georgia.
James Fielden Wilkinson	Dale.
WITH DEGREE OF CIVIL ENGINEER.	
M. Downer Pace, B. Sc	
James Quarles, A. B	Clay.
WITH DEGREE OF MINING ENGINEER.	(M. E.)
Bolling Hall Crenshaw, B. Sc Arthur St. Charles Dustan, B. Sc	.Butler. .Virginia.

DISTINGUISHED STUDENTS.

AWARDED CERTIFICATES IN 1890.

The students of each class who secure a grade above 90 in three or more subjects are distinguished for excellence in scholarship, and are awarded

HONOR CERTIFICATES.

The following students received honor certificates in 1890:

SENIOR CLASS.

Benjamin Cheney Abernethy	Florida.
James William Bivins	Lee.
George Woodhull Emory	Lee.
Daniel Gillis	Georgia.
Frank Davis Milstead	Elmore.
Percy Willett Terry	Jefferson.
James Fielden Wilkinson	Dale.

JUNIOR CLASS.

Lawrence Ernest Baker	. Jefferson.
Harmon Benton	. Barbour.
Frank Jarvis Bivins	. Lee.
Seaborn Jesse Buckalew	. Chambers.
Walter Edward Fitzgerald	Georgia
Charles Bowls Glenn	. Lee.
Clifford Leroy Hare	. Lee.
Beverly Franklin Harwood	. Perry.
Charles Cicero Johnson	. Coosa.
John Calvin Kimball	. Georgia.
Isaac Isaiah Moses	.Georgia
William Henry Oates	. Mobile.
Petit Reynolds	. Macon.

SOPHOMORE CLASS.

Elbert Cathey Averyt	.Shelby.
Leigh Stafford Boyd	.Lee.
Charles Allen Brown	.Sumter.
Joseph Little Burr	
Henry Ticknor DeBardeleben	. Jefferson.
Henry Farris Dobbin	. Florida.
Eugene Hamiter Graves	
Raleigh Williams Greene	. Lee.
Raleigh Frederick Hare	. Lee.
Louis Philip Heyman	. Georgia.
Arthur Lynn Jones	. Autauga.
Glen McCulloh	.Lee.
Benjamin Walter McCutchen	.Lee.
Frank McLemore Moseley	. Montgomery.
Walter Evan Richards	. Chambers.
Robert Jefferson Trammell	.Lee.
David Edwin Wilson	.Jefferson.

FRESHMAN CLASS.

Robert Lee Gordon Bivins	Lee.
Walter Scott Crump	St. Clair.
George Alpheus Dennis	Chilton.
Hamilton Rowan Johnstone	Mobile.
Charles David Kline	Texas.
James Monroe Little	Lee.
Charles Henry Smith	Georgia.
Rosser Colbert Spratling	
William Van Antwerp	Mobile.

CATALOGUE OF STUDENTS

FOR THE SESSION 1890-91.

GRADUATE STUDENTS.

[Residence is Alabama when State is not named.]

NAME.

RESIDENCE.

Pleasant Lee Hutchinson.	. Georgia.
John Hammond Little	. Lee.
Andrew Manly Lloyd	. Lee.
Robert Earnest Noble	. Calhoun.
James Miles Quarles	. Clay.
James Fielden Wilkinson	. Dale.
SENIOR CLASS.	
Lawrence Earnest Baker	. Jefferson.
Harmon Benton	. Barbour.
Frank Jarvis Bivins	.Lee.
Seaborn Jesse Buckalew	. Chambers.
James Albert Cox.1	. Lee.
James Nathaniel Dean	. Montgomery.
Walter Edward Fitzgerald	. Georgia.
William Thomas Glass	
Charles Bowls Glenn	. Lee.
Clifford Leroy Hare	.Lee.
Beverly Franklin Harwood	. Perry.
Charles Cicero Johnson	. Coosa.
John Calvin Kimball	. Georgia.
Frank Allemong Lupton !	. Lee.
William Audley Marshall	. Georgia.
Alexander Dowling McLennan	.Barbour.
William Henry Oates	Mobile.

Petit Reynolds	Macon.
William Edward Reynolds	
Robert Clanton Smith	Chambers.
Clanton Ware Williams	Montgomery.

JUNIOR CLASS.

William Sayre Allen	. Montgomery.
Archie Scruggs Averett	
Earl Averitt.	
Elbert Cathey Averyt	
Leigh Stafford Boyd\	. Lee.
Charles Allen Brown	
Jabob Thompson Bullen	. Montgomery.
Walter Bartow Clay	. Montgomery.
Amos Hill Cox.	.Lee.
John Gereardt Crommelin	. Montgomery.
Jesse Lock Culver	. Bullock.
Henry Lee Davidson	. Montgomery.
George William Dantzler	. Autauga.
Henry Ticknor DeBardeleben	. Jefferson.
Henry Farris Dobbin	. Florida.
William Francis Feagin	. Barbour.
James Edward Gachet	Lee.
Eugene Hamiter Graves	. Barbour.
Raleigh Williams Greene	.Lee.
Raleigh Frederick Hare	.Lee.
Louis Philip Heyman	. Georgia.
Andrew Silous Horn.	. Clay.
Thomas Pearson Hutchinson	. Georgia.
Arthur Lyne Jones	. Autauga.
Clifton Arthur Jones	Lee.
Edward Oscar Knox	.Pike.
Harold Magruder	. Georgia.
Robert Dibrell McAlister	. Georgia.
Glenn McCulloh	.Lee.
Duncan McDougald	. Georgia.
Alfred Huger Moses	. Colbert.

Frank McLemore Mosely	. Montgomery.
Louis Sinclair Munford	. Hale.
Leonidas Warren Payne.	Lee.
Frank Peabody	
Charles Teed Pollard	
Walter Evan Richards	
James L. Richey	
Wyche Jackson Robinson	
Robert Lee Shipp (. Georgia.
Edward Broadus Smith.	Opelika.
Signor Sydney Strong	
George Adams Thomas	Montgomery.
Sheldon Lynn Toomer	. Lee.
Robert Jefferson Trammel	Lee.
Sydenham Benjamin Trapp	
David Marshall Walker	Marengo.
David Lewis Whetstone	Elmore.
David Edwin Wilson	Jefferson.
Thomas Felton Wimberly	Lee.

SOPHOMORE CLASS.

Theodore Benjamin Bethea	. Montgomery.
Wallace Reverdy Bishop 4	. Talladega.
Robert Lee Gordon Bivins.	. Lee.
Francis Marshall Boykin.t	. Montgomery.
Massey Robert Burton	. Lee.
Clifford Fontaine Clopton.4	. Montgomery.
Joseph Johnstone Crawford.	. Georgia.
Charles Henry Crowder.	. Montgomery.
Walter Scott Crump	.St. Clair.
Union Anderson Cullbreath	. Lee.
Clarence William Daugette	. Lee.
Mims Davis	. Autauga.
Joel Dumas. +	. Wilcox. •
John Harris Dunstan	. Virginia.
Daniel Benjamin Edwards, jr	Dallas
Thomas Preston Flanagan	· 10 WIIWU.

Thomas Gardner Foster. +	. Montgomery.
John Halifax Flynn	. Etowah.
George Wilson Harrison	
William Frazier Herbert	. Montgomery.
Joseph Andrew Herron.	. Montgomery.
John Henry Holt. 4	. Georgia.
John Henry Holt. 4	. Autauga.
William Forney Hughes X	. Etowah.
Hamilton Rowan Johnstone +	
Amos Wesley Jones	
Byron Watts Jones. 4	
Thomas Litchfield Kennedy, jr	. Lee.
Jere Clements King	.Butler.
Jere Clements King	. Mexico.
James Monroe Little	. Lee.
James Monroe Little. J	. Marshall.
Homer Bedford Lusk	. Marshall.
Nicholas Barnett Marks	
Frank Inman McRee	Georgia.
Edward Baker Mell.	. Georgia.
Hampton Knox Miller	. Talladega.
Herbert Abner Milner	. Jefferson.
Hugh Nelson	. Dallas.
Minor Evans Nicholson	. Georgia.
John Austin Norton +	. Montgomery.
Oscie Kyle Parker	.Elmore-
Henry Lee Porter.	.St. Clair.
Joseph Samuel Pou. T	. Lee.
Sidney Powell Reaves	. Georgia.
Walter Merritt Riggs	. So. Carolina.
John Shelton Robinson	. Jefferson.
Logan Abner Siebold.	. Marshall.
Guy Allen Shafer. +	Perry.
Charles Henry Smith.4	. Georgia.
Engene Aglette Smith	. Bullock.
John Howard Smith	Georgia.
Linton Sparks Smith.	Georgia.

2 4

Rosser Colbert Spratling.	Chambers.
William Simeon Street	Tallapoosa.
William Augustus Thomas	Chambers.
Wyeth Tódd	Marshall.
William Van Antwerp.	
Joel Franklin Webb	Coosa.
Charles Hutchinson Weston	Colbert.
John Mitchel Woolley	Georgia.

FRESHMAN CLASS.

Felix Reuben Allison	Lee.
George Smith Anderson	Lee.
John Frank Anderson	Georgia.
Champ Seabury Andrews	Tennessee.
Harvey Armstrong	Missouri.
Isaac Alfred Baker.	Jefferson.
Joseph Johnson Beggs	
Richard Isaac Betts	Monroe.
Henry Harrington Bookhart	Georgia.
William DeLawar Glayton	Lee.
George Lee Cleere	Franklin.
Howell Hunter Cherry	Lee.
Joseph Anderson Coleman'	Georgia.
Rosberry Covington Conner	Macon.
William Lonie Crew	Coosa.
William Lonie Crew	Montgomery.
Walter Caldwell Darwin	Madison.
Palmer Payne Daugette	Lee.
Charles Fairchild DeBardeleben	Jefferson.
Rufus Thomas Dorsey, jr).	Georgia.
Ebenezer Westley Doughty	
Flurry Pellicer Dowe	
Joseph Addison Driver	Perry.
Waverly Goode Duggar/b	
Julius Confree Dunham J	Montgomery.
James Dunlap	Madison.
Charles Dunlap	Madison.

John Thomas Eckford 2. O	Lee.
Turner Thomas Edmunds	
Wilbur Thomas Edwards	Tallapoosa.
David Silas Flanagan	Lee.
Cliff Foy	Barbour.
A Robert Cherry Hoy	Darbour. Jean
James Thaxton Gillespie	Jefferson.
James Thaxton Gillespie John Samuel Godwin	Barbour.
John Samuel Godwin	Jefferson.
1 James Perry Grant	Barbour.
Eddie Connerly Gregory -	Jenerson.
John Earnest Griffin.	Lee.
Crossland Clarence Hare.	Lee.
Angustus J. Harris	Morgan.
James Clanton Havgood	Intollegoinorj.
/ Arnold Whitfield Herren2.6	Elmore.
William Marion Hight	Calhoun.
Harry Holgate	Georgia.
Julius Cicero Hudson	Lee.
/ Robert Ford Hunter2.7	Georgia.
Jeremiah Jackson	Lee.
Jacob Samuel Johnson	Antauga.
William Young Johnstone.	Barbour.
Henry Clay Jones 2.7	Montgomery.
Take Thatabar Iongs	Autauga.
Remer Young Jones 3.	Georgia.
Walham V Tanes	Lee.
Madison Leonard	Shelby.
Oprin Joseph McCarley 3. 2	Chambers.
Thomas McElrath	
Potrick Roland Cleburne McFarland	Lauderdale.
THE RESERVE TO SERVE THE PROPERTY OF THE PROPE	Barnour.
Paul Prett McKeown 34	Florida.
Tohn Robert McNab	Barbour.
John Robert McNab	Georgia.
Toward Wholes Miller	
Andrew Hammil Milstead 3. 7	Elmore.
Andrew Hammit minstead	

28

UE

20 219 toutarde and mechanical	Conege.
Edward Beall Mitchell	Georgia.
Lauriston Greene Moore. + 3.9.	Lee.
Peyton Herndon Moore X. H. O.	Blount
William Washington Moore. H.1.	Blount
Charles Carter Newman 4 2	Lee.
J Camarage Illavii.	denerson
Thomas Winfrey Oliver	Montgomery
Thomas Winfrey Oliver. Thomas Verner Ordway	Tennessee
Joseph Preistly Orme	Chambers
James Solomon Palmer.	Rlount
Charles Moss Powell	Bullook
James Harris Pride	Madison
Oscar Browder Pruett	Ranhann
George Noble Ross	Too
George Noble Ross. Thomas Henry Schuessler. 46	Obarahana
Benjamin Harris Sargent	Enablin
Benjamin Harris Sargent. Walter Russell Shafer.	Demon
dames raward Stanion	01 9
Robert Otis Stone	Maki
Jack Thorington. 4.9.	Moone.
Henry Curry Turner	Montgomery.
Henry Curry Turner. Frank Atkinson Vernon.	Madison.
Eugene Whaley	Chambers.
Eugene Whaley. Andrew Hearne Whitman 57	Jefferson.
Virginius Wilcox	Lee.
Virginius Wilcox. William Dunbar Wills. James Albert, Wilcox	Mobile.
James Albert Wilson	Lee.
James Albert Wilson Arthur Zachariah Wright	Barbour.
Cary Oscar Wright.	Lee.
,	Lee.
SUB-FRESHMAN CLASS.	
Daniel Spigner Anderson.	Loo
William Frederick Bellinger	Tofforson
IXHOX DOULL	A
Doy de la serie	0.0
Trank Asoury Boykin	Tan
James Hardy Bradford	Too
	Lee.

Willie Orlando Brooks	Lauderdale.
Porcius Festus Caddell	Bibb.
James Burch Charles	Montgomery.
Philip George Clay.	
Charles Edward Coleman	Georgia.
Henry Wyatt Dozier	Jefferson.
Leooard Leonidas Godbold.	Wilcox.
William Wesley Goldsmith	Lowndes.
William Woolson Goolsby	Elmore.
James A. Griffin	Lee.
James A. Griffin. Benjamin Browning Haralson.	Dallas.
John Fletcher Heard	. Lee.
John Alexander Jackson	. Lee.
Charles Albert Johnstone	
Cary Park McElhaney, Jr	. Lee.
Malcolm Demos Moore	. Hale.
Eddie Lette Mosely	. Monroe.
Howard Bond Mosely	. Monroe.
Hunter Glenn Motley	. Macon.
Malcolm Oates	. Mobile.
George Emmett Pace.	. Macon.
Charles Llewellyn Pinkston	. Montgomery.
John Williams Hudson Powers	. Lee-
Thomas Percy Rockett.	.Jefferson.
Edwin Norville Sawkins	. Mississippi.
Charles Watkins Scruggs	. Madison.
Andrew Jackson Smith.	. Lee.
Marshall Burt Smith	. Lee.
James Nelson Stephens	. Darbour.
Foliv Stanley Thomas	. Lee.
Togonh Worner Vaughan	. Dallao.
Honry Watte Vinson	. Georgia.
Toose Myone West -	, Dallas.
Pohort Potton Woodon	. Landerdare.
Rose Green Whisenant	. Cainoun.
Frank Lowig Whitman	. Lec.
John Welker Wilcox	, Mobile,

Marvin Clark Price Williams	Mobile.
John Adams Wills	Lee.
James Alexander Wilson	
0 0	

SPECIAL STUDENTS.

Albert Crosland Bowen.	Dale.
Paul Andrew Goldsmith.	. Lowndes.
Arthur Harris Hall	. Georgia.
James Thomas Heflin	. Randolph.
Joseph Andrew Holifield	. Lee.
Dudley David Stephens	Barbour.

SUMMARY.

Graduates	7 -
Senior Class	21 -
Junior Class3.5	50 - / /
Sophomore Class 3.1	61-14
Freshman Class5.0	93 - 2 9
Sub-Freshman	46 = 18
Special students	6- 3
	- 70
Total	984



NUMBER OF STUDENTS IN EACH SUBJECT OF STUDY.

English	Biology 45
History147	Agriculture126
French	Physics122
German 18	Botany 61
Latin 67	Geology 49
Mental Science 10	Engineering 40
Political Economy 22	Drawing
Mathematics244	Mechanic Arts150
Chemistry 95	Military Tactics268

MILITARY ORGANIZATION. W. L. BROUN. Commandant. J. B. McDONALD, 1st Lt. 10th U. S. Cavalry. Po, of Haro Surgeon. J. H. DRAKE, M. D. calle Con Cadet Captains. Q 1. L. E. BAKER, 3. F. A. LUPTON, 2. J. N. DEAN, C4. B. F. HARWOOD. Cadet 1st Lieutenants. C 6. C. C. JOHNSON. O. 7. J. C. KIMBALL, 8. W. E. FITZGERAUD, 2 1. R. C. Smith, Adj't. 2. W. A. MARSHALL, Qr. Mr., . 3. C. L. HARE, 3 9. J. A. Cox, 4. F. J. BIVINS, 5. C. B. GLENN, 10. S. J. BUCKALEW, Cadet 2d Lieutenants. 22. P. REYNOLDS. 29, 127 1. H. BENTON. C 3. J. E. GACHET, , , , , , , , , Cadet First Sergeants. 1. C. A Brown, Q 4. H. F. DOBBIN. 1, 3 & 2. L. S. MUNFORD, Cadet Sergeants. © 10. A. S. AVERETT 11. R. W. GREENE, 12. R. F. HARE, 13. R. J. TRAMMELL, 14. E. H. GRAVES, 15. H. T. DEBARDELEBEN, 216. D. E. WILSON, 217. W. THEN. 5/3 1. W. F. FEAGIN, Sgt. Major, B 2. J. T. BULLEN, 3. D. L. WHETSTONE, Qr. Mr. Sgt., 4. E. C. AVERYT, Col. Sgt. C 5. G. A. THOMAS, 4. G. A. L. JONES, 7. W. B. CLAY, 8. H. L. DAVIDSON, C 17. W. S. ALLEN, 2 18. S. L. TOOMER, 9. J. G. CROMMELIN, (19. F. M. Moseley. Cadet Corporals. © 10. C. F. CLOPTON, © 11. L. S. SMITH, al. J. Dumas, C 12. H. R. JOHNSTONE, C 13. T. G. FOSTER, 14. J. H. DUNSTAN, B 15. W. VAN ANTWERP, 2. R. C. SPRATLING, ₱3. C. H. SMITH, 53 4. W. R. BISHOP, 5. W. S. CRUMP, 6. E. B. MELL, 316. *J. S. Pou, 7. C. H. WESTON, C 17. *C. D. KLINE, C18. *R. L. G. BIVINS, P9. L. A. SIEBOLD, Q19. E. A. SMITH. NOTE. -Numbers indicate the relative rank of officers in each grade, Color Corporal.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character. To enter the fourth class the applicant must be not less than fifteen years of age, and should be qualified to pass a satisfactory examination on the following subjects:

1. Geography and History of the United States.

2. English—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar and

division into paragraphs.

3. Mathematics—(a) Arithmetic, including fundamental operations; common and decimal fractions; denominate numbers, the metric system; percentage, including interest and discount; proportion; extraction of square and cube roots.
(b) Algebra, to quadratic equations.

Those applicants who desire to continue the study of Latin should be qualified to pass a satisfactory examination in Latin grammar and the first two books of Cæsar, in addition to the

above subjects.

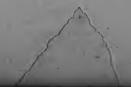
For admission to the higher classes, students should be prepared to stand a satisfactory examination on all the studies of the lower classes, as shown in the courses of study. Where opportunity has not been offered to pursue special studies required at this College, the system of equivalents will be adopted, and studies which denote an equivalent amount of discipline and training will be accepted as satisfactory.

ENTRANCE EXAMINATIONS.

Entrance examinations will be held on Wednesday, the 16th of September, the day on which the session opens. Candidates will also be examined during the session, when application is made for admission.

Applicants who are not prepared to stand the entrance examinations for full admission to the Freshman class are admitted to the sub-college department.

They will be advanced to full admission to the Freshman



class when they are qualified to pass satisfactorily the required examinations.

Students upon their arrival at Auburn will report immediately to the President. No student will be admited to a recitation in any class previous to matriculation.

NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week and in all give twenty-seven exercises per week required.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the junior class, and those over twenty-one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty.

Regular students who fail to pass satisfactory final examinations in any one study become special students. They will be classed as regular students pursuing a course for a degree, whenever they can pass the examinations in those subjects in which they were found deficient.

Students candidates for a degree, who are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greater number of studies, and their names are so placed in the Catalogue.

COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences, with their applications; Agriculture, Biology, Mechanics, Astronomy, Mathematics, Engineering, Drawing,

3

English, French, German and Latin Languages, History, Political Economy, Mental and Moral Sciences.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active

pursuits of life.

There are three degree courses for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

- I. Course in Chemistry and Agriculture.
- II. Course in Mechanics and Engineering.
- III. GENERAL COURSE.

There are also two partial courses, each requiring two years for its completion:

- IV. Two YEARS' COURSE IN AGRICULTURE.
- V. Two YEARS' COURSE IN MECHANIC ARTS.

Course I includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II includes the principles and applications of the sciences that directly relate to civil and mechanical engineering, and is adapted to those who expect to enter the profession

of engineering.

Courses III has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses IV and V have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and take one of the regular degree courses.

Students who complete either of these two year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

Those who have completed the general course in each department of the school of Mechanic Arts, and are qualified, can enter upon a more extended technical course in Mechanical Engineering.

PREPARATORY COURSE IN PHARMACY.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all their time in the laboratories of these departments, under the immediate direction of the professors. With the excellent facilities offered in the chemical and botanical laboratories, scientific preparation of great value to the practical pharmacist can be obtained.

COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering, which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry, Assaying, Reduction of Ores, Mineralogy, Economic Geology, Mining Machinery, Drifting, Tunnelling, Timbering, Ore Dressing, and the various operations connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering and Natural History.

SPECIAL ONE YEAR COURSE IN AGRICULTURE.

Young men over twenty-one years of age who desire to study Agriculture will be permitted, without examination, to enter any class under the Professor of Agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied.

They can attend the lectures in Agriculture in all the classes. and engage in the practical work at the experimental station, in the field, stock-yard, dairy, garden, orchard and vineyard, etc., and may thus, in one year, acquire valuable practical knowledge of Scientific Agriculture.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this College, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in the

following departments:

I.—CHEMISTRY.

II .- Engineering, Field Work, Surveying, etc.

III .- AGRICULTURE.

IV.—BOTANY.

V.-MINERALOGY.

VI.—BIOLOGY.

VII.—TECHNICAL DRAWING.

VIII .- MECHANIO ARTS.

*IX.—PHYSICS.

^{*} It is expected to equip this laboratory next session.

I.—COURSE IN CHEMISTRY AND AGRICULTURE.

The numerals opposite the subjects indicate the number of hours per week.

FRESHMAN CLASS.

	FRESHMAN CLASS.	
First Term.	Second Term.	Third Term.
2. History. 5. Mathematics. 3. Elementary Physics. 3. Drawing. 6. Mechanic Art Labor'y.	2. History. 5. Mathematics. 6. Elementary Physiology 6. Drawing. 6. Mechanic Art Lab'y. 6. Military Drill.	 Drawing. Mechanic Art Lab'y. Military Drill.
	SOPHOMORE CLASS.	'
First Term.	Second Term.	Third Term.
2. History. 5. Mathematics. 3. General Chemistry. 3. Agriculture. 3. Drawing. 4 Mechanic Art Lab'y.	 English. History. Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'y. Practical Agriculture Military Drill. 	 English. Botany (a). Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'y. Practical Agriculture. Military Drill.
First Term.	JUNIOR CLASS. Second Term.	Third Term.
3. English.3. Physics.3. Industrial Chemistry.	 English. Physics. Industrial Chemistry Agriculture. 	 English. Physics. Industrial Chemistry. Agriculture.

First Term.	Second Term.	Third Term.
 Agriculture. Botany. (Lab'y.) Military Tactics. 	 Physics. Industrial Chemistry. Agriculture. Botany. (Lab'y.) Military. Tactics. 	 Agriculture Botany. (Lab'y.) Military Tactics. Chemical Laboratory.

⁽a) Begins March 1st.

First Term.

5. English.

2. History.

Laboratory.

SENIOR CLASS.

	First Term.		Second Term.	٠	Third Term.
2.	English Literature.	2:	Political Economy.	2.	Political Economy.
2.	Mental Science.	2.	Moral Science.		Moral Science.
2.	Physics.				Astronomy.
2.	Geology.	2.			Geology.
2.	Biology.	2.			Biology.
2.	Agricultural Chemistry	2.	Agricultural Chemistry	2.	Agricultur'l Chemistry
1.	Military Science.	1.	Military Science.	1.	Military Science.
9.	Chemical Laboratory.	9.	Chemical Laboratory.	9.	Chemical Laboratory.
2.	Practical Agriculture.	2.	Practical Agriculture.	2.	Practical Agriculture.

ry

Third Term.

5. English.

II.—COURSE IN MECHANICS AND ENGINEERING.

The numerals opposite the subjects indicate the number of hours per week.

FRESHMAN CLASS. Second Term.

5. English.

2. History.

2. IIIbwiy.	4. mistory.
5. Mathematics.	6. Mathematics.
3. El. Physiology.	2. Agriculture.
3. Drawing.	3. Drawing.
0	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.
SOPHOMORE CLASS.	- / - /
Second Term.	Third Term.
3. English.	2. English.
2. History.	3. Botany (a).
5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.
•	3. Agriculture (b).
	3. Drawing.
0	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.
	5. Mathematics. 3. El. Physiology. 3. Drawing. 6. Mechanic Art Lab'y. 3. Military Drill. SOPHOMORE CLASS. Second Term. 3. English. 2. History. 5. Mathematics. 3. General Chemistry. 3. Agriculture (b). 3. Drawing. 6. Mechanic Art Lab'y.

(b) For Agriculture may be substituted French or German or work in the Chemical

JUNIOR CLASS.

First Term.	Second Term.	Third Term.
German.	German.	3. English, French or German.
3. Physics.	3. Physics.	3. Physics.
5. Mathematics.		5. Mathematics.
5. Engineering	P 77 .	5. Engineering.
	5. Drawing.	Drawing.
1. Military Tactics.	1. Military Tactics.	l. Military Tactics.
4. Lab'y, Mineralogy (a).	.4. Lab'y, Mineralogy (a).6	6. Field Wrk, Engin'g (a)
4. Field Work, Engin'g.	4. Field Work, Engin'g.	B. Military Drill.
	3. Military Drill.	0.0

SENIOR CLASS.

	First Term.		Second Term.		Third Term.
2.	English Literature	(b).2.	Political Economy	(b).2.	Political Economy (b).
2.	Physics.	2.	Astronomy.	2.	Astronomy.
2.	Geology.	2.	Geology.	2.	Geology.
3.	Mathematics.	3.	Mathematics.	3.	Mathematics.
5.	Engineering.	5.	Engineering.	5.	Engineering.
5.	Drawing.	5.	Drawing.	5.	Drawing.
	Military Science.	1.	Military Science.	. 1.	Military Science.
	Field Work, Engine	er'g .	Field Work, Engine	er'g	Field Work, Engin'g.

III.—GENERAL COURSE.

The numerals opposite the subjects indicate the number of hours per week. FRESHMAN CLASS.

First Term.	Second Term.	Third Term.
 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Latin. Mathematics. Drawing. Agriculture. Mechanic Arts. Military Drill.

⁽a) Or Mechanic Arts.

⁽b) For Eng. Lit. and Pol. Econ. may be substituted French or German.

	SOPHOMORE CLASS	3.		
First Term.	Second Term.	Third Term.		
5. Latin.	5. Latin.	4. Latin.		
2. History.	2. History.	3. Botany (a).		
5. Mathematics.	5. Mathematics.	5. Mathematics.		
3. Genaral Chemistry.	3. General Chemistry.	3. General Chemistry.		
3. Drawing.	3. Drawing.	3. Drawing.		
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y		
3. Military Drill.	3. Military Drill.	3. Military Drill.		
	JUNIOR CLASS.			
First Term.	Second Term.	Third Term.		
3. English.	3. English.	3. English.		
3. Physics.	3. Physics.	3. Physics.		
3. Mathematics.	3. Mathematics.	3. Mathematics.		
3. French.	3. French.	3. French.		
3. Latin.	3. Latin.	3. Latin.		
3. German.	3. German.	3. German.		
1. Military Tactics.	1. Military Tactics.	1. Military Tactics		
6. Laboratory Work (b)	.6. Laboratory Work (b).	6. Laboratory Work (b		
3. Military Drill.	3. Military Drill.	3 Military Drill.		
	SENIOR CLASS.			
First Term.	Second Term.	Third Term.		
2. English Literature.	2. Political Economy.	2. Political Economy.		
2. Mental Science.	2. Moral Science.	2. Moral Science.		
2. Physics.	2. Astronomy.	2. Astronomy.		
2. Geology.	2. Geology.	2. Geology.		
3. French.	3. French.	3. French.		
3. German.	3. German,	3. German.		
2. Latin.	2. Latin.	2. Latin		
1. Military Science.	1. Military Science	1. Military Science.		
English Thesis.	English Thesis.	English Thesis.		

⁽a) Or History continued. Botany begins March 1st.
(b) The student may elect the Laboratory of any department for which he may be qualified.

IV.—TWO YEARS' COURSE IN MECHANIC ARTS.

FIRST YEAR.

First Term.	Second Term.	Inira Ierm.
5. English.	5. English.	5 English.
2. History.	2. History.	2. History.
5. Mathematics.	5. Mathematics.	6. Mathematics.
3. Elementary Physics.	3. Elem'tary Physiology	7.2. Agriculture.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
	SECOND YEAR.	
First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
5. Mathematics.	5. Mathematics.	5. Mathematics.
	3. Physics.	3. Physics.
3. Physics.	3 Drawing.	3. Drawing.
3. Drawing.		12. Mechanic Art Lab'y.
12. Mechanic Art Lab'y 3. Military Drill.	3. Military Drill.	3 Military Drill.
Times Town	FIRST YEAR. Second Term.	Third Term.
First Term.		r Duelich
5. English.	5. English.	5. English.
2. History.	2. History.	2. History.6. Mathematics.
5. Mathematics.	5. Mathematics.	6. Mathematics.
3. Elementary Physics.	3. Elem'tary Physiolog	y.z. Agriculture.
3. Drawing.	3. Drawing.	3. Drawing.4. Mechanic Art Lab'y.
4. Mechanic Art Lab'y.	4. Mechanic Art Lab'y.	3. Military Drill.
3. Military Drill.	3. Military Drill.	5. Military Dim.
2. Practical Agriculture	e. 2. Practical Agricultur	e. 2. Practical Agriculture.
	SECOND YEAR.	
First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. General Chemistry		. 3. General Chemistry.
w A M.	K Agriculture	5. Agriculture.
12 Practical Agricultu	re.12. Practical Agricultu	re.12. Practical Agriculture.
3. Military Drill.	3. Military Drill.	3. Military Drill.

HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
I. 8-9	4. Algebra. 3. Latin. 2. French 1 & 2. Drawing. 4. Mechanic. Arts.	4. Geometry. 3. Latin. 2. German. 1 & 2. Drawing. 2. Botany.	4. Algebra. 3. Latin. 2. French. 1 & 2. Drawing. 2. Practical Agr. 4. Mech. Arts.	4. Geometry. 3. Latin. 2. German. 1&2. Drawing. 2. Botany.	4. Algebra. 3. Latin. 2. French. 1. & 2 Drawing. 2. Practical Agri. 4. Mechanic Arts. 1. Biology.	Exerc's in Elocution
11. 9–10	4. English. 3. Chemistry. 2. Engineering. 1. Calculus. 1. French. 4. Mech. Arts.	4. History. 3. Agriculture. 2. Engineering. 2. Botany. 1. Physics.	4. English. 3. Chemistry. 2. Engineering. 1. Calculus. 1. French. 4. Mech. Arts. 2. Practical Agri.	4. History. 3. Agriculture. 2. Engineering. 2. Botany. 1. Physics.	4. English. 3. Chemistry. 2. Engineering. 1. Biology. 1. Calculus. 1. French. 2. Latin. 4. Mech. Arts. 2. Practical Agr.	Military Drill.
	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
III. 10-11	3. English. 2. Physics. 1. German. 1. Engineering. 1. Biology.	3. History (1. 2). 3. Botany (2. 3). 2. Agriculture. 2. Latin. 1. Engineering. 4. English.	3. English. 2. Physics. 1. German. 1. Engineering. 1. Biology.	3. History (1. 2). 3. Botany (2. 3). 2. Agriculture. 2. Latin. 1. Engineering. 4. English.	3. English. 2. Physics. 1. German. 1. Engineering.	2. German. 4. Mech. Arts. 1 Sec. 3. Mech. Arts, 2 Sec. 1. 2. Machine Work. Laboratory Work. Field Work, Enging.

IV.	4. Agriculture (3). 4. Latin. 3. Drawing. 2. Mathematics.	4. Mech. Arts 1 Sec 4. Latin. 3. Drawing. 2. Mathematics. 1. Chemistry.	4. Physiology (2). 4. Latin. 3. Agriculture. 2. Mathematics. 2. Chemistry. 1. English (1). 1. Political Economy (2. 3).	4. Latin. 3. Agriculture, 2. Mathematics. 1. Chemistry.	4. Physiology (2). 4. Agriculture (3). 4. Latin. 3. Drawing. 2. Mathematics. 2. Chemistry.	4. Mech. Arts, 1 Sec. 3. Mech. Arts 2 Sec. 1 & 2.Machine Work. Field Work, Eng'ng. Laboratory Work.
10.1	3. Mathematics.		 Drawing. Mathematics. Mental Science. 		4. Drawing. 3. Mathematics. 1. Mental Science.	
P. M.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
VI VII	3. Mech. Arts 1 Sec 3. Field Work Agr. 1 & 2. Laboratory.	2d & 3d Sec. 2. Mineralogy Laboratory. 2. Mech. Arts. Military Drill (*)	1 & 2 Laboratory	2d & 3d Sec 2. Mineralogy Laboratory 1. 2 Mech. Arts. Military Drill, (*)	1 Sec 3. Field Work Agr. 1&2. Labor'y Chem 1 & 2. Field Work	

Chapel services daily at 7:50 A. M. Numbers prefixed denote classes,—1 denotes Senior, 2 Junior, &c. Numbers affixed—(1), (2), (3), denote terms. *From 4:30 to 5:30 P. M.

DEPARTMENTS OF INSTRUCTION.

PHYSIOS AND ASTRUMEN

PERMITTED SECTION

The instruction is given by recitation from text-book my lectures, limitated by experiments. The first per of the course is occupied with Elementery Regions Measures, treated graphically.

This is ionowed by a full discussion of Ministral Mechanics white one promisence is given to proscuper. Bretters reference is made to the applications of scatters.

The number of the junior case because the properties of mabe, mails of measure, force, work, energy, kinematics, injecte, measured power, fraction, pendulum, molecular forces of solids, hounds and game, factory of undomations, from the tricit, magnetical, etc.

The studies of the senior case include Theoretic and it application: Option Astronomy and Meteorology.

Territories in Process. Attenues Santa. In Astronomy Tong.

MATHEMATICS

SECTION SETTINGS

The same for the Inc. two years embraces in Inc.

The Application of the Inc. Sold the Application of the Inc.

The Inc. Spherical Technologies, Servering,

Two regions are sought to be attained: First month in colors: second, a theorem improved in the principles of the matter and that provides applications.

Therefore and present instruction services in the source made in him, over and government hand survey to district and community of creek and all the property and community of creek and all the property and services.

The class, in sections of six or eight, devote three afternoons a week during the second and third terms to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical Engineering course. Analytical Geometry, Descriptive Geometry and Calculus are pursued in the Engineering course. Especial attention is given to their practical applications.

During the entire course, instruction in text-books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with the application of principles and formulæ.

TEXT BOOKS.

Wentworth's Algebra, Wentworth's Geometry, Wentworth's Trigonometry and Surveying, Wentworth's Analytical Geometry, Waldo's Descriptive Geometry, Taylor's Calculus.

NATURAL HISTORY AND GEOLOGY.

PROF. MELL.

Geology.—This subject is studied in the senior class, and extends through the entire session. Special attention is given to the geology of Alabama, and many illustrations are drawn from the coal and iron fields and other natural deposits of minerals in the State. The origin of ore deposits, mineral springs and geological relations of soils are carefully studied.

There is also a course of advanced work in practical Geology for the post-graduate students. This subject is pursued by applicants for degrees of Master of Science and Mining Engineering.

The junior class in Engineering spends two terms in Mineralogy and blow-pipe work.

Botany.—The students of the Sophomore class begin the study of Botany the first of March and continue it through the session. Analytical work is made an important feature. This class is provided with plants from the fields, and taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section.

In the Junior class, in the course of Chemistry and Agriculture, an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope in the preparation of specimens showing plant structure; this work is sufficient to familiarize the students with the methods of plant building and cellular organization. Excellent microscopes of the most improved patterns, and all the necessary chemicals and apparatus for preparing and mounting vegetable tissues, are used by the students. A dark room is attached to this laboratory for photo-micrography.

TEXT-BOOKS.

Le Conte's Geology, Gray's Botany, Dana's Mineralogy, Goodale's Physiological Botany, Nelson's Herbarium and Plant Descriptions.

ALABAMA WEATHER SERVICE.

The United States Signal Service has established in Alabama a State system for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled from reports sent from numerous stations throughout the State. An opportunity is thus offered the students in Meteorology of becoming familiar with the system operated by the Department at Washington.

CIVIL ENGINEERING AND DRAWING.

PROF. LANE.

CIVIL ENGINEERING.

The special studies of this department begin in the Junior class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics. They are as follows:

Junior class.—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, location and construction of common roads and railroads.

Senior class.—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars and their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings; solid and open built beams; classification, construction and mechanics of masonry; foundations on land and in water; bridges and roofs of different kinds; their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads; navigable, irrigation, and drainage canals; river and sea-coast improvements. Theory and practice are combined in both classes.

TEXT-BOOKS.

Junior Class.—Henck's Field Book for Railway Engineers, Gillespie's Roads and Railroads, Parson's Track.

Senior Class.—Wheeler's Civil Engineering, Von Ott's Graphic Statics.

DRAWING.

All of the students of the Freshman and Sophomore classes are required to take Drawing; but only the students in Mechanics and Engineering in the Junior and Senior classes.

The Freshman class is taught linear and free-hand drawing.

The Sophomore class is instructed in the principles of ortho-

graphic and isometric projections, shade and shadows, perspective and tinting. In the Junior class the instruction embraces a more extended course in orthographic and isometric drawing, perspective, shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings and blue prints. The Senior class makes topographical drawings, and drawings of machines, roofs, bridges, etc., to different scales and blue prints. Plans, profiles and sections of railroad surveys complete the instruction in this department.

TEXT-BOOKS.

Freshman Class—Kitchener's Geometrical Note Book, Thorne's Junior Course in Mechanical Drawing, and Davidson's Model Drawing. Sophomore Class.—Davidson's Projections, Davidson's Practical Perspective, Keuffel & Esser's Alphabet.

Junior Class.—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the College,

Keuffel & Esser's Alphabet.

Senior Class.—French, English and American Plates belonging to the College, Keuffel & Esser's Alphabet.

AGRICULTURE.

PROF. NEWMAN.

The course of instruction in this department embraces: I., soils; II., plants; III., domestic animals. In the Freshman class twenty lectures, covering the third term of the session, treat of soils, their classification. physical defects and remedies, causes of diminished fertility, and the means used to protect them from waste and restore fertility, the theory and practice of surface and sub-drainage, etc. The subject is treated with special reference to the different classes of soil in Alabama, omitting as far as possible questions involving a knowl. edge of Chemistry and Botany.

In the Sophomore class, in addition to the discussion of the physical properties and mechanical treatment of soils, the methods of studying their chemical defects and their remedies are discussed. The sources of the important elements of plant

food, and their use upon different soils and plants, the restoration of humus, saving home manures, composts, commercial fertilizers, the office of different chemical elements in plant development—the relations of plant growth to soil and atmosphere, the theory and practice of restoration of crops, terracing and grading to prevent washing, plows and plowing—indeed everything connected with tilling the soil passes under review as foundation work.

Southern agriculture is then treated in the concrete-the history, nature and cultivation of each of our field crops discussed as regards their adaptation to and treatment upon the soils of Alabama. This occupies the first and second terms. The third term is devoted to domestic and commercial horticulture, poultry, sheep, cattle-breeding and management of the dairy, etc. In the junior class stock breeding and management is completed in the first term, and a thorough course in pomology, including the propagation of nursery stock, plant. ing, manuring, pruning, cultivating, harvesting and marketing every species of fruit, treated theoretically and practically, occupies the second term. Barry's Fruit Garden, corrected for our latitude, is used in this class. In the third term lectures are delivered upon political economy in its special relations to the pursuit of agriculture; the selection, purchase, equipment and management of a farm, the ratio between fixed and working capital, the employment and management of labor, etc. Landscape gardening, treated with special reference to the improvement of country homes, occupies the remainder of the session.

CHEMISTRY.

PROF. LUPTON. ASSISTANT, L. W. WILKINSON.

Instruction in this department embraces-

- 1. A course of lectures in General Chemistry.
- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each

course of lectures, for the practice of chemical analysis and chemical research.

1. Course in General Chemistry: This consists of a series of lectures (three per week) extending throughout the entire session, and includes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements, with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

REFERENCE BOOKS.

Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cook's Chemical Philosophy, Chemical Journals.

2. The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures to the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, heating, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products

together with models and diagrams.

REFERENCE BOOKS.

Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology, Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week), and includes a thorough discussion of the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained,

the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock and the various operations carried on by the intelligent and successful agriculturist.

BOOKS OF REFERENCE.

Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Department and Stations.

4. The course of systematic Laboratory Work: This course of practical work in the laboratory is carried on in connection with each course of lectures, and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The laboratories, which are open from 9 A. M. to 5 P. M. during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the Chemical Laboratory is furnished with a work table, a set of re-agent bottles, and the common re-agents and apparatus used in qualitative and quantitative analysis. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

BOOKS USED.

In Qualitative Analysis-Jones, Fresenius, Plattner.

In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying.

In Agricultural Chemical Analysis—Church, Frankland. Official methods of the Association of Agricultural Chemists.

CHEMICAL LABORATORY.

(For description of the building see page 15.)

The Chemical Apparatus recently purchased for the new laboratory consists of a full supply of the most approved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to first class laboratories, a new and improved Schmidt and Hensch's Polariscope has been imported, two short-arm Becker Balances of latest pattern, Bunsen Spectroscope, Zeiss' Microscope, and other instruments for delicate and accurate work.

ENGLISH AND LATIN.

PROF. THACH.

ENGLISH.

In this department the students are carried through a systematic course of study in the English Language and literature. In the courses of study which do not include the ancient classics, a full course in English is especially important. It is therefore designed, as much as the time allotted permits, to familiarize the students by frequent exercises with the standard authors of the language.

The course of study is as follows:

Freshman Class.—Five hours a week; study of grammar, the principles of special and general composition, with frequent brief papers illustrating the laws studied.

Whitney's Essentials, Lockwood's Lessons in Rhetoric.

Sophomore Class.—Three hours a week; study of style, analysis of selections of prose and poetry, frequent essays on literary and historic themes.

Genung's Rhetoric, Scudder's American Poems, Abbott's How to Write Clearly. Weekly exercises in declamation are required of this class.

Junior Class.—Three hours a week; critical study of English Classics, History of English and American Literature, Logic, Essays.

Shaw's History of English Literature, Abbott's English Lessons, Hale's Longer English Poems,

Senior Class.—Two hours a week, first term. Principles of criticism and study of English Classics; second and third terms, Political Economy, Two hours a week, first and second terms, Mental Science; third term, Moral Science.

Shakespeare's Plays, Chaucer's Canterbury Tales, Wavland's Science of Wealth, Hickok's Mental Science, Gregory's Christian Ethics.

Three original orations are required during the year of each student of the first and second classes.

LATIN

The subjects taught in this department are the Latin Language and Literature.

The modes of instruction are by translation from the Latin texts into English and from English into Latin. The constant use of blackboards adds much to the progress and accuracy of the student.

A systematic course of exercises, illustrative of the principles of Latin etymology and syntax, is carried on in connection with the reading of the authors prescribed. Special attention is given to English derivatives from the Latin, and to the corresponding idioms of the two languages.

The progress of the student is valued not so much by the number of books read, as by his ability to read Latin and ex-

plain the principles of interpretation and construction.

Latin authors read:

Freshman Class.-Virgil, Cicero's Orations, Grammar and Composition.

Sophomore Class.—Cicero's Composition.

Junior Class .- Tacitus, Horace, Selections from Latin poets and Prose writers, Classical Literature.

Senior Class .- Cicero's Tusculan Disputations, Terrence, History of Latin Literature.

MECHANIC ARTS.

G. H. BRYANT, B. S. DIRECTOR.

J. J. WILMORE, B. A. BLAKEY, ASSISTANTS.

The course in Manual Training covers three years, as fol-First year, wood-working-carpentry and turning; second year, pattern-making and foundry and forge work—moulding, casting and smithing; third year, machine shop-chipping and filing and machine work in metals.

This course is obligatory upon the students of the three lower classes. For satisfactory reasons a student may be ex-

cused from this laboratory work by the Faculty.

The full work of each class is six hours per week, in three exercises of two hours each.

The power for running the apparatus in this department is derived from a twenty-five horse power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler. A steam pump and a heater for the feed water form a part of the steam apparatus. For the steam plant a substantial brick boiler-house and chimney have been erected.

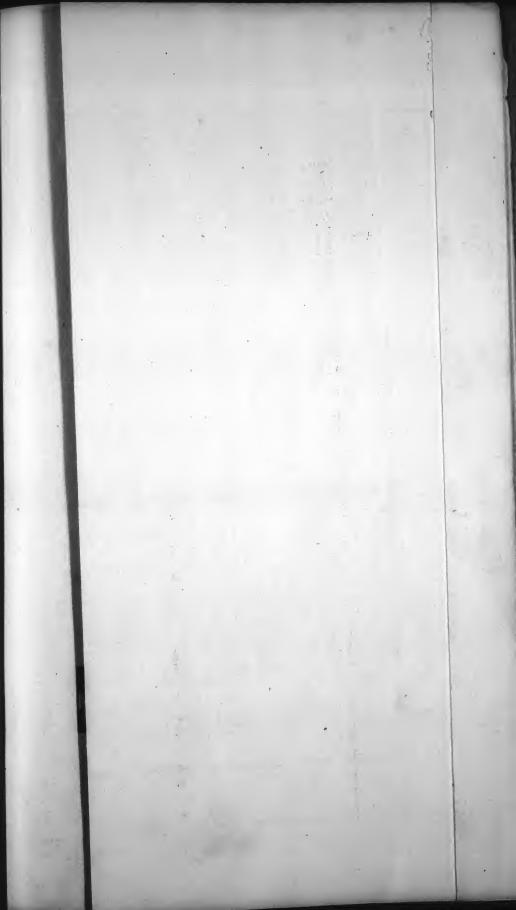
The equipment for the wood-working shop comprises the following: 20 double wood-working benches, each with complete set of carpenter's tools; 20 turning-lathes, 10-inch swing, each with complete set of tools; 1 double circular saw; 1 band saw; 1 board-planing machine; 1 buzz planer; 2 scroll saws (power), 1 large pattern-maker's lathe, 16-inch swing; 1 36-inch grindstone. In addition to these, the tool room is supplied with a variety of extra hand-tools for special work.

The equipment for the foundry consists of moulding-benches for 12 students, each supplied with a complete set of moulder's tools; a 14-inch cupola, with all modern improvements, capable of melting 1,000 pounds of irou per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of crucible tongs, etc. Also a full supply of ladles, large and small moulding flasks, special tools, etc.

The forge shop equipment consists of 16 hand forges of new pattern, each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola), and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke-flues and

forces it out through the chimney.

The machine tools in the machine department are as follows: 6 engine-lathes (screw-cutting), 14-inch swing, 6-foot bed; 2 engine-lathes, 16-inch swing (one with taper attachment); 1 speed lathe, 10-inch swing; 1 20-inch drill-press (power-feed); 1 15-inch shaper; 1 22-inch x 22-inch x 5 foot friction planer; 1 universal milling machine; 1 corundum tool-grinder (14-inch wheel); 1 bench grinding-machine (small); 1 post drill press (14-inch). A part of this room is set apart for vise-work, chipping and filing; and benches for 12 students are provided, each with vise and sets of files, chisels, hammers, etc. In the tool-room is to be found a good supply of machinists' tools for gen-





ALA. POLY. INST.

BCALE 1/6 - 1'

INDEX

- WORK BENCHES BAND SAW BGROLL SAW

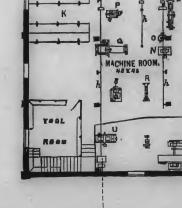
- PATTERN LATHE GIRCULAR SAW
- GRINDSTONE
- BUZT-PLANER SURFACE **
- DRILL PRESS
- DHILL PRESS
 EILING BENCHES
 ENGINE LATHES
 BENCH GRINDER
 TOOL
 POST DRILL
 SHAPER
 PLANER

- R SPEED LATHE

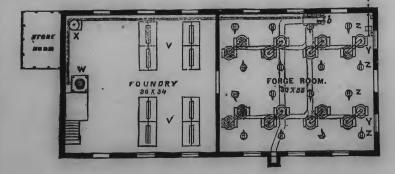
- MILLING MACHINE ENGINE DYNAMO MOULDING SENCHES

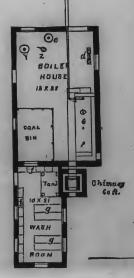
- W GUPOLA
 X BRASS FURNAGE
 Y FORGES
 Z ANVILS
 W WOOD LATHES
 D BLOWERS
 C HEATER
 D PUMP

- 6 BOILER f CLOSETS g SINKS
- BHAFT LINES BENCHES



WOOD







eral shop use, such as lathe and drill chucks, drills, reamers, taps, dies, gauges, files, cutting and measuring tools, and special appliances for machine work, etc.

The nature of the work in each department is as follows:

FIRST YEAR.

I. A course of carpentry (hand work covering the first

term and part of the second, or about five months).

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, different kinds of joints, timbersplices, cross joints, mortise and tenon, mitre and frame work, dovetail work, comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof-trusses, etc.

II. A course in turning, extending through the three months of the third term. The lessons comprise, first, nature and use of lathe and tools, plain straight turning caliper work to different diameters and lengths, simple and compound curves, screw plate and chuck-work, hollow and spherical

turning.

SECOND YEAR.

I. A course in pattern-making, covering the first half of the first term. The work includes a variety of examples of whole and split patterns, core work, etc., giving the students familiarity with the use of patterns for general moulding.

II. A course in moulding and casting in iron and brass occupying ten weeks. The work consists for the most part of small articles, such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two part flasks; core work is also given, and some three part flask and some dry sand work is introduced.

The same patterns which have been previously made by students are used, besides special patterns for occasional larger

or more complicated work. Instruction and practice is given in working the cupola, each student in turn taking charge of a

melting.

III. A course in forge work in iron and steel, occupying the remainder of the year. The lessons are arranged so that the students, in making the series of objects, become familiar with the nature of the metals and the successive steps in working them by hand into simple and complex forms, as drawing, upsetting, bending, cutting, punching, welding by various methods, tool-forging, tempering, hardening, etc.

In connection with this second year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel, brass, etc,

THIRD YEAR.

I. A course in chipping and filing covering the first term. The lessons comprise work on cast and wrought iron; chipping to line on flat and curved surfaces, key-seating, etc.; filing and finishing to line (straight and curved), surface filing and finishing, fitting, slotting, dovetail work, sliding and tight fits, sawing, pin, screw and key filing, surface finishing with scraper, etc.

II. Machine work occupying the remainder of the year. The work includes cast and wrought iron, steel and brass: turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling—both in lathe and drill press—reaming, boring, screw-cutting in lathe and with taps and dies, planing, slotting, etc., with planer and shaper, milling various forms with the milling machine, fitting, grinding, polishing, etc.

Lectures are also given during the year on various subjects connected with machine work in metals: Such as forms, construction and use of the various machines, cutting tools, gearing, gauges, screw threads, etc. During the last term some piece of construction work is given the classes.

Instruction is generally given, first, by black-board drawings or sketches which the student copies, with dimensions in note-

book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class, second by inspection and direction at the bench by the instructor.

Students desiring to pursue the study of applied mechanics beyond the above course will take a special course of Steam and Mill Engineering, supplemented by experiment and practice with the apparatus, including steam generation and the forms, construction and use of steam-boilers and accompanying apparatus; steam as a motive power, and forms, construction and use of the steam engine, with the study and use of the indicator; transmission of power-shafting, belting, gearing, etc.; also elementary theoretical mechanism.

BIOLOGY.

PROFESSOR ATKINSON.

Elementary Biology.—Three lectures a week during the second term will be given to the freshman class upon the elementary principles of biology. The course will include a discussion of the fundamental physiological properties of animal and plant life. The lectures will be supplemented by experiments, demonstrations and microscopic illustrations before the class.

Practical Biology.—This subject is presented by lectures twice a week to the senior students in Agriculture and Chem-The first part of the year will be devoted to the study of fungi, giving prominence to those which cause diseases of cultivated plants. This will be followed with the study of insects, including those injurious and beneficial to Agriculture. Special attention will be given to methods employed in combating the attacks of fungi and insects upon plants.

The reference books will be announced to the classes. department contains a carefully selected library of the standard works on biology and many rare and valuable works, besides current periodicals adapted to aid in the special investi-

gations carried on in the laboratory.

MODERN LANGUAGES AND HISTORY.

C. H. BARNWELL, JR., ADJUNCT PROFESSOR.

MODERN LANGUAGES.

The following regular courses are given in French and German:

French.—First Year: Three recitations a week. During this year the principal object is to acquire a thorough knowledge of the elements of grammar, and a correct pronunciation, together with facility in translating ordinary French. Reading is begun at an early stage, and the principles of grammar are illustrated and impressed by frequent exercises in rendering English into French.

Second Year: Three recitations a week. During this year, the same line of work is pursued as that begun in the previous year. More difficult and varied French is read, and careful instruction is given upon the laws of grammar and the construction of the language.

German.—Two Years: Three recitations a week the first year, three a week the second year. In this course the aim and the methods are similar to those in French.

Special Courses.—In addition to these regular courses, additional classes are formed for special study in the literature, or for special study in any particular direction desired, when the number of students desiring it is sufficient.

TEXT-BOOKS.

French-First Year: Joynes-Otto's French Grammar and Introductory Reader.

Second Year: Super's French Reader, Jeanne d'Arc, and d'Avare. Heath's French Dictionary recommended.

German-First Year: Joynes-Meissner's German Grammar, and Joyne's Reader,

Second Year: Hauff's Karavane, Peter Schlemihl, Die Journalisten, Heath's German Dictionary recommended.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the

fact that History is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. This causal relation of events is closely studied and the students are taught to investigate for themselves the growth of ideas, and to trace particularly their development in the United States, so as to acquire a practical knowledge of the history and present workings of our government and institutions. The knowledge acquired is rendered clear and permanent by frequent comparison of customs and laws, and also by diagrams, charts and maps. Instruction is given by lectures and text-books.

The course covers two years, and embraces the History of the United States, studies on our government and its institutions, and on general history.

TEXT-BOOKS.

First Year: Johnston's U.S. History, and Swinton's "Outlines of the World's History."

Second Year: Myer's Mediæval and Modern History.

MILITARY SCIENCE AND TACTICS.

LIEUT. J. B. McDONALD, U. S. ARMY, COMMANDANT.

Military Science and Tactics are required to be taught in this institution by law. This law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion; also in Guard Mountings, Inspections, Dress Parades, Reviews, etc.

Under section 1225, U. S. Revised Statutes, the College is provided with modern Cadet rifles and accourtements and two pieces of field artillery. Ammunition for practice firing is used under the direction of an experienced officer.

The following uniform of standard Cadet gray cloth has been prescribed for dress, viz.: Coats and pants as worn at West Point, with sack coat for fatigue, dark blue Cadet cap. West Point, with sack coat for fatigue, dark blue Cadet cap. A neat and serviceable uniform can be obtained here at \$18 A neat and serviceable uniform can be obtained here at \$18 to \$19. This is less expensive than the usual clothing. All to \$19. This is less expensive than the usual clothing the session.

The entire body of students is divided into companies. officers are selected for proficiency in drill, deportment and Each company is officered by one Captain, two 1st Lieutenants, one 2d Lieutenant, and with a proper number of The officers and non-commissioned officers are dis-Corporals. tinguished by appropriate insignia of rank. These appointments are confirmed by the President on nomination of the Commandant.

The Junior Class recites once a week in the United States Infantry Tactics.

The Senior Class recites once a week in "Notes on Military Science."

POST-GRADUATE DEGREES.

There are three Post-Graduate Degrees-MASTER OF SCIENCE, MINING ENGINEER and CIVIL ENGINEER.

A Post Graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one year's residence at the College, spent in the successful prosecution of a course of study in applied science prescribed by the Faculty.

Candidates must also present to the Faculty a satisfactory thesis, showing independent investigation upon some subject pertaining to their course of study, and must pass a satisfactory examination on the course of study prescribed. amination is written, and also oral, in presence of the Faculty.

Applicants for Post-Graduate Degrees are, by order of the Board, permitted to matriculate without payment of fees.

They are subject to the general regulations as other students,

but are exempt from all military duty.

Resident graduates, who are not candidates for a degree, are permitted to matriculate and prosecute the studies in any department of the College, except chemical laboratory, without payment of regular fees.

DISTINCTIONS.

Distinctions are awarded in the different subjects of each class to those students whose grade for the entire year is above 90 per cent.

Certificates of Distinction are awarded in public on Commencement day to those who obtain an average of 90 per cent. in all the prescribed studies of a regular class, and also to those who obtain three distinctions in the freshman class, four in the sophomore or junior class, and five in the senior class, provided they have satisfactorily passed all the regular examinations of that session.

PHOTOGRAPHY.

During the second term there will be given by Professor Mell a course of twelve lectures on photography. This course will be elective, and the instruction will be opened to any student who may desire to learn how to make pictures. It will be necessary for each student to provide himself with an outfit that will cost from \$11.50 to \$16.00.

RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

From the record a monthly circular, or statement, is sent to the parent or guardian.

EXAMINATIONS.

Written recitations, or monthly examinations on the studies of the month, are held at the option of the professor.

At the end of each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination, can be promoted to full standing to the next higher class, only on satisfactory examinations at the opening of the next session. It is required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within six weeks of the examination, except in extreme cases.

Examinations for degrees, or certificates of proficiency, embrace the entire subject of study in the course.

LIBRARY.

A commodious room in the new building has been appropriated to the library. It is designed to make it an important educational feature of the college. At present it contains a number of valuable reference books, books of the standard authors, and others suitable for students. It is open daily, when students are permitted to select books under prescribed regulations.

DISCIPLINE.

The government of the College is administered by the President and Faculty, in accordance with the code of laws and regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, are required of every student.

Students are not allowed to have in their possession weapons or arms not issued for the performance of military duty.

MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapacitated to bear arms, are required to engage in these exercises.

The drills are short, and the duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the devel opment of the *physique* and improvement of the carriage of the Cadet are manifest.

Privates of the first class may be excused by the President from all military drills, and also students over twenty-one years of age, who are permitted to matriculate and devote their time to one special study, as chemistry, agriculture, etc.

RELIGIOUS SERVICE.

Religious services are held every morning in the chapel.
All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings exerts a wholesome Christian influence among the students of the College.

LOCATION.

The College is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railroad.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty-one feet above tide water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

THESIS.

Each applicant for a degree is required to write and submit to the Faculty a thesis on a subject of immediate relation to some study of his course, and deliver the same at Commencement, if required by the Faculty.

This thesis must be given to the Professor of English by

the first of May.

LITERARY SOCIETIES ..

There are two Literary Societies connected with the College—the Wirt and Websterian. Each has a hall in the college building.

These societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

EXERCISES IN ELOCUTION.

On every Saturday morning, immediately after chapel services, oratorical exercises in declamation and in original orations are conducted by the Professor of English, in presence of the Faculty and students.

The first and second terms the students of the sophomore class are exercised in declamation.

The second term the members of the junior class deliver original orations.

The third term the members of the senior class read essays or deliver original orations.

SOCIETY OF THE ALUMNI.

The Annual Alumni Oration, by a member of the society, is delivered in the chapel during Commencement week. The following are the officers of the society:

T. H. Frazer, M. D. President.

J. C. Street, Vice President.

C. C. Thach, Treasurer and Secretary.

BOARDING.

The College has no barracks nor dormitories, and the students board with the families of the town of Auburn, and thus enjoy all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of order.

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President, and this permission is given only at the close of a term, except for special reasons.

EXPENSES.

Incidental fee, per half session\$2	50
Library fee, per half session 1	
Surgeon's fee, per half session 2	50
Board per month, with fuel and lights\$12 to 15	00
These fees are payable, \$6.00 on matriculation and \$6.00	on

These fees are payable, \$6.00 on matriculation and \$6.00 on February 1st. By order of the Board no fees can be remitted.

There is no charge for tuition.

For students entering after January 1st, the fees for half session only are required.

CONTINGENT FEE.

A contingent fee of five dollars is required to be deposited by each student on matriculation, to cover any special or general damage to college property for which he may be liable.

At the close of the session the whole of the contingent fee, or the unexpended balance, will be refunded to the student.

AMOUNT OF DEPOSIT.

Each student on entering College should deposit with the Treasurer not less than \$50.00, to pay the expenses of fees, one month's board, uniform, books, etc.

UNIFORM.

A uniform of Cadet gray cloth is prescribed which all under graduate students are required to wear during the session. The uniforms are made at Auburn, of cloth manufactured at the Charlottsville mills. The suit including cap, costs about \$19.00; the dress coat \$10.00 to \$11.00. It is neat and serviceable and less expensive than ordinary clothing.

SURGEON.

The Surgeon is required to be present at the College daily, to visit the Cadets at their quarters who are reported sick, and

to give all requisite medical attention without other charge than the regular Surgeon's fee, paid on entering College.

FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the Treasurer of the College all funds desired for sons or wards, whether for regular charges of College fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., when approved.

When funds are deposited, checks are drawn on the Treasurer of the College by the cadet to pay his necessary expenses. These checks are paid only when approved by the President. This approval is given only for necessary expenses, as stated in the Catalogue, unless specially

requested in writing by the parent.

The College cannot be held responsible for the expenses of a student, unless the funds are deposited with the Treasurer. No student should be permitted to have a large amount of pocket money, as it only brings trouble and encourages idleness.

ACADEMIC YEAR. = 11116

The Academic Year commences on Wednesday, 16th September (second Wednesday after first Monday), and ends on Wednesday, 16th June (the second Wednesday after the first Monday), which is Commencement day.

It is divided into three terms. The first term extends from the opening of the session to the 23d of December; the second term begins December 31st and ends March 27th; the third term continues from March 27th to the close of the session.

RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the Trustees:

That in view of increased facilities for instruction in Agriculture and the technical departments of education now possessed by this College, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the Faculty are authorized, in addition to the legal name of this College, to print on the Catalogue the words ALABAMA PÓLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the course of education now provided for,

DONATIONS TO LIBRARY.

Secretary of the Interior—Senate and House Reports, Mineral Resources, Consular Reports, Geological Survey, Ordinance Report, Bureau of Ethnology, Geodetic Survey, etc., 60 vols.

Hon. John T. Morgan, Public Documents, 5 vols.

Hon. James L. Pugh, Public Documents, 7 vols.

Hon. W. C. Oates, War of Rebellion, Congressional Record, 10 vols.

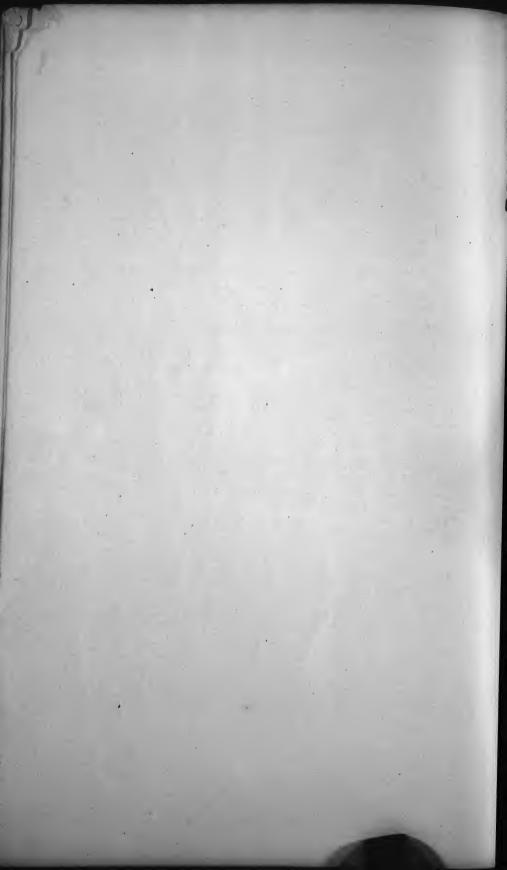
Hon. Robert Porter, Superintendent of Census, Bulletins, etc.

Hon. W. T. Harris, Commissioner of Education, Pamphlets, etc., 5 vols.

U. S. Geodetic Survey, 11 vols.

CALENDAR 1891-92.

Session begins	Wednesday, Sept. 16, 1891.
Examination for admission	Wednesday, Sept. 16, 1891.
First term begins	Wednesday, Sept 16, 1891.
First term ends	Wednesday, Dec. 23, 1891.
Second term begins	Thursday, Dec. 31, 1891.
Second term ends	Saturday, March 27, 1892.
Third term begins	Monday, March 29, 1892.
Sophomore class exercises	Saturday, May 1, 1892.
Final examinations begin	Monday, May 24, 1892.
Commencement sermon	Sunday, June 13, 1892.
Annual meeting of Trustees	Monday, June 14, 1892.
Military exercises	Monday, June 14, 1892.
Celebration of Literary Societies 8 P. M.	Monday, June 14, 1892.
Junior class celebration	Tuesday, June 15, 1892.
Alumni oration	Tuesday, June 15, 1892.
All and before Literary societies & B.	Tuesday, June 15, 1892.
Address before Literary societies 8 P. Commencement day	Wednesday June 16, 1892.
Commencement day	Wednesday, suite 10, 1002.



AGRICULTURAL →EXPERIMENT & STATION →

-OF THE-

AGRICULTURAL Nº MECHANICAL COLLEGE

-of-

ALABAMA.



OFFICERS

OF THE

AGRICULTURAL EXPERIMENT STATION.

BOARD OF VISITORS.

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION:

Hon, J. G. Gilchrist, Hon. R. F. Ligon, ... † Hon. J. B. Mitchell.

OFFICERS OF THE STATION.

W. L. Broun	President
J. S. NEWMAN	Director and Agriculturist
N. T. LUPTON	Vice-Director and Chemist
P. H. MELL*	Botanist
G. F. ATKINSON	Biologist

ASSISTANTS.

ISAAC Ross, First Asst. Agriculturist in Charge of Live Stock and Dairy		
JAS. CLAYTON	Second Assistant Agriculturist	
J. T. Anderson, Ph. D	First Assistant Chemist	
L. W. WILKINSON, M. Sc	Second Assistant Chemist	
J. F. WILKINSON, B. Sc	Third Assistant Chemist	
J. F. WILKINSON, B. SC	Fourth Assistant Chemist	
R. E. Noble, B. Sc	A seigtant Rotonist	
A. M. LLOYD, B. Sc	Assistant Dotamer	

^{*} Prof. Mell has charge of the Meteorological Observations.

⁺ Deceased.



AGRICULTURAL EXPERIMENT STATION.

DEPARTMENT OF AGRICULTURE.

In this department every variety of experiment with field crops, grasses, vegetables and fruits calculated to benefit the farmers of the State have been conducted, or are in progress. Worn and gullied lands have been brought into profitable cultivation, and swamps drained.

For the purpose of learning the chemical needs of the various typical soils of the State, chemicals, for experiment, have been furnished fortythree experimenters cultivating the different typical soils in every part of the State. These are furnished by the Station ready for application to the experiment plots, free of charge to the experimenters who volunteer to do the work according to printed instructions furnished by the Station. In addition to these an alumnus of the College is conducting upon his own lands an elaborate set of special nitrogen, potash and intercultural experiments with chemicals furnished by the Station. Varieties of seed have also been furnished a number for experimental comparison upon different soils. Varieties of grapes, strawberries and raspberries have also been gratuitously distributed to the experimenters for the purpose of learning what varieties may be profitably grown under the great variety of conditions of soil, climate and elevation presented in Alabama. Crops have been planted with special reference to facilitating research by the Chemist, Botanist and Biologist. The Station has a large house for milch cows, a model dairy with modern appliances, a gin-house with milling room, barn and stable, two silos, with 15-horse power engine. It also has the residence of the professor and general office, with storage rooms, etc.

DEPARTMENT OF CHEMISTRY.

The Chemical Department of the Agricultural Experiment Station, in connection with the Agricultural and Mechanical College of Alabama, includes in its present organization, the Chemist in charge and four assistants.

In addition to the work directly connected with the Station, the Chemist is Professor of general and Agricultural Chemistry in the Agricultural and Mechanical College, and official Chemist of the State Department of Agriculture. On the application of the Commissioner of Agriculture, he is required to "analyze and certify the analysis of all fertilizers, samples of which are furnished him." The variety and extent of this work, which has greatly increased during the past year, can be seen from the following tabular statement of the number and character of quantitative analyses made during the year ending April 1st, 1891. In the analyses of commercial fertilizers, only those constituents are determined which the State law requires, viz: Water soluble, citrate soluble and acid soluble phosphoric acid, nitrogen and potash.

Analyses made during the year from April 1st, 1890, to April 1st, 1891.

	No. of Samples.
Acid phosphates with nitrogen and potash	185
Acid phosphates with potash	11
Acid phosphates	75
Natural phosphates	
Marls	2
Tankage	
Cotton seed meal	17
Muriate of potash	
Bone meal	
Dried blood	
Bat manure	
Coal ashes	
Kainite	
Sodium nitrate	
Cotton seed hull ashes	2
Compost	
Iron ores	
Limestone	2
Feed stuffs	6
Sorghum	63
Milk	37
Butter	37
Total	518

In addition to the quantitative work, a large number of mineralogical specimens, the character of which could be ascertained by mere inspection or by simple qualitative tests, have been examined and their value determined.

Two bulletins have been prepared and issued during the year, embracing in detail the results of analyses of commercial fertilizers and other substances, in addition to discussions of subjects of interest to the farmers of the State. The first of these bulletins on "nitrogen as a

fertilizer," embraces a discussion of nitrogen as plant food, its sources in vegetation and its accumulation by plants, especially by pea vines, the value of which as a fertilizer is discussed in connection with original determinations of the amount of phosphoric acid, nitrogen and potash contained in the vines and roots. The results show the great value of this important natural fertilizer in restoring fertility to worn and exhausted soils.

The second bulletin contains a discussion of the composition of milk and butter with special reference to the effects of feeding on cotton seed and cotton seed meal. Twenty-seven analyses of these dairy products, derived from different feed stuffs, show an increase in the melting point and a corresponding diminution in the volatile acids of the butter produced by feeding on the substances mentioned.

FACILITIES FOR WORK.

The new building for the Department of Chemistry is complete in its arrangements, and admirably adapted to meet the growing demands of modern progress in this department of science. In this building, a description of which is given in this Catalogue, is located the State Chemical Laboratory, where all the chemical work of the Experiment Station is carried on. Care has been taken to secure the best form of work tables, niches, hoods, etc. Gas, water and other conveniences and necessaries for effective work are abundantly supplied.

The equipment is the best that can be secured from manufacturers in this country and in Europe. In addition to the apparatus usually found in chemical laboratories, and especially where soils, feed stuffs, and dairy products are analyzed and their properties investigated, may be mentioned—

Schmidt and Hansch's Polariscope. Zeiss' Microscope. Zeiss' Refractometer. Spectroscope. Becker's Balances.

Also, a new and special arrangement for carrying on, at the same time, a number of nitrogen determinations by the Kjeldahl method.

The Library of the Experiment Station contains a large number of standard works of reference, and is supplied with the principal American, English, French, and German chemical journals.

DEPARTMENT OF BOTANY AND METEOROLOGY.

The work in this department of the station is specially devoted to investigations in phanerogamous plants, and observations of meteorological instruments.

The laboratory for botanical work consists of the following apparatus: • One Zeiss microscope, No. IIa, with apochromatic objectives, with the equivalent focus in m m of 16.0, 8.0, 4.0, and one homogeneous immersion of 2.0, the series of compensating oculars of 2, 4, 6, 8, 12, 18, and Zeiss projection eye piece for photographing objects; camera lucida after Abbe; sliding objection-changers; Abbe condenser; Goniometer eye piece; eye piece micrometer; stage micrometer; polarizers.

Four Leitz microscopes for students, containing objectives 3 and 7,

oculars 1 and 3.

Twelve Acme Students microscopes with objectives 1, 1/2, 1-5 inches, and oculars to suit.

Two Bausch & Lombs compact dissecting and mounting microscopes.

One Bausch & Lombs Laboratory microtome.

One King's microtome.

One Bausch & Lomb Professional photo-micro camera, with bellows to extend eight feet, containing mechanical stage, achromatic amplifier, 1 inch objective.

Bull's eye condenser, lens 3 inches diameter.

A well equipped dark room with all the appliances for complete photographic operations.

One camera fitted with Clark's Rapid Rectilinear lens List No. 1, with Bausch & Lombs, Diaphragm Shutter.

The laboratory contains besides the above all the vessels and smaller instruments needed for investigations in botany.

The meteorological observatory is supplied with:

One maximum thermometer.

One minimum thermometer.

One wet and dry bulb hygrometer.

Three sets of soil thermometers, ranging in depth from one to ninetysix inches.

One solar radiator thermometer.

One terrestrial thermometer.

One Barometer.

One Anemometer, with electrical recorder.

One Anemoscope.

One rain gauge.

The United State Signal Service has detailed an observer (Mr. J. M. Quarles) to act as assistant in Meteorological work at this station, and through the aid of the National Service about thirty sets of instruments have been secured for as many different sub-stations throughout Alabama. The observers in charge of these stations report to the College at regular intervals throughout the year, and during the crop seasons special crop bulletins, indicating the effects of the weather on the growing crops, are issued each week, prepared from the data sent in by these observers.

DEPARTMENT OF BIOLOGY. .

During the year three bulletins and two circular letters have been prepared from this department as follows:

Circular Letter No. 1, May 14, 1890, sent to one hundred farmers of the State requesting their experience in the application of the dry poisons (Paris green and London purple), by dusting it through osnaburg bags suspended from a pole.

Circular Letter No. 2, August, 1890, sent to one hundred farmers in the State requesting specimens and notes on the diseases of cotton, variously termed "rust," "red rust," "black rust," "Frenching," etc.

Bulletin No. 15, April, 1890.—Insecticides; kerosene emulsion; how to make and apply it.

Bulletin No. 17, July, 1890.—Dry application of Paris green and London purple for the cotton worm. The replies to circular letter No. 1 were made the basis of this bulletin.

Bulletin No. 21, December, 1890.—A new root rot disease of cotton. A description of root rot of cotton caused by the root-gall nemotode, *Hetrodera radicicola*, with photograph illustrating the disease. Attention is directed to the danger of the present reckless distribution of this nematode in the roots and tubers of various plants.

There is also a popular description of the worm and its habits.

The special work of the Biologist is phytopathology, or the study of the diseases of plants.

The department is now engaged especially in studying the diseases of the cotton plant. From personal inspection and careful observation in the field and study in the laboratory, including also material sent in from a number of farmers in the State in answer to circular letter No. 2, a bulletin is now ready to be issued upon the diseases popularly called "black rust." In it are considered the external characters of the disease, the fungi causing it, the progress of the disease, and various cur-

rent theories regarding the cause. It is illustrated with photographs of the diseased leaves and pen sketches of the most injurious fungi concerned.

A new fungous disease of cotton termed "Authracnose of cotton" has also been carefully studied and a bulletin will soon be issued upon the subject.

During the spring experiments were made to test the efficacy of certain fungicides for black rot of grapes. The Bordeaux Mixture and the Ammoniacal carbonate of copper were the principal ones experimented with.

The Bordeaux Mixture was successful to a very satisfactory degree, but the Ammoniacal carbonate of copper did not present any beneficial results.

A large number of fungi on grasses, fruit trees, forest trees, etc., have been collected and placed in the cabinet of the department for use in offering instruction and as the basis for other bulletins of economic interest.

In the laboratory the gelatine and agar agar method of studying micro-organisms is being made a special feature of the work, applying the methods to the handling and culture of fungi, and already promises important results in determining the economic importance of certain fungi as well as giving us a clearer insight into their habits and polymorphism.

FACILITIES FOR WORK.

At present three rooms are occupied by the department—an office, lecture room and laboratory. The office contains the cabinent of fungi, the technical library for the department, slate table with a Zeiss microscope, reagents, gas and water fittings. The work in the office consists of the examination, indentification and cataloguing of the specimens of fungi, beside the special work peculiar to such an office. The cabinet is provided with tight drawers, for receiving the mounted specimens of fungi.

The technical portion of the Experiment Station library in the office of the Biologist contains a number of valuable works of reference, special reports, &c.

LABORATORY.—Five slate top tables are devoted to the use of students, there being 10 Leitz microscopes set apart for them.

A small culture room contains the plate and teche cultures of fungi and bacteria which are being studied in relation to the plant diseases they cause. Here they can be handled and studied with little danger of contamination from the dust of the laboratory. In this room is kept a Rohrbeck Thermostat fitted with automatic cut off burner and Lautenseblager's most recent electric thermoregulator for maintaining constant temperatures,



Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

1891

```
OCLC: 36819601
                          Rec stat:
  Entered:
             19970429
                         Replaced:
                                       19970429 Used:
                                                             19970429
                          Srce: d
                                      GPub: s Ctrl:
Type: a
            ELvl: I
                                                              Lang: eng
  BLvl: s
             Form: a
                          Conf: 0
                                      Freq: a
                                                 MRec:
                                                              Ctry: alu
  S/L: 0
             Orig:
                          EntW:
                                      Regl: r
                                                  ISSN:
                                                              Alph:
          SrTp:
                                      DtSt: d
                                                  Dates: 1873,1893 ¶
  Desc: a
                          Cont:
   1 040
             AAA +c AAA ¶
           h +b c +d b +e f +f u +g b +h a +i u +j p 1
   2 007
   3 043
             n-us-al ¶
   4 090 LD271 +b .A76 ¶
   5 090
             *b 1
   6 049
             AAAA ¶
  7 110 2
             Agricultural and Mechanical College of Alabama. ¶
   8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
   9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
▶ 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama 1
12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama 1
             Auburn, Ala. : +b The College, ¶
  13 260
  14 300
             21 v. ; +c 21 cm. ¶
 15 310
             Annual ¶
 16 362 0
             1872-73-1892-93. ¶
             Title varies slightly. ¶
 17 500
             Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
18 533
≠d 1997. ≠c microfilm reels : negative ; 35 mm. ¶
             d +b 1873 +c 1893 +d alu +e u +f u +g a ¶
19 539
20 650 0 Universities and colleges +z Alabama +x Periodicals. 1
▶ 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
▶ 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
> 23 785 00 Agricultural and Mechanical College of Alabama. +t Catalogue of
```

> 24 830 0 USAIN State and Local Literature Preservation Project 1

the Alabama Polytechnic Institute 1

ALABA A POLYFEUHNIC INSTITUTE DATALOGUE 1891-92

AU LD271 .A76 1891/92 c.2

AUBURN UNIVERSITY LIBRARY



AU LD271 .A76 1891/92 c.?

THE PERSON NAMED IN

Aunufactured by VLORD BROS. Inc. Syracuse, N. Y. Stockton, Calif.

NOON,

CAT.2-

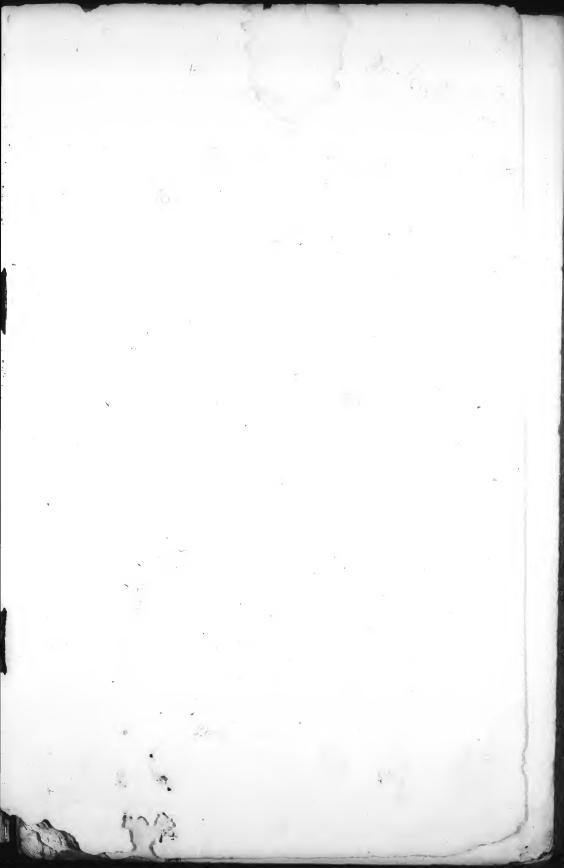


AGRIC LTURAL AND MECHANICAL COLLEGE.

ALABAMA POLYTECHNIC INSTITUTE.

1892.







AGRICULTURAL AND MECHANICAL COLLEGE.
ALABAMA POLYTECHNIC INSTITUTE

CATALOGUE

OF THE

STATE

AGRICULTURAL NO MECHANICAL

COLLEGE.

ALABAMA POLYTECHNIC INSTITUTE.

1891-92.

AUBURN, ALABAMA.

MONTGOMERY, ALABAMA:
BROWN PRINTING CO., PRINTERS, BINDERS AND STATIONERS.
1892.

BOARD OF TRUSTEES.

His Excellency Thomas C	JONES, President	ex-officio.
	ndent of Education	
e will be a second of the seco		
J. G. GILCHRIST	(term expires 1897)	Montgomery.
	(term expires 1897)	
C. C. HARRIS	(term expires 1897)	Decatur.
	-	,
	(term expires 1895)	
R. F. LIGON	(term expires 1895	Tuskegee.
JOHN W. BISHOP	(term expires 1895)	Talladega.
R. F. Kolb	(term expires 1893)	Eufaula.
C. H. LINDSAY	(term expires 1893)	Mobile.
H. CLAY ARMSTRONG	(term expires 1893)	Auburn.

E. T. GLENN, Treasurer. | F. M. REESE, Secretary.

A2L LD27/ A76 1891/92 C.2 BARKSDALE

FACULTY AND OFFICERS.

WM. LEROY BROUN, M. A. LL. D.,
President and Professor of Physics and Astronomy.

OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, M. E., Ph. D.,
Professor of Natural History and Geology.

JAMES H. LANE, C. E., A. M., LL. D., Professor of Civil Engineering and Drawing.

> CHARLES C. THACH, A. M., Professor of English and Latin.

N. T. LUPTON, A. M., M. D., LL. D.,

Professor of General and Agricultural Chemistry and State Chemist.

GEORGE F. ATKINSON, Ph. B., Professor of Biology.

GEORGE PETRIE, M. A., Ph. D., Professor of History and Latin.

LIEUT. J. H. WILLS, 22nd Infantry, U. S. A. (West Point), Commandant and Professor of Military Science.

A. J. BONDURANT, A. M.,

Professor of Agriculture and Agriculturist of Experiment Station.

CHARLES H. BARNWELL, A. M.,

Adjunct Professor of Modern Languages and History.

A. F. McKISSICK, A. M.,
Adjunct Professor of Electrical and Mechanical Engineering.

J. J. WILMORE, M. E.,

Acting Director of Laboratory, and Instructor of Mechanic Arts.

C. A. CARY, D. V. S.,

Lecturer on Veterinary Science.

L. W. WILKINSON, M. Sc.,

Assistant in Chemical Laboratory.

B. A. BLAKEY, M. Sc.,

B. H. CRENSHAW, M. Sc.,

Assistant Instructors in Mechanic Arts.

H. C. Armstrong, Jr., B. Sc	Assistant Librarian.
L. E. BAKER, B. Sc	Assistant in Drawing.
H. BENTON, B. Sc	Assistant in Agriculture.
S. J. BUCKALEW, B. ScAs	ssistant in Mathematics and English.
J. S. CLARK, B. Sc	Assistant in Botany.
B. M. DUGGAR, B. Sc	Assistant in Biology.
C. B. GLENN, B. Sc	Assistant in English.
C. C. Johnson, B. Sc	Assistant in Mathematics.
F. A. LUPTON, B. Sc	Assistant in Chemistry.
W. A. MARSHALL, B. Sc	
A. D. McLennan, B. Sc	Assistant in Mechanic Arts.
J. H. DRAKE, M. D	Surgeon.
C. C. THACH	Librarian and Recording Secretary.
	Corresponding Secretary.

OFFICERS

OF THE

AGRICULTURAL EXPERIMENT STATION.

BOARD OF VISITORS.

COMMITTEE OF TRUSTEES ON EXPERIMENT STATION.

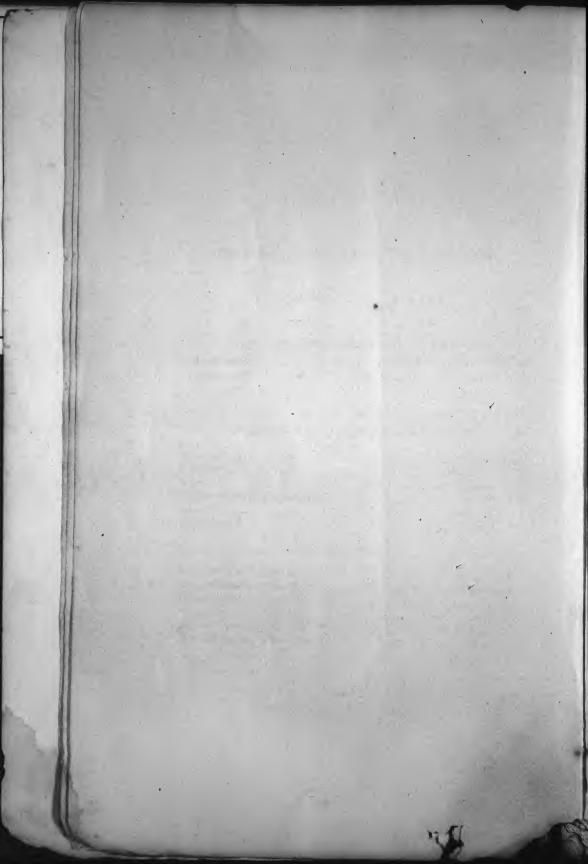
Hon. J. G. GILCHRIST	
Hon. R. F. Ligon.	Montgomery.
HON, H. CLAY ARMSTRONG	Auburn.

BOARD OF DIRECTION.

WM. LEROY BROUN	President.
A. J. BONDURANT	
N. T. LUPTON	
P. H. MELL	
GEO. F. ATKINSON	Biologist.
C. A. CARY, D. V. S	Veterinarian.

ASSISTANTS:

JAMES CLAYTON	Assistant Agriculturist.
J. T. ANDERSON, Ph. D	First Assistant Chemist.
L. W. WILKINSON, M. Sc	Second Assistant Chemist.
R. E. Noble, B. Sc	Third Assistant Chemist.
C. L. HARE, B. Sc	Fourth Assistant Chemist.
G. S. CLARK	Clerk, and Assistant Botanist.



OBJECT OF THE COLLEGE.

The leading object of the College, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its course of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on a sound, general education.

The College, in fact, is a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue—and work of great value to the youth of the State is now being accomplished by fitting them, by a thorough science-discipline, in which manual training in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the Faculty.



LABORATORIES AND FACULTIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in applied science in the following departments:

I .- IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with illustrated specimens of stock of select varieties.

The agricultural experiment station, established in connection with the College, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc., where lectures are delivered in presence of the objects discussed, and during the year exercises in practical agriculture of an educational character are given the students who enter upon this course of study.

II .-- IN MECHANIC ARTS.

The laboratory of Mechanic Arts is used as an auxiliary in industrial education, as a school of manual training in the arts that constitute the foundation of various industrial pursuits. The work performed by the students is instructive in character, as in any other laboratory, and the classes are taught in sections by a series of graded lessons under the supervision of the professor. In the lower classes of the College each student enters this school, and is assigned three exercises a week, each exercise being two hours long.

The object of this laboratory is not to teach a trade, but to educate, to discipline and train the eye and the hand, as well as the mind, and thus by associating manual and mental training, to thoroughly educate the student for the duties of life, whatever his vocation may be. There is no attempt to teach students special skill in constructing articles of commercial value, but all the exercises are systematically arranged and designed for purposes of education.

The wood department is located in a commodious hall 90 x 50 feet, and is provided with a twenty-five horse power Corliss engine, with indicator, a planer, circular saw, handsaw, two scroll saws, a buzz planer, twenty-four stands with lathe and full set of lathe tools for each, and thirty benches for carpenter work with the tools requisite for construction.

A brick building, 30 x 87 feet with two rooms, has been constructed especially for instruction in working iron.

One room is equipped with sixteen forges and tools required for a forge department, and the other with a cupola furnace, having a capacity of 1000 pounds per hour, a core oven, a brass furnace, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant fan and exhauster, supplied with power from a ten horse power engine, constructed by the students in the Mechanic Arts.

The machine department occupies a brick building 30 x 50 feet, and is equipped with nine engine lathes, one speed lathe, one 20-inch drill press, one post drill, one 16-inch shaper, one 5-foot planer, one universal milling machine, a corundum tool grinder and a small emery grinder.

The chipping and filing department is arranged with benches, vises and tools for twelve students.

The tool room is well supplied with special tools for use in instruction, including a machine for grinding twist drills.

A Weston dynamo is used at present for lighting the rooms when necessary.

III.—IN PRACTICAL CHEMISTRY.

The chemical laboratory is supplied with new and modern apparatus, and in its entire equipment affords excellent facilities for inchange in the state of the chemical laboratory is supplied with new and modern apparatus, and in its entire equipment affords excellent

facilities for instruction in practical chemistry.

The investigations that are undertaken in this laboratory by scientific experts, in connection with the work of the agricultural experiment station, are of especial value to advanced students, and afford them unusual opportunities to learn the methods of scientific research. The building contains a large general laboratory that will accommodate sixty students, and lecture room with capacity for one hundred seats, and nine other rooms, all appropriated to instruction and research in chemistry.

It is equipped with the improved modern appliances necessary for instruction and investigation.

IV .- IN ELECTRICAL ENGINEERING.

The Electrical Laboratory is well supplied with modern appliances for instruction in electrical engineering. It occupies two large rooms in the basement, and is equipped with a Weston 150 volt, 20 ampere dynamo; one Brush 6 arclight dynamo, with regulator; one Edison compound wound 12 kilo-watt generator; a Crocker-Wheeler one-horse power motor and rheostat, and one alternator, made by special students.

The dynamos occupy a separate room from the Laboratory, and are operated by a 35-horse power Westinghouse vertical engine.

The equipment comprises many fine instruments of precision, Sir Wm. Thomson's standard 100 ampere balance, his graded current galvanometer, reading to 600 amperes; also, his graded potential galvanometer, reading to 600 volts, Cardew voltmeter, reading to 150 volts; Weston's standard ammeter and voltmeter; ballistic reflecting galvanometer, mirror galvanometer, Thomson Watt-meter, &c.

A battery of fifty-five Julien accumulators has also been installed in the Laboratory. There is also in connection with this department a 10-horse power motor at the experiment station farm a thousand yards from the College, which is run by the Edison generator at the Electrical Laboratory.

V .- IN PHYSICS.

In the College building provision is made for laboratory work in the department of physics. Special rooms in the basement are appropriated for this purpose, and it is designed to equip this laboratory with the necessary appliances for instruction in practical physics. An improved testing machine, of 35,000 pounds capacity, has been purchased of Riehle Bros. for this laboratory.

VI.-IN MINERALOGY.

This laboratory occupies a convenient room in the basement, and is provided with tables and appliances to accommodate thirty students, with an excellent collection of minerals.

VII .-- IN BOTANY.

In the work of the agricultural experiment station, investigations in botany are given special attention, and opportunities are offered advanced students for practical work in a laboratory especially fitted with microscopes, tables, a dark room for photographic work, and appliances needed for instruction and research. This department is provided with Auzoux's clastic models of seeds and flowers for teaching botany.

VIII.-IN BIOLOGY.

The laboratory in this department adjoins the lecture room of the professor, and is furnished with tables, microscopes and appliances for investigation. Each student of the class works under the supervision of the professor.

IX .- IN ENGINEERING AND SURVEYING.

The necessary apparatus for field work, including transits, levels, plane table, models of bridges, etc., is provided for the use of the students, and the customary exercises in the field are given.

X .- IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. A large, well-lighted drawing room, that will accommodate fifty students, is provided with tables, lock boxes, etc.

MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

This department is under the charge of Lieut. J. H. Wills, 22d Infantry, U. S. A.

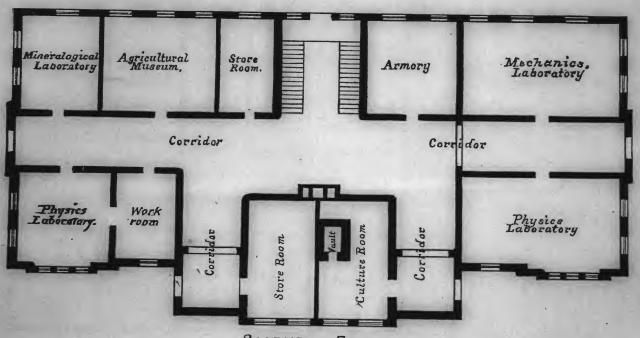
It has recently been supplied with new cadet muskets and accoutrements for the corps, and for artillery practice, with two three-inch rifle guns, carriages and limbers.

COLLEGE BUILDING.

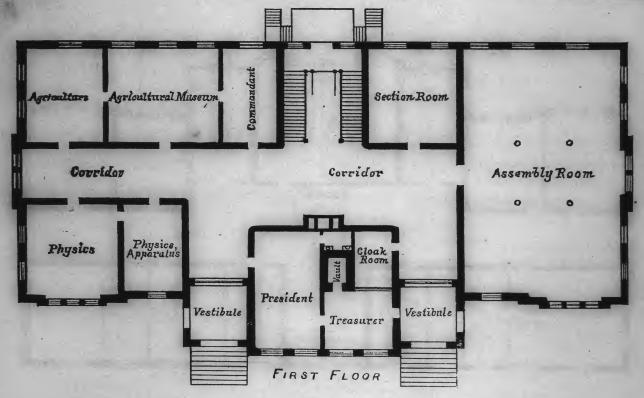
The frontispiece is a representation of the recently constructed main college building. It is 160 by 71 feet, and contains, exclusive of the basement floor, thirty-five rooms. This building is not used for dormitories for students, but is appropriated for purposes of instruction and investigation.

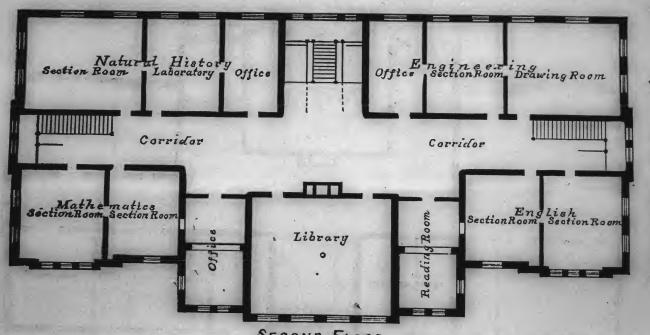
It contains the lecture rooms and offices of the professors, laboratories, library, museum, armory, etc. The illustrations of the four floors on the following pages indicate the uses to which the rooms have been assigned.

The rooms marked for the laboratories of physics and mechanics are used for electrical engineering and physics.

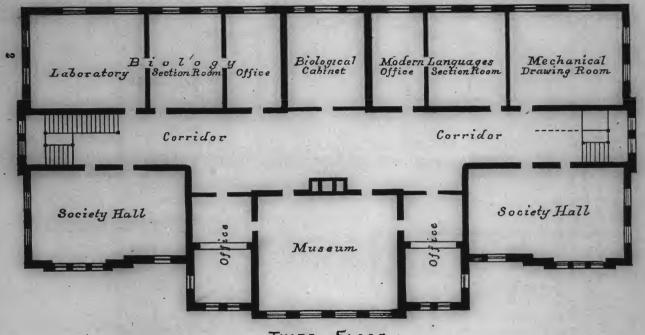


BASEMENT FLOOR





SECOND FLOOR



THIRD FLOOR

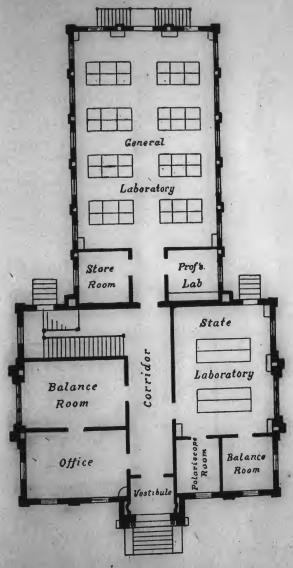
THE CHEMICAL LABORATORY,

As shown on the opposite page is a handsome two-story structure, 40 by 60 feet, with a rear projection 35 by 60 feet of one story and basement. The exterior is of pressed brick, with cut stone trimmings, and terra-cotta ornamentation.



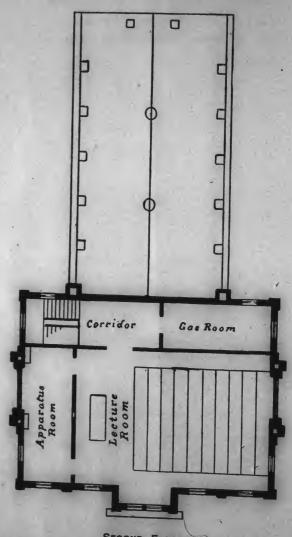
CHEMICAL LABORATORY.





FLOOR FIRST

The first room to the left is the office of the professor, to the rear of which is the balance-room. On the right, extending the whole length of the floor, is the State balance-room, and laboratory for research. Two small rooms are cut off from this, one laboratory and laboratory for research. Leading from the rear of the a balance-room, and the other for the spectroscope. Leading from the rear of the amain hall is the door which enters the large laboratory for general work. Two main hall is the door which enters the large laboratory and the other a private rooms are cut off from this—one for combustion furnaces and the other a private working-room.



SECOND FLOOR.

In the basement are ample accommodations for assaying and storage. The main laboratory will accommodate sixty students, and contains improved working-tables, with water, gas and every necessary appliance for chemical work. Niches in the wall opposite each working-table, with hoods, where necessary, connect with flues, and furnish the best possible means of escape for deleterious vapors, while ventilators in the ceiling furnish additional means for getting rid of noxious gases.

The height is sixteen feet in the clear, with paneled ceiling of oiled southern pine. The rooms are wainscotted throughout and finished in natural wood.

The second story contains a lecture-room and room for gas analysis. Around this lecture room are cases for containing crude and manufactured products, illustrating the subjects of agricultural and industrial chemistry, which are prominent subjects taught in this institution.

LANGDON HALL.

This is a two-story building, ninety by fifty feet. The second story is the audience hall, used for Commencement and other public occasions.

The first story is appropriated to the laboratory of Mechanic Arts.

GRADUATES IN 1891.

CLASS OF 1891.

HONOR GRADUATES. COURSE IN CHEMISTRY AND AGRICULTURE.

TO DESCRIPTION AND AGRICULT	TUKE.
Beverly Franklin Harwood	Perr
COURSE IN MECHANICS AND ENGINEER	RING.
Charles Cicero Johnson	Coos
WITH DEGREE OF BACHELOR OF SCIENCE	(B. So.)
Lawrence Earnest Baker	Tofforson
Trainfold Delitoli	Danhann
Frank Jarvis Bivins.	Too
Beauth Jesse Buckalew	Chambana
Values Albert Cox.	T
valles Tallianiei Dean	35
Tanata Tilabelani	A
THOMAS CHASS	O
The Down of Citing	
Childre Leroy Hare.	T
Lovelly Flaukilli Flarwood	D
· · · · · · · · · · · · · · · · · · ·	~
Carvin Kimoan	~
THE TOTAL THE TO	A
The state of the s	D 1
- Cauco	1/ 1 11
Robert Clanton Smith	Macon,
	Unambers.

WITH DEGREE OF MASTER OF SCIENCE.

Daniel Gillis, B. Sc	. Georgia.
John Hammond Little, B. Sc	. Lee.
Andrew Manley Lloyd, B. Sc	
Robert Ernest Noble, B. Sc	. Calhoun.
James Fielden Wilkinson. B. Sc	

DISTINGUISHED STUDENTS.

AWARDED CERTIFICATES IN 1891.

The students of each class who secure a grade above 90 in three or more subjects are distinguished for excellence in scholarship, and are awarded

HONOR CERTIFICATES.

The following students received honor certificates in 1891.

SENIOR CLASS.

Harmon Benton	Rarhour
Frank Jarvis Bivins	T.oo
Seaborn Jesse Buckalew	Chambana
waiter Edward Fitzgerald	Gaamaia
Charles Bowls Glenn.	T
Clifford Leroy Hare	T
Beverly Franklin Harwood.	Lee.
Charles Cicero Johnson	Perry.
John Calvin Kimball	Coosa.
William Audley Marshall	Georgia.
Alexander Dowling McLanner	Georgia.
Alexander Dowling McLennan	Barbour.
Petit Reynolds	Macon.

HONOR STUDENTS IN JUNIOR CLASS.

COURSE IN CHEMISTRY AND AGRICULTURE. Walter Evan Richards....

.... Chambers.

COURSE IN MECHANICS AND ENGINEERING.

Robert Jefferson Trammell.....Lee.

JUNIOR CLASS.

Elbert Cathey Averyt	.Shelby.
Leigh Stafford Boyd	Lee.
Charles Allen Brown	. Sumter.
Henry Ticknor DeBardeleben	Jefferson.
Henry Farris Dobbin	Florida.
William Francis Feagin	Barbour.
Raleigh Williams Green	Lee.
Raleigh Frederic Hare	Lee.
Louis Philip Heyman	Georgia.
Arthur Lyne Jones	Autanga.
Frank McLemore Mosely	Montgomery.
Walter Evan Richards	Chambers.
James L. Richey	Calhoun.
George Adams Thomas	Montgomery.
Robert Jefferson Trammell	Lee.
Thomas Felton Wimberly	Lee.

SOPHOMORE CLASS.

Robert Lee Gordon Bivins	Lee.
Tobert Lee Gordon Divino	Lee.
Massey Robert Burton	Antongo
Mime Davie	Autauga.
Joel Dumas	Wilcox.
Joel Dumas	Mohile
Hamilton Rowan Johnstone	Moone.
Nicholas Barnett Marks	Kentucky.
Nicholas Darnett Marks	Talladega.
Hampton Knox Miller	G. Ab Carolina
Walton Mornitt Riggs	
CI I TI C :41	Georgia.
Charles Henry Smith	Cango
Joel Franklin Webb	

FRESHMAN CLASS.

Champe Seabury Andrews. Howell Hunter Cherry. (dund) Ebenezer Westley Doughty (rampud)	. Tennessee.
Champe Seabury Andrews.	. Lee.
Howell Hunter Cherry.	Georgia.
Ebenezer Westley Doughty	Perry.
Julius Confree Dunham	monegomorj.

	A
homae	M.E

William Washington Moore.....Blount.

Cat good

Whoke the

CATALOGUE OF STUDENTS.

FOR THE SESSION 1891-92.

GRADUATE STUDENTS.

[Residence is Alabama when State is not named.]

NAME.

RESIDENCE.

NAME.	
Lawrence Earnest Baker	Jefferson.
Harmon Benton	Barbour.
Sacharn Jesse Ruckalew	Chambers.
Wilmer Calloway	Montgomery.
Benjamin Minge Duggar	Hale.
Charles Bowls Glenn	Lee.
Clifford Leroy Hare	Lee.
Charles Cicero Johnson	Coosa.
Charles Cicero Johnson	Lee.
Frank Allemong Lupton	Georgia.
William Audley Marshall	Barbour.
Alexander Dowling McLennan	
SENIOR CLASS.	
177 A 31	Montgomery.
William Sayre Allen	Georgia.
Archie Scruggs Averett	Shelby.
Elbert Cathey Averyt	Toe
Leigh Stafford Boyd	Sumter
(Name of the Description of the state of the	
Table Millian Dallan	· · · · · · · · · · · · · · · · · · ·
T.1 O le Oue man olin	
Tagas Taska Culmon	
C TIT'II' D 4=1 cm	
Henry Lee Davidson. f	Montgomery.
18 19 19 19 19 19 19 19 19 19 19 19 19 19	

Herry Ticknor DeBardeleben	Toffinan
Henry Farris Dobbin	Jenerson.
- William Francis Forgin	Florida.
Willia. Francis Feagin.	Barbour.
James Edward Gachet	Lee.
Eugene Hamiter Graves	Barbour.
Raleigh Williams Greene.	Lee.
- Raleigh Frederick Hare	Lee.
- Louis Philip Heyman.	Georgia
Arthur Lyne Jones	Autanga
Robert Dibrell McAllister	Georgia.
Frank McLemore Mosely 4	Montgomerva
Louis Sinclair Munford	Virginia
Leonidas Warren Payne.	Lee.
Charles Teed Pollard	Montgomery
- Walter Evan Richards /	Chambers.
Edward Broadus Smith	Lee. \
Signor Sidney Strong	Georgia.
George Adams Thomas	Montgomery
Sheldon Lynn Toomer	Lee
Robert Jefferson Trammell	Tee
David Marshall Walker	Marengo
David Lewis Whetstone	Elmore
Clanton Ware Williams	Montgomony
David Edwin Wilson. C	Lofferson
	······ deffersoff.
-	

JUNIOR CLASS.

Lee Ashcraft.	Landerdale
Wallace Reverdy Bishop.	Talladera
Robert Lee Gordon Biving.	Tee v
Francis Marshall Boykin	Montgomery
Massey Robert Burton	Tee
Clifford Fontaine Clopton.	Montgomery
Walter Scott Crimn Va	Q4 O1-:-
Union Anderson Culbreath	Tee 1
Clarence William Daugette	. Lee.
Joel Dumas	Wilcox
John Harris Dunstan	. So. Carolina.

Daniel Benjamin Edwards, Jr	Dallas.
Thomas Gardner Foster, Jr	
John Henry Holt	
Byron Watts Jones	
Thomas Litchfield Kennedy, Jr	
James Monroe Little	
James Berry Loveless	
Nicholas Barnett Marks	
James David Martin	
de Edward Baker Mell	
Hampton Knox Miller	
+Walter Merritt Riggs	
John Shelton Robinson	
Guy Allen Shafer	
Charles Henry Smith	
John Howard Smith	
Henry Hamilton Smith	
Linton Sparks Smith	Georgia.
Rosser Colbert Spratling	Chambers.
Joel Franklin Webb.	Coosa.

SOPHOMORE CLASS.

	George Smith Anderson	Lee.
	Champe Seabury Andrews	Tennessee.
	Harvey Armstrong	Missouri.
	Henry Harrington Bookhart	Georgia.
	John Morgan Burns	Dallas.
	George Washington La Fayette Carr	Lowndes.
	Howell Hunter Cherry	. Lee.
	William DeLamar Clayton &	.Lee.
	Robert Park Clower	Lee.
	Roseberry Covington Connor	Macon.
	Robert David Conner	Macon.
	Palmer Payne Daugette	Lee.\
	Charles Fairchild DeBardeleben	Jefferson.
1	Joseph Addison Driver	. Perry.
	Rufus Thomas Dorsey	. Georgia.
	Traine Thomas Dorool	

- 11 1	Georgia.
Ebenezer Westley Doughty Warrley Goode Duggar Julius Confree Dunham	Hale.
Wat Triey Goode Duggar.	Montgomery.
Julius Confree Dunham	Madison.
Charles Dunlap	Madison.
James Duniap	Lee.
James Dunlap John Thomas Eckford	Calhoun.
John Thomas Eckford	Lee.
Thomas Flanagan	Barbour.
Thomas Flanagan Robert Cherry Foy Frederic Almet Fulghum	Jefferson.
Frederic Almet Fulghum	Jefferson.
Frederic Almet Fulghum	Barbour.
Richard Billups Going James Perry Grant	Lee.
James Perry Grant	Lee.
Charles Gordon Greene	Georgia.
Crosland Clarence Hare Thomas Gordon Harrell	Morgan.
Thomas Gordon Harrell	Elmore.
Augustus J. Harris Arnold Whitfield Herren	Calhoun.
Thomas Carter Hill	Georgia.
Robert Ford Hunter	Autauga.
Jacob Samuel Johnson	Georgia.
Remer Young Jones	Lee.
Welborn V. Jones.	Tuscaloosa.
Sidney Leach	Barbour.
John D. Martin Orrin Joseph McCarley	Chambers.
Orrin Joseph McCarley	Coosa.
Thomas McElrath	Florida.
Paul Pratt McKeown	Georgia.
George Young McKee Herman Meislahn	Florida.
Herman Meislahn	Georgia.
Ernest Knoles Miller Edward Beall Mitchell	Georgia.
+ Edward Beall Mitchell	Lee.
Lauriston Greene Moore	Blount.
Peyton Herndon Moore	Blount.
William Washington Moore	Lee.
Charles Carter Newman	Tennessee.
Charles Carter Newman Thomas Verner Ordway	Georgia,
Joseph Priestly Orme.	

Hamilton Ormsby	Kentucky.
Peter Preer.	
Joseph Beasly Rudulph	
Thomas Henry Schuessler	
Albert Somerville	
James Edward Stanley	
James Nelson Stephens	
Robert Otis Stone	
William Simeon Street	
Frederick Lloyd Tate	
Henry Curry Turner	Madison.
Thomas Luther Thomason	
Jack Thorington	
William Douglass Trawick	
Frank Atkinson Vernon	
Andrew Hearne Whitman	
Rinaldo Greene Williams	
William Dunbar Wills	
Arthur Zachariah Wright	
Cary Oscar Wright	
,	

FRESHMAN CLASS.

Daniel Spigner Anderson	Lee.
Walter Scott Askew	Chambers.
Frank Stuart Barnes	Jefferson.
David French Boyd	Lee.
Frank Asbury Boykin	Lee.
James Hardy Bradford	Lee.
Henry Clay Burr	Georgia.
Solon Lycurgus Coleman	Perry.
Robert Mullins Collins	Missouri.
Wiley Davis Crenshaw	Lanapoosa.
Tames Marquis DeLacy	
Sir Hugh DeLacy	Russell.
Clarence Eugene DuBose	Lee.
Robert Eugene Dumas,	Wilcox.
Leonidas Dunaway	Wilcox.

13!

		•
+	Henry Drayton Evins. 4	. Florida.
	Morrie Louis Falk	. Marengo.
	Charles Grigeby Foulks	
	Benjamin Browning Haralson	. Dallas.
1	Sumter Lea Harwood	.Perry.
-	John Fletcher Heard	
	John Thomas Hill	. Randolph.
	William Hardy Hill	
-	Claud Holston	. Lee.
	Smith Graham Howard	. Dallas.
	Thomas Arnold Hurt	. Macon.
	(William Coats Hurt	
+	Frederick Ingate	. Mobile.
7	Frederick Ingate	. Montgomery.
-	Paul Adolphus Lewis	. Sumter.
	Steven Edmund Martin	.Lowndes.
4	Cary Park McElhaney	.Lee.
	William Cunningham McMillan	. Talladega.
	John Robert McNab	. Barbour.
4	Andrew Hamilton Milstead	. Elmore.
	William Page Molette	. Dallas.
	William Flournoy Moore	Butler.
	George Haden Oglesby	. Texas.
	Thomas Winfrey Oliver	Montgomery.
	Henry Hinds Peevey	Madison.
	Tilden Hendricks Phipps	Georgia.
	Thomas Jefferson Poole	Georgia.
	Charles Llewellyn Pinkston	Chilton.
	Benjamin Fitzpatrick Russell	Tallapoosa.
	Walter Russell Shafer	Perry.
fin	Percy Hilton Smith	Georgia.
	Robert Mailard Stephens	Barbour.
	Tyler McCuin Swann	Randolph.
	Felix Stanley Thomas	Lee.
- 1	Hugh Pearson Thornton	Jefferson.
4	Harvey Casie Tuttle	Macon.
	Robert Edward Lee Weathers	Randolph.
		Tours de l'action

Robert Patton Weeden	Lauderdale.
John Adams Wills	Lee.
James Alexander Wilson	: Franklin.
Frank Lewis Whitman	Lee.
Eugene Glover Wing	Clark.
John Meadows Wolfenden.	Florida.

SUB-FRESHMAN CLASS.

Percy Alexander Bryant	Baldwin.
Tomos Washington Culver	Lee.
Walter Earnest Culver	пес.
James Artemus Culver	Georgia.
W 14 Missish Eckford	Lee.
Emil Ernest Erhart	Florida.
to 1 Warman Ethoredge	deorgia.
Jacob Herman Feist	Baldwin.
Samuel Ananias Gordon	Lowndes.
James Amos Griffin	Lee.
Mitchell Jackson Howard	Coosa.
John Asa Hudson	Georgia.
John Asa Hudson	Lee.
Frank Ernest Jackson	Lee.
John Alexander Jackson	Barbour.
James Jacob Lampley	Randolph.
Oscar William Longshore	Pickens.
Benjamin Rufford McGehee	Florida.
Benjamin Rufford McGenee	Dallas.
James Waller Means Edwin Allen Oliver	Pike.
Edwin Allen Oliver George Emmet Pace	Coosa.
Henry Wilson Pond	Washington.
Henry Wilson Pond	Florida.
Charles Lynn Pringle Edwin Lightfoot Reese	Florida.
Edwin Lightfoot Reese	Barbour.
John Milton Shettleworth	Florida.
Asa Engene Tatom Seldon Edgar Thomas	Barbour.
Seldon Edgar ThomasLeroy Jack Upshaw	· · · · · · · · · · · · · · · · · · ·
	U .

Charles Wilson		,	.Franklin.
Frederick Henry	Winston	, . ,	. Lee.

SPECIAL STUDENTS.

	mı	
	Thomas Jackson Boyd	. Lee.
	Henry Crommelin	. Montgomery.
	Aaron Thomas Colley	. Pike.
	Walter Caldwell Darwin	Madison
	Herbert Armstead Goldthwaite	Montgomery
	Alfred Flournoy Griggs.	Georgia
	Francis Gustavus Hendrick.	Pika
3	Mims Lamar Howard.	Antanga
	John Robert Hinson.	Lowndon
	Clifton Arthur Jones.	Loo .
	Henry Clay Jones.	Montgomen
	George Augustus Klie	Moran as
1	Frank Inman McRee	Carrelleo.
~	George Simonton Means.	Georgia:
	Joseph Samuel Pou.	r ioriga.
	Graham Golson Vanchan	Lee.
	Graham Golson Vaughan James Monroe Watkins	Dallas.
	THE TACKIUS	Pike.

SUMMARY.

Graduates	11
Senior Class	11
Innion Oleca	36
Junior Class	31
Sophomore Class.	72
Freshman Class	14
Special Ct. J.	58
Special Students	17
Total in College Classes	
Sub Freeham Ol	225
Sub-Freshman Class	30
111	
Total 4	
Total.	255

4/253

Agricultural	and .	Mechanical College.	35
NUMBER OF STUDENT	rs in	EACH SUBJECT OF STUDY.	
English	123 56	Agriculture	117 108 64 39 35 13 193 152 241 15
4,	2	41 Cas 602/1	

MILITARY ORGANIZATION.

1891-92.

President,

W. L. BROUN.

Commandant,

JOHN H. WILLS, 1st Lt. 22d Infantry.

Major,

L. E. BAKER.

Surgeon,

J. H. DRAKE.

Battalion Staff.

Cadet 1st Lieutenant G. A. THOMAS, Adjutant.
Cadet 1st Lieutenant D. L. WHETSTONE, Quartermaster.
Cadet Sergeant JOEL DUMAS, Sergeant Major.
Cadet Sergeant J. H. HOLT, Quartermaster Sergeant.

Cadet Captains.

1. C. A. Brown,

3. H. F. DOBBIN,

2. J. E. GACHET,

4. W. F. FEAGIN.

Cadet 1st Lieutenants.

1. J. T. BULLEN. 1 &

5. J. G. CROMMELIN,

2. A. L. Jones,

6. H. T. DEBARDELEBEN,

3. W. B. CLAY, S. 4. H. L. DAVIDSON,

7. R. W. GREENE, 8. R. J. TRAMMELL.

Cadet 2d Lieutenants.

1. E. H. GRAVES,

3. F. M. MOSELY.

2. D. E. WILSON,

4. C. T. POLLARD.

Cadet 1st Sergeants.

1. C. H. SMITH,

3. R. C. SPRATLING,

2. W. S. CRUMP,

4. E. B. MELL.

Cadet Sergeants,

1.	w.	R.	Візнор,	2	1
----	----	----	---------	---	---

8. M. R. Burton,

15. Н. Н. Ѕмітн.

Cadet Corporals.

- 1. P. P. McKeown, / 8. R. C. For,
- 2. C. S. Andrews,
- 3. J. S. Johnson, 115
- 4. R. T. DORSEY, Jr.,* 1
- 5. JACK THORINGTON,
- 6. CHARLES DUNLAP,*
- 7. A. W. HERREN,

- 9. F. A. FULGHAM, 3 A
- 10. J. C. Dunham,*
 - 11. W. W. MOORE, 3
- 12. G. S. ANDERSON, 3
 - 13. R. P. CLOWER,
 - 14. C. G. GREENE,*

15. R. C. CONNER.

Note.—*Denotes Color Corporal.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character. To enter the fourth class the applicant must be not less than fifteen years of age, and should be qualified to pass a satisfactory examination on the following subjects:

1. Geography and History of the United States.

2. English—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation,

grammar and division into paragraphs.

3. Mathematics—(a) Arithmetic, including fundamental operations; common and decimal fractions; denominate numbers, the metric system; percentage, including interest and discount; proportion; extraction of square and cube roots. (b) Algebra, to quadratic equations.

Those applicants who desire to continue the study of Latin should be qualified to pass a satisfactory examination in Latin grammar and the first two books of Cæsar, in ad-

dition to the above subjects.

For admission to the higher classes, students should be prepared to stand a satisfactory examination on all the studies of the lower classes, as shown in the courses of study. Where opportunity has not been offered to pursue special studies required at this College, the system of equivalents will be adopted, and studies which denote an equivalent amount of discipline and training will be accepted as satisfactory.

ENTRANCE EXAMINATIONS.

Entrance examinations will be held on Wednesday, the 14th of September, the day on which the sessions opens. Candidates will also be examined during the session, when application is made for admission.

Applicants who are not prepared to stand the entrance examinations for full admission to the Freshman class are admitted to the sub-college department.

They will be advanced to full admission to the Freshman class when they are qualified to pass satisfactorily the required examinations.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week and in all give twenty-seven exercises per week required.

SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the junior class, and those over twenty-one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless otherwise ordered by the Faculty.

Regular students who fail to pass satisfactory final examinations in any one study become special students. They will be classed as regular students pursuing a course for a degree, whenever they can pass the examinations in those subjects in which they were found deficient.

Students candidates for a degree, who are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greater number of studies, and their names are so placed in the Catalogue.

COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences, with their applications; Agriculture, Biology, Mechanics, Astronomy, Mathematics, Engineering, Civil, Electrical and Mechanical Drawing, English, French, German and Latin Languages, History, Political Economy, Mental and Moral Sciences.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

There are three degree courses for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

- I. Course in Chemistry and Agriculture.
- II. COURSE IN MECHANICS AND ENGINEERING.
- III. GENERAL COURSE.

There are also two partial courses, each requiring two years for its completion:

- IV. Two YEARS' COURSE IN AGRICULTURE.
- V. Two Years' Course in Mechanic Arts.

Course I includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II includes the principles and applications of the sciences that directly relate to civil, electrical and mechanical engineering, and is adapted to those who expect to enter the profession of engineering.

Courses III has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses IV and V have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and take one of the regular degree courses.

Students who complete either of these two year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

Those who have completed the general course in each department of the school of Mechanic Arts, and are qualified, can enter upon a more extended technical course in Mechanical Engineering.

PREPARATORY COURSE IN PHARMACY.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all their time in the laboratories of these departments, under the immediate direction of the professors. With the excellent facilities offered in the chemical and botanical laboratories, scientific preparation of great value to the practical pharmacist can be obtained.

COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering, which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry, Assaying, Reduction of Ores, Mineralogy, Economic Geology, Mining Machinery, Drifting, Tunnelling, Timbering, Ore Dressing, and the various operations connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering and Natural History.

SPECIAL ONE YEAR COURSE IN AGRICULTURE.

Young men over twenty-one years of age who desire to study Agriculture will be permitted, without examination, to enter any class under the Professor of Agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied.

They can attend the lectures in Agriculture in all the classes and engage in the practical work at the experimental station, in the field, stock-yard, dairy, garden, orchard and vineyard, etc., and may thus, in one year, acquire valuable practical knowledge of Scientific Agri-

culture.

LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this College, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in

the following departments:

I.—CHEMISTRY.

II.—Engineering, Field Work, Surveying, etc.

III.—AGRICULTURE.

IV.—BOTANY.

V.—MINERALOGY.

VI.—BIOLOGY.

VII.—TECHNICAL DRAWING.

VIII.—MECHANIC ARTS.

IX.—PHYSICS.

X.—ELECTRICAL ENGINEERING.

L.—COURSE IN CHEMISTRY AND AGRICULTURE.

The numerals opposite the subjects indicate the number of hours per week.

FRESHMAN CLASS.

First Term.	Second Term.	Third Term.
 English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Labor'y Military Drill. 	3. Military Drill.	 English. History. Mathematics. Agriculture. Drawing. Mechanic Art Lab'y. Military Drill.
First Term.	SOPHOMORE CLASS. Second Term.	Third Term.
 English. History. Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'y. Practical Agriculture. Military Drill. 	 English. History. Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'y. Practical Agriculture. Military Drill. 	 English. Botany (a) Mathematics. General Chemistry. Agriculture. Drawing. Mechanic Art Lab'y. Practical Agriculture. Military Drill.
First Term.	JUNIOR CLASS. Second Term.	Third Term.
3. English. 3. Physics. 3. Industrial Chemistry 2. Agriculture. 4. Botany. (Lab'y.) 1. Military Tactics. 9. Chemical Laboratory. 2. Practical Agriculture 3. Military Drill.	 Agriculture, Botany. (Lab'y.) Military Tactics. Chemical Laboratory. 	 English. Physics. Industrial Chemistry. Agriculture. Botany. (Lab'y.) Military Tactics. Chemical Laboratory. Practical Agriculture. Military Drill.

SENIOR CLASS.

First Term.	Second Term.	Third Term.
2. English Literature.	2. Political Economy.	2. Political Economy.
2. Mental Science.	2 Mental Science.	2. Mental Science.
2. Physics.	2. Astronomy.	2. Astronomy.
2. Geology.	2. Geology.	2. Geology.
2. Biology.	2. Biology.	2. Biology.
		y2. Agricultural Chemistry
	1. Military Science.	
		2. Chemical Laboratory.
2. Practical Agriculture.	2. Practical Agriculture.	2. Practical Agriculture.

II.—COURSE IN MECHANICS AND ENGINEERING.

The numerals opposite the subjects indicate the number of hours per week.

FRESHMAN CLASS.

First Term.	Second Term.	Third Term.
 English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English. History. Mathematics. El. Physics. Drawing. Mechanic Art Lab'y. Military Drill. 	 English, History. Mathematics. Agriculture. Drawing. Mechanic Art Lab'y. Military Drill.
	~~~~	

	SOPHOMORE CLASS	S.
First Term.	Second Term.	Third Term.
<ol> <li>English.</li> <li>History,</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture (b)</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture (b).</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>Botany (a).</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture (b).</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>

⁽a) Or History continued. Botany begins March 1st.

⁽b) For Agriculture may be substituted French or German or work in the Chemical Laboratory,

### TINTOD OF AGO

	JUNIOR CLASS.	
First Term.	Second Term.	Third Term.
German.	English, French or German. Physics.	<ul><li>3. Eng'ish, French or German.</li><li>3. Physics.</li></ul>
5. Mathematics. 5.	Mathematics.	5. Mathematics.
5. Engineering. 5.	Engineering.	5. Engineering.
		5. Drawing.
1. Military Tactics. 1.	Military Tactics.	1. Military Tactics.
4. Lab'y, Mineralogy (a).4.	Lab'y, Mineralogy (a)	6. Field Wrk, Engin'g (a)
4. Field Work, Engin'g. 4.	Field Work, Engin'g.	3. Military Drill.
	Military Drill.	
	SENIOR CLASS.	1
First Term.	Second Term.	Third Term.

2.	English Literature (b).5.	Political Economy	(b).2.	Political Economy (b).
		Astronomy.	2.	Astronomy.
		Geology.	2.	Geology.
	000.087.	Mathematics.	4.	Mathematics.
	THE PROPERTY OF THE PARTY OF TH	Engineering.	5.	Engineering.
		Drawing.	5.	Drawing.
		Military Science.	1.	Military Science.
	field Work, Engineer'g	Field Work, Engine	eer'g	Field Work, Engineer's

# III.-GENERAL COURSE.

The numerals opposite the subjects indicate the number of hours per week...

### FRESHMAN CLASS. Second Torm

Third Term.

First Term. Second Term.	
2. History. 2. History. 3. Latin. 5. Mathematics. 3. Drawing. 6. Mechanic Art Lab'y. 6. Mechanic Art Lab'y. 7. Military Drill.	English. History. Latin. Mathematics. Drawing. Agriculture. Mechanic Arts. Military Drill.

⁽a) Or Mechanic Arts.(b) For Eng. Lit. and Pol. Econ. may be substituted French or German.

	SOPHOMORE CLASS.	
First Term.	Second Term.	Third Term.
5. Latin.	5. Latin.	5. Latin.
2. History.	2. History.	3. Botany (a).
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. General Chemistry.	3. General Chemistry.	3. General Chemistry.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
	JUNIOR CLASS.	
First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
3. Physics.	3. Physics.	3. Physics.
3. Mathematics.	3. Mathematics.	3. Mathematics.
3. French.	3. French.	3. French.
3. Latin.	3. Latin.	3. Latin.
3. German.	3. German.	3. German.
1. Military Tactics.	1. Military Tactics.	1. Military Tactics.
6. Laboratory Work (b).	6. Laboratory Work (b).	6. Laboratory Work (b).
3. Military Drill.	3. Military Drill.	3. Military Drill.
	SENIOR CLASS.	
First Term.	Second Term.	Third Term.
2. English Literature.	2. Political Economy.	2. Political Economy.
2. Mental Science.	2. Mental Science.	2. Mental Science.
2. Physics.	2. Astronomy.	2. Astronomy.
2. Geology.	2. Geology.	2. Geology.
3. French.	3. French.	3. French.
3. German.	3. German.	3. German.
2. Latin.	2. Latin.	2. Latin.
4 37771 0 1	4 98111	

1. Military Science.

English Thesis.

1. Military Science. .

English Thesis.

1. Military Science.

English Thesis.

⁽a) Or History continued. Botany begins March 1st.(b) The student may elect the Laboratory o fany department for which he may be qualified.

Third Term.

## IV.—TWO YEARS' COURSE IN MECHANIC ARTS.

### FIRST YEAR.

First Term.	Second Term.	Third Term.
<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>Elementary Physics.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>Elementary Physics.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>Agriculture.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>
	SECOND YEAR.	

# SECOND YEAR. Second Term.

First Term.

3.	English.	3.	English.	2.	English.	
.5.	Mathematics.	5.	Mathematics.	5.	Mathematics.	
3.	Physics.	3.	Physics.	3.	Physics.	
3.	Drawing.	3.	Drawing.	3.	Drawing.	
12.	Mechanic Art Lab'y.	12.	Mechanic Art Lab'y.	12.	Mechanic Art Lab'y.	
3	Military Drill	3.	Military Drill.	3.	Military Drill.	

## V.—TWO YEARS' COURSE IN AGRICULTURE.

### FIRST YEAR.

First Term.		Second Term.		Third Term.		
2. 5. 3. 4. 3.	English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill. Practical Agriculture.	2. 5. 3. 4.	Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill.	2. 6. 2. 3. 4.	English. History. Mathematics. Agriculture. Drawing. Mechanic Art Lab'y. Military Drill. Practical Agriculture.	
					m:	

First Term.	Second Term.	Third Term.
<ol> <li>English.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture.</li> <li>Practical Agriculture.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture.</li> <li>Practical Agriculture.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture.</li> <li>Practical Agriculture.</li> <li>Military Drill.</li> </ol>

### SCHEDULE OF EXERCISES.

HOURS	. MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
I. 8-9	4. Algebra 3. Latin 2. French 1 and 2 Drawing. 4. Mechanic Arts	4. Geometry. 3. Latin. 2. German. 1 and 2 D awing. 2. Botany. 1. Mental Science.	4. Algebra. 3. Latin 2. French. 1 and 2 Drawing. 2. Practical Agri. 4. Mech. Arts.	4. Geometry. 3. Latin 2. German. 1 and 2 Drawing. 2. Botany 1. Mental Science.	4. Algebra. 3. Latin. 2. French . 1 and 2 Drawing. 2. Practical Agri. 4. Mechanic Arts. 1. Biology.	Exerc's in Elocution
II. 9–10	4. English. 3. Chemistry. 2. Engineering. 2. Latin. 1. Calculus. 1. French. 4. Mech. Arts.	2. Engineering.	4. English. 3. Chemistry. 2. Engineering. 2. Latin. 1. Calculus. 1. French. 4. Mech. Arts 2. Practical Agri.	4. History. 3. Agriculture. 2 Engineering. 2. Botany. 1. Physics.	4. English. 3. Chemistry. 2. Engineering. 1. Biology. 1. Calculus. 1. French. 2. Latin. 4. Mech. Arts. 2. Practical Agri.	Military Drill.
	MONDAY.	TUESDAY	- WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
III. 10-11		l. Engineering.	3. English. 2. Physics 1. German. 1. Engineering. 1. Biology	3. History (1. 2). 3. Botany (2. 3). 1. Engineering. 4 English	3. English. 2. Physics. 1. German. 1. Engineering.	2. German. 4. Mech. Arts, 1 Sec. 3. Mech. Arts, 2 Sec. 1. 2. Machine Work. Laboratory Work Field Work, Eng'ng.

IV. 11-12	4. Agriculture (3). 4. Latin (1, 2). 3. Drawing. 2. Mathematics. 2. Chemistry.	<ol> <li>Latin.</li> <li>Drawing.</li> <li>Agriculture.</li> <li>Mathematics.</li> <li>Chemistry.</li> </ol>	4. Latin. 3. Agriculture.		4. Agriculture (3). 4. Latin (1. 2). 3. Drawing. 2. Mathematics, 2. Chemistry.	4. Mech, Arts 1 Sec. 3. Mech. Arts 2 Sec. 1 & 2. Machine Work Field Work, Eng'ng. Laboratory Work.
10 1		4. Mech. Arts 1 Sec 3. Mathematics. 2. English. 1. Geology.	4. Drawing. 3. Mathematics. 1. Latin.	4. Mechanic Arts [1 Sec 3. Mathematics. 1. English. 1. Geology.	t. Drawing. 3. Mathematics. 1. Latin.	Mechanic Arts. Laboratory Work.
P. M.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
2-4	3. Mech. Arts 1 Sec 3. Field Work Agr. 1 & 2 Laboratory. 1 & 2 Field Work	2d & 3d Sec 2. Mineralogy Laboratory 2. Mech. Arts. Military Drill (*	3. Mech. Arts 1 Sec 3. Field Work Agu 1 & 2 Laboratory Chem. 1 & 2 Field Work	2d and 3d Sec. 2. Mineralogy Laboratory 1. 2. Mech. Arts. Wilitary Drill,(*)	1 Sec. 3 Field Work Agr. 1 & 2. Lab'ry Chem 1 & 2. Field Work	

Chapel services daily at 7:50 A. M.
Numbers prefixed denote classes,—1 denotes Senior, 2 Junior, &c. Numbers affixed—(1), (2), (3), denote terms.

**From 4:30 to 5:30 P. M.

# DEPARTMENTS OF INSTRUCTION.

### PHYSICS AND ASTRONOMY.

PRESIDENT BROUN.

The instruction is given by recitations from text-books and lectures, illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics, treated graphically.

This is followed by a full discussion of Molecular Mechanics; while due prominence is given to principles, frequent reference is made to the applications of science.

The studies of the junior class include the properties of matter, units of measure, force, work, energy, kinematics, kinetics, mechanic powers, friction, pendulum, molecular forces of solids, liquids and gases, theory of undulations, heat, electricity, magnetism, etc.

The studies of the senior class include Optics, Astronomy and Meteorology.

TEXT-BOOKS.—In Physics, Atkinson's Ganot. In Astronomy, Young.

### MATHEMATICS.

PROF. SMITH.

The general course for the first two years embraces the first year, Algebra and Geometry, six books; second year, Solid Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration.

Two objects are sought to be attained: First mental discipline; second, a thorough knowledge of the principles of pure mathematics and their practical applications.

Theoretical and practical instruction is given to the sophomore class in farm, town, and government land surveying, dividing land, mapping, plotting, and computing of areas, etc.; also in the theory, adjustment and use of instruments.

The class, in sections of six or eight, devote three afternoons a week during the second and third terms to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering courses. Analytical Geometry, Descriptive Geometry, and Calculus are pursued in the Mechanical and Engineering courses. Especial attention is given to their practical applications.

During the entire course, instruction in text-books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with the application of principles and formulæ.

### TEXT-BOOKS.

Wentworth's Algebra, Wentworth's Geometry, Wentworth's Trigonometry and Surveying, Wentworth's Analytical Geometry, Waldo's Descriptive Geometry, Taylor's Calculus.

# NATURAL HISTORY AND GEOLOGY.

### PROF. MELL.

Geology.—This subject is studied in the senior class, and extends through the entire session. Special attention is given to the geology of Alabama, and many illustrations are drawn from the coal and iron fields and other natural deposits of minerals in the State. The origin of ore deposits, mineral springs and geological relations of soils are carefully studied.

There is also a course of advanced work in practical Geology for the post-graduate students. This subject is pursued by applicants for degrees of Master of Science and Mining Engineering.

The junior class in Engineering spends two terms in

Mineralogy and blow-pipe work.

Botany.—The students of the Sophomore class begin the study of Botany the first of March and continue it through the session. Analytical work is made an important feature. This class is provided with plants from the fields, and taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section.

In the junior class, in the course of Chemistry and Agriculture, an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope in the preparation of specimens showing plant structure; this work is sufficient to familiarize the students with the methods of plant building and cellular organization. Excellent microscopes of the most improved patterns, and all the necessary chemicals and apparatus for preparing and mounting vegetable tissues, are used by the students. A dark room is attached to this laboratory for photomicrography.

#### TEXT-BOOKS.

LeConte's Geology, Gray's Botany, Dana's Mineralogy, Goodale's Physiological Botany, Nelson's Herbarium and Plant Descriptions.

### ALABAMA WEATHER SERVICE.

The United States Signal Service has established in Alabama a State system for collecting meteorological data relating to climatic changes. The service is now in successful operation with the central office located at this Institute. Bulletins are issued at the close of each month, compiled

from reports sent from numerous stations throughout the State. An opportunity is thus offered the students in Meteorology of becoming familiar with the system operated by the Department at Washington.

### CIVIL ENGINEERING AND DRAWING.

#### PROF. LANE.

#### CIVIL ENGINEERING.

The special studies of this department begin in the Junior class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics. They are as follows:

Junior Class.—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, location and construction of common roads and railroads.

Senior Class,—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars and their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of the same; joints and fastenings; solid and open built beams; classification, construction and mechanics of masonry; foundations on land and in water; bridges and roofs of different kinds; their construction and strains determined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads; navigable, irrigation, and drainage canals; river and sea-coast improvements. Theory and practice are combined in both classes.

#### TEXT-BOOKS.

Junior Class.—Henck's Field Book for Railway Engineers, Gillespie's Roads and Railroads, Parson's Track.

Senior Class.—Wheeler's Civil Engineering, Von Ott's Graphic Statics.

#### DRAWING.

All of the students of the Freshman and Sophomore classes are required to take Drawing; but only the students in Mechanics and Engineering in the Junior and Senior classes.

The Freshman class is taught linear and free-hand drawing. The Sophomore class is instructed in the principles of orthographic and isometric projections, shade and shadows, perspective and tinting. In the Junior class the instruction embraces a more extended course in orthographic and isometric drawing, perspective, shades and shadows and tinting; also sketches of tools and machines, plans, elevations and cross-sections of buildings and blue prints. The Senior class make topographical drawings, and drawings of machines, roofs, bridges, etc., to different scales, and blue prints. Plans, profiles and sections of railroad surveys complete the instruction in this department.

#### TEXT-BOOKS.

Freshman Class.—Kitchener's Geometrical Note Book, Thorne's Junior Course in Mechanical Drawing, and Davidson's Model Drawing. Sophomore Class.—Davidson's Projections, Davidson's Practical Perspective, Keuffel & Esser's Alphabet.

Junior Class.—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the College,

Keuffel & Esser's Alphabet.

Senior Class.—French, English and American Plates belonging to the College, Keuffel & Esser's Alphabet.

### ENGLISH AND POLITICAL ECONOMY.

PROF. THACH.

### OBJECTS AND METHODS.

In this department the students pursue a systematic course in the English Language and Literature.

Language is the avenue of approach to all knowledge; the interpretation of words is the fundamental process in

education of whatsoever kind. A full course of English is, therefore, considered especially important in the technical courses of study that do not include the ancient classics. Accordingly, the course of English is continued throughout the four years of the College curriculum, three hours a week, and is made obligatory upon all students, with the exception of those pursuing the two first years of the course in Latin. In this extended drill in the grammar and literature of the English language, the endeavor is made to afford a training somewhat equivalent to the ordinary course in the classical languages.

In view of the ill preparation in languages, especially in their mother tongue, exhibited by many of the candidates for admission to the Freshman Class, it is deemed advisable, for the sake of honest work, to devote a portion of the first year to grounding such students in the principles of grammar. Further, with the idea that an ability to speak and write correctly English of the present, and to appreciate the literary excellencies of standard authors, is more desirable than training in the philological curiosities, and literary crudities of Anglo-Saxon literature, the course of study in this institution is confined exclusively to the literature of Modern English.

Especial attention is given to the study of the writings, themselves, of leading English authors, since direct contact with literature is considered more profitable than information merely about literature.

#### COURSE OF STUDY.

Freshman Class.—Five hours a week; study of grammar, the principles of special and general composition, with frequent brief papers illustrating the laws studied; study of American authors, Irving, Hawthorne, Holmes.

Whitney's Essentials, Lockwood's Rhetoric, Scudder's American

Sophomore Class.—Three hours a week; study of style, analysis of selections of prose and poetry, frequent essays on historic and literary themes.

Abbott's How to Write Clearly, Genung's Rhetoric, Scudder's Selection from Longfellow, Lowell, Emerson.

Junior Class.—Three hours a week; Lectures on the History of English Literature, Logic, Critical Study of English Classics—Milton, Gray, Goldsmith, etc., Essays.

Shaw's History of English Literature, Hale's Longer English Poems. Senior Class.—Two hours a week, first term. Principles of Criticism, Shakespeare's Julius Cæsar, Hamlet, etc.

### ESSAYS AND ORATIONS.

Theory without practice is as fruitless in the study of English as in any other department of study. Practical work is indispensable to the successful teaching of English.

Besides numerous brief papers, illustrative of the subject matter of the text-books, set essays or orations are required of all these students; for the fourth class, six essays a year; six for the third; for the first and second classes, three orations each.

#### DECLAMATION.

The old practice of committing pieces to memory for "speaking" is cultivated as a means, both of training in the art of thinking on the feet, and of storing the mind with the diction of finished specimens of English style.

The Sophomore class is heard weekly throughout the year in sections of ten, once for an hour and a half in rehearsal, afterwards in the study hall before the body of students.

The Senior and Junior classes also deliver their orations in public.

## PHILOSOPHY AND POLITICAL ECONOMY.

The entire Senior class pursues the study of Intellectual Science, twice a week, through the year; and Political Economy twice a week during the two last terms. The instruction in this department is by lectures in combination with text-books.

Intellectual Science.—Psychology defined. Value in relation to moral culture, education, and Natural Sciences.

The Relations of the Soul to matter. The argument of the materialist. Counter arguments. The Faculties of the The nature of Consciousness. Sense Perception. Memory, its nature, development, education. Fancy. Imagination. Nature of conceptions. Language. Judgment. Deduction. Induction, etc. Porter's Intel-Reasoning. Political Economy. Value; production of lectual Science. wealth; land; labor; capital; division of labor; distribution of wealth; wages; trades union; co-operation; money; credit; functions of government; taxation; tariff; education, etc. Ely's Political Economy. Lectures by Professor.

A Post-Graduate Course has been established in Political Economy. The texts used as the basis of the work are F. A. Walker's Advanced Political Economy, and Woodrow Wilson's State. Topics are assigned for research by the student, who is facilitated in his labor by a well chosen library, including most of the standard works on political economy and government.

### CHEMISTRY.

PROF. LUPTON. ASSISTANT, L. W. WILKINSON.

Instruction in this department embraces—

- 1. A course of lectures in General Chemistry.
- 2. A course of lectures in Industrial Chemistry.
- 3. A course of lectures in Agricultural Chemistry.
- 4. Systematic laboratory work in connection with each course of lectures, for the practice of chemical analysis and chemical research.
- 1. Course in General Chemistry: This consists of a series of lectures (three per week) extending throughout the entire session, and includes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties and compounds of the

metallic and non-metallic elements, with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the Arts and Manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

#### REFERENCE BOOKS.

Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cook's Chemical Philosophy, Chemical Journals.

2. The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the Arts and Manufactures to the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

#### REFERENCE BOOKS.

Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology, Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week), and includes a thorough discussion of the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock and the various operations carried on by the intelligent and successful agriculturist.

#### BOOKS OF REFERENCE.

Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Departments and Stations.

4. The course of systematic Laboratory Work: This course of practical work in the laboratory is carried on in connection with each course of lectures, and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The laboratories, which are open from 9 A. M. to 5 P. M., during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the Chemical Laboratory is furnished with a work table, a set of re-agent bottles, and the common re-agents and apparatus used in qualitative and quantitative analysis. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

### BOOKS USED.

In Qualitative Analysis-Jones, Fresenius, Plattner.

In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying.

In Agricultural Chemical Analysis—Church, Frankland. Official methods of the Association of Agricultural Chemists.

#### CHEMICAL LABORATORY.

[For description of the building see page 18.]

The Chemical Apparatus recently purchased for the laboratory consists of a full supply of the most approved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to first-class laboratories, a new and improved Schmidt and Hensch's Polariscope has been imported, four short-arm Becker Balances of latest pattern, Bunsen Spectroscope, Zeiss' Microscope, and other instruments for delicate and accurate work.

### BIOLOGY.

#### PROFESSOR ATKINSON.

Practical Biology.—This subject is presented by lectures twice a week to the senior students in Agriculture and Chemistry. The first part of the year will be devoted to the study of fungi, giving prominence to those which cause diseases of cultivated plants. This will be followed with the study of insects, including those injurious and beneficial to Agriculture. Special attention will be given to methods employed in combating the attacks of fungi and insects upon plants.

The reference books will be announced to the classes. The department contains a carefully selected library of the standard works on mycology and many rare and valuable works, besides current periodicals adapted to aid in the special investigations carried on in the laboratory.

Especial opportunities are offered to graduate students who desire to pursue advanced work and engage in original investigations.

### FACILITIES FOR WORK.

At present three rooms are occupied by the department—an office, lecture room and laboratory. The office contains the cabinet of fungi, the technical library for the department, slate table with a Zeiss microscope, re-agents, gas and water fittings. The work in the office

consists of the examination, indentification and cataloguing of the specimens of fungi, beside the special work peculiar to such an office. The cabinet is provided with tight drawers, for receiving the mounted specimens of fungi.

LABORATORY. -Five slate top tables are devoted to the use of stu-

dents, there being 10 Leitz microscopes set apart for them.

Two small culture rooms contain the plate and test tube cultures of fungi and bacteria which are being studied in relation to the plant diseases they cause. Here they can be handled and studied with little danger of contamination from the dust of the laboratory. In these rooms are kept Rohrbeck Thermostats fitted with automatic cut off burners and Lautenschläger's most recent thermoregulator for maintaining constant temperatures.

A Winkel microscope is kept here for the examination of cultures. It consists of stand No. 2, with condenser, triple revolver, homogeneous immersion lens 1-24 and 1-14, dry objectives No. 3 and No. 7, oculars 1, 3 and 5, and micrometer ocular.

A Winkel microscope is also kept for the use of the students, exactly like the former, except the 1-24 homogeneous immersion lens.

The other pieces of apparatus are as follows:

Steam sterilizer, dry sterilizer, domestic still, instantaneous water heater. Pasteur filter, fine and common balances, apparatus for demonstrating intramolecular breathing of yeast, the Brendel models of parasitic and sapro-phytic fungi, bacteria and yeast plants, and automatic device for rolling culture tubes of nutrient agar agar.

There are also cases containing a large quantity of the various glass vessels, paper, dry and liquid dyes and re-agents, culture media, etc., required in modern investigation.

The laboratory is well lighted from southern and western exposure.

All the rooms are well fitted with gas and water supply.

A phytopathological laboratory has recently been fitted up for conducting investigations on the diseases of plants. While this constitutes part of the equipment for the Biologist in Experiment Station work, it will be at the disposal of the department for instruction.

### HISTORY AND LATIN.

PROF. PETRIE.

#### HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that History is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. This casual relation of events is closely studied and the students are taught to investigate for themselves the growth of ideas, and to trace particularly their development in the United States, so as to acquire a practical knowledge of the history and present workings of our government and institutions. The knowledge acquired is rendered clear and permanent by frequent comparison of customs and laws, and also by diagrams, charts and maps. Instruction is given by lectures and textbooks.

The course covers two years, and embraces the History of the United States, studies on our government and its institutions, and on general history.

#### TEXT-BOOKS.

First Year: Johnston's U. S. History, Macy's Our Government. Second Year: Myer's Mediæval and Modern History.

#### LATIN.

In this department two objects are kept in view: a knowledge of the language, and an appreciation of the literature.

In teaching the Language the following methods are used: A systematic course is given in Etymology and Syntax. These are taught both deductively from a textbook on Grammar and inductively from the Latin text read. Latin texts are translated, sometimes at sight, sometimes after being assigned for preparation. English passages based on a familiar author or illustrative of special constructions are translated into Latin on the blackboard. Simple conversation is carried on in Latin.

Special emphasis is laid upon the study of Latin Literature. In connection with each author studied in class there is prescribed a course of reading in English descriptive of his life, writings and times. The artistic value of his writings is carefully studied and discussed, and frequent comparisons are made with modern writers.

#### TEXT-BOOKS.

Freshman Class—Nepos, Virgil, Sallust, Grammar, Composition. Sophomore Class—Cicero's Orations, Cicero's Letters, Livy, Composition.

Junior Class-Ovid, Tacitus, Horace.

Senior Class-Cicero's De Natura Deorum, Plautus, Terence.

### AGRICULTURE.

#### PROF. BONDURANT.

The course of instruction in this department embraces: I, Soils; II, Plants; III, Domestic Animals.

In the Freshman class, lectures, extending through the third term of the session, treat of soils, their classification, physical defects and remedies, causes of diminished fertility, and the means used to protect them from waste and to restore fertility, and the theory and practice of surface and sub-drainage, &c. These subjects are treated with special reference to the different classes of soil in Alabama, omitting as far as possible, questions involving a knowledge of Chemistry and Botany.

In the Sophomore class, in addition to the discussion of the physical properties and treatment of soils, the methods of studying their defects and their remedies are also con-

The sources of the important elements of plant food and their use upon different soils and plants, saving farm manures, making composts, proportioning and applying commercial fertilizers, the relation of plant growth to soil and atmosphere, terracing and grading land to prevent washing, plows and plowing, and indeed everything connected with tilling the soil, passes under review as foundation work.

Southern agriculture is then treated—the history, nature and cultivation of field crops discussed as regards their adaptation to, and treatment upon, the soils of Alabama.

This occupies the first and second terms.

The third term is devoted to domestic and commercial horticulture, poultry, sheep, cattle-breeding and management of dairy, &c.

In the Junior class, stock breeding and management are completed, and a course in Pomology, including the propagation of nursery stock, planting, manuring, pruning, cultivating, harvesting and marketing every species of fruit, is treated, which occupies the second term.

In the third term, lectures are delivered upon subjects relating to agriculture, the selection, purchase, equipment and management of a farm, employment and management of labor, &c.

Landscape gardening also is taught with special reference to the improvement of country homes.

Drawings and models of agricultural implements and farm products will be used to illustrate the lectures. Reference will be made to suitable agricultural books, and especial reference to the experiments contained in bulletins of other agricultural stations, whenever applicable to the subject under discussion.

In this department, practical agriculture is combined with class instruction. Opportunities are given, and students are required in the second and third classes, to do practical field work of an educational character, under the instruction and direction of the professor, and they are graded according to their skill.

The farm instruction will embrace details of farm work, assisting in field and feeding experiments, dairy work, care and management of farm stock, machinery, propagating fruits, grafting and budding, and pruning vines and fruit trees.

### MODERN LANGUAGES.

#### PROF. BARNWELL.

The following regular courses are given in French and German:

French.—First Year: Three recitations a week. During this year the principal object is to acquire a thorough knowledge of the elements of grammar, and a correct pronunciation, together with facility in translating ordinary French. Reading is begun at an early stage, and the principles of grammar are illustrated and impressed by frequent exercises in rendering English into French.

Second Year: Three recitations a week. During this year, the same line of work is pursued as that begun in the previous year. More difficult and varied French is read, and careful instruction is given upon the laws of grammar and the construction of the language.

German.—Two Years: Three recitations a week the first year, three a week the second year. In this course the aim and the methods are similar to those in French.

Special Courses.—In addition to these regular courses, additional classes are formed for special study in the literature, or for special study in any particular direction desired, when the number of students desiring it is sufficient.

#### TEXT-BOOKS.

French-First Year: Joynes-Otto's French Grammar and Introductory Reader, Super's French Reader.

Second Year: Jeanne d'Arc, L'Avare, Theatre Francias Classique,

Heath's French Dictionary recommended.

German—First Year: Joynes-Meissner's German Grammar, and

Joynes' Reader, Andersen's Bilderbuch ohne Bilder. Second Year: Hauff's Karavane, Peter Schlemihl, Die Journalisten, Heath's German Dictionary recommended.

### ELECTRICAL ENGINEERING.

#### PROF. MC KISSICK.

The students in this course will study English, French or German, Physics, Mathematics, &c., as now prescribed for the course of Civil Engineering in the Junior and Senior years; and, in addition thereto, will prosecute their studies in Electricity and Mechanics, as herein described.

### COURSE IN ELECTRICAL ENGINEERING.

#### JUNIOR YEAR.

Five hours per week for the entire session are devoted to the study of the principles of Electricity and Magnetism. The student is made familiar with the theoretical principles by experiments, illustrations, recitations and lectures.

LABORATORY WORK.—Six hours per week are given to work in the laboratory. This includes management of batteries, construction of instruments, electrical measurements, verification of the principles upon which the measurement of currents, electromotive force and resistance are based, &c.

#### TEXT-BOOKS.

Ayrton's Practical Electricity, Meadowcroft's Electricity, Desmond's Electricity for Engineers, S. P. Thompson's Electricity and Magnetism, Stewart and Gee's Practical Physics.

### SENIOR YEAR.

In the Senior year five hours per week are devoted to theoretical instruction in Electricity and Magnetism, supplemented by a course of lectures and practical demonstrations on the applications of electricity to lighting, electrical transmission of energy, electrical welding, telegraphy and telephony.

Encouragement is offered to advanced students for conducting original investigations, and opportunity is taken to stimulate a spirit of scientific inquiry. Courses of reading

are suggested to such students in connection with their experimental work.

LABORATORY WORK.—Six hours per week are devoted to practical laboratory work, including construction of instruments, electrical measurements, electrolysis, and relation of electrical currents to heat and mechanical work, care and tests of dynamo, the adjustment and calibration of voltmeters and ammeters, electric lighting, management and care of accumulators, energy consumed in lamps, adjustment and care of arc lamps, proper wiring of buildings, the application of electricity to street railways, magnetic measurements, tests of transformers and motors.

DRAWING AND CONSTRUCTION.—Five hours per week in the Senior year are devoted to the design and construction of electrical machinery. The student is required to make original designs of dynamos, motors, transformers, galvanometers, etc., and will be required to construct at least one piece of apparatus of his own design.

#### TEXT-BOOKS.

Slingo and Brooker's Electrical Engineering, S. P. Thompson's Electro Magnet, Thompson's Dynamo Electric Machinery, Fleming's Alternate Current Transformer.

#### REFERENCE BOOKS.

Treatise on Electricity and Magnetism, Vols. I and II, by Gordon; Electricity and Magnetism, by Clerk Maxwell; Emtage's Introduction to the Mathematical Theory of Electricity and Magnetism; Kempe's Electrical Testing, Dredge's Electric Illumination, Vols. I and II; Dynamo Electric Machinery, by Carl Hering; The Electro Motor and its Applications, by Wetzler and Martin; Electric Transmission, by Kapp; Electric Lighting, by Atkinson; Electric Light Installations, by Salomons; Alternating Currents of Electricity, by Blakesley; London Electrician; Proceedings of American Institute of Electrical Engineers.

#### EQUIPMENT.

The Electrical Laboratory has a complete line of batteries, call-bells, annunciators, telegraph sounders, relays, keys, magnets, and all apparatus necessary for first year

students in Electrical Engineering. The equipment comprises many fine instruments of precision, Sir Wm. Thomson's standard 100 ampere balance (either for direct or alternating currents), Sir Wm. Thomson's graded current galvanometer, reading to 600 amperes; also, his graded potential galvanometer, reading to 600 volts, Cardew voltmeter (for direct or alternating currents), reading to 150 volts; Weston's standard ammeter and voltmeter, box of resistance coils; Queen's magnetic vane voltmeter and ammeter, standard \( \frac{1}{3} \) micro-farad condenser and Sabine key; Thomson Watt-meter ballistic reflecting galvanometer, mirror galvanometer, and several other galvanometers for first year students. A battery of fifty-five Julien accumulators has been installed in the Laboratory, and a like battery in the department of Natural History.

In the Dynamo room the following are installed: One Weston 150 volt, 20 ampere dynamo, with rheostat; one Brush 6 arc-light dynamo, with regulator and six lamps; one Edison compound wound 12 kilo-watt generator; a Crocker-Wheeler one-horse power motor and rheostat, and one alternator, made by special students, furnish current to the laboratory and light up the different buildings.

The dynamos occupy a separate room from the Laboratory, and are operated by a 35 horse-power Westinghouse vertical

engine.

This department, being provided with Sir Wm. Thomson's standard electrical instruments for exact measurements, will calibrate any ammeter or voltmeter that may be sent to the College free of expense.

An electro-motor, supplied with current from a generator at a distance of 3,000 feet, operates a gin, gin press, silo cutter and feed cutter at the Experiment Station farm. This motor not only subserves a useful purpose in the operation of these machines, but is an excellent illustration of the electric transmission of power.

#### MECHANIC ARTS.

J. J. WILMORE, M. E., DIRECTOR.

B. A. BLAKEY, B. H. CRENSHAW, ASSISTANTS.

The course in Manual Training covers three years, as follows: First year, wood-working—carpentry and turning; second year, pattern-making and foundry and forge work—moulding, casting and smithing; third year, machine shop—chipping and filing and machine work in metals.

This course is obligatory upon the students of the three lower classes. For satisfactory reasons a student may be excused from this laboratory work by the Faculty.

The full work of each class is six hours per week, in three exercises of two hours each.

The power for running the apparatus in this department is derived from a twenty-five horse power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler. A steam pump and a heater for the feed water form a part of the steam apparatus. For the steam plant a substantial brick boiler-house and chimney have been erected.

The equipment for the wood-working shop comprises the following: 30 wood-working benches, each with complete set of carpenter's tools; 24 turning-lathes, 10-inch swing, each with complete set of tools; 1 double circular saw; 1 band saw; 1 board-planing machine; 1 buzz planer; 2 scroll saws (power), 1 large pattern-maker's lathe, 16-inch swing; 1 36-inch grindstone. In addition to these, the tool room is supplied with a variety of extra hand-tools for special work.

The equipment for the foundry consists of moulding-benches for 18 students, each supplied with a complete set of moulder's tools; a 14-inch cupola, with all modern improvements, capable of melting 1,000 pounds of iron per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of crucible tongs, etc. Also a full supply of ladles, large and small moulding flasks, special tools, etc.

The forge shop equipment consists of 16 hand forges of new pattern, each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola), and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke-flues and forces it out through the chimney.

The machine department occupies a brick building 30x50 feet, and is

Care (5)

equipped with 6 engine-lathes (screw-cutting), 14-inch swing, 6-foot bed; 2 engine-lathes, 16-inch swing (one with taper attachment); 1 screw cutting lathe, 8-inch swing; 1 speed lathe, 10-inch swing; 1 20-inch drill press (power-feed); 1 15-inch shaper; 1 22-inch x 22-inch x 5 foot friction planer; 1 universal milling machine; 1 corundum tool-grinder (14-inch wheel); 1 bench grinding-machine (small); 1 post drill press (14-inch). A part of this room is set apart for visework, chipping and filing; and benches for 12 students are provided each with vise and sets of files, chisels, hammers, etc. In the toolroom is to be found a good supply of machinists' tools for general shop use, such as lathe and drill chucks, drills, reamers, taps, dies, gauges, files, cutting and measuring tools, and special appliances for machine work, with machine for grinding twist drills.

The nature of the work in each department is as follows:

#### FIRST YEAR.

I. A course of carpentry (hand work covering the first two terms and part of the third, or about five months).

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, different kinds of joints, timbersplices, cross joints, mortise and tenon, mitre and frame work, dovetail work, comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof-trusses, etc.

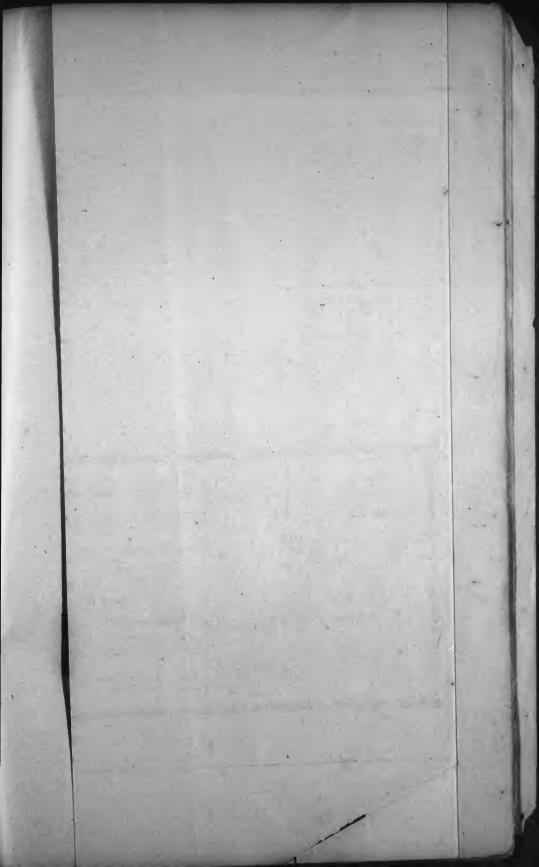
II. A course in turning, extending through the third term. The lessons comprise, first, nature and use of lathe and tools, plain straight turning caliper work to different diameters and lengths, simple and compound curves, screw plate and chuck-work, hollow and spherical turning.

## SECOND YEAR.

I. A course in pattern-making, covering the first half of the first term. The work includes a variety of examples of whole and split patterns, core work, etc., giving the students familiarity with the use of patterns for general moulding.

II. A course in moulding and casting in iron and brass occupying ten weeks. The work consists for the most part

6,36,3





ALA. POLY. INST.

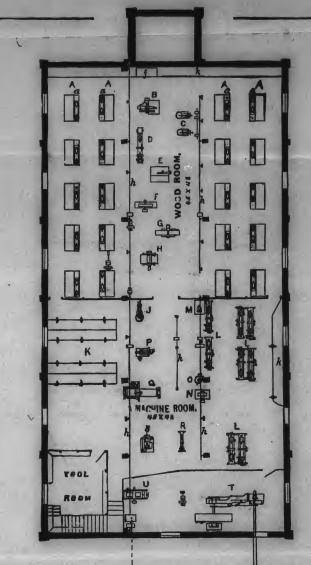
BCALE 46-1'

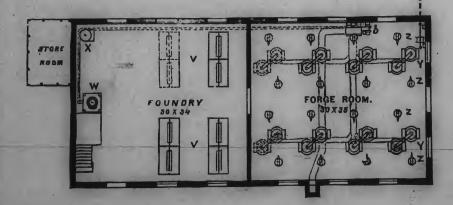
#### INDEX

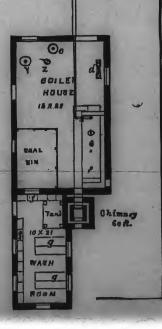
WORK BENCHES R SPEED LATHE
S MILLING MACHINE
T ENGINE
U DYNAMO
V MOULDING BENCHES
W CUPOLA
X BRASS FURNAGE
Y FORGES
Z ANVILS
a WOOD LATHES
b BLOWERS
C HEATER
d PUMP
e BOILER
f CLOSETS SPEED LATHE BAND SAW EGROLL SAW PATTERN LATHE CIRCULAR SAW GRINDSTONE BUZZ-PLANER SURFACE " DRILL PRESS FILING BENCHES ENGINE LATHES BENCH GRINDER TOOL " POST DRILL SHAPER PLANER

CLOSETS

BHAFT LINES









of small articles, such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two part flasks; core work is also given, and some three part flask and some dry sand work is introduced.

The same patterns which have been previously made by students are used, besides special patterns for occasional larger or more complicated work. Instruction and practice is given in working the cupola, each student in turn taking charge of a melting.

III. A course in forge work in iron and steel, occupying the remainder of the year. The lessons are arranged so that the students, in making the series of objects, become familiar with the nature of the metals and the successive steps in working them by hand into simple and complex forms, as drawing, upsetting, bending, cutting, punching, welding by various methods, tool-forging, tempering, hardening, etc.

In connection with this second year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel, brass, etc.

## THIRD YEAR.

I. A course of chipping and filing, covering ten weeks of the first term. The lessons comprise work on cast and wrought iron; chipping to line on flat and curved surfaces, key-seating, etc.; filing and finishing to line (straight and curved), surface filing and finishing, fitting, slotting, dovetail work, sliding and tight fits, sawing, pin, screw and key filing, surface finishing with scraper, etc.

II. Machine work occupying the remainder of the year.

The work includes cast and wrought iron, steel and brass:

turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling—both in lathe and drill press—reaming, boring, screw-cutting in lathe and with taps and dies, planing, slotting, etc., with planer and shaper, milling various forms with the milling machine, including exercises in making taps, reamers, etc., fitting, grinding, polishing, etc.

Lectures are also given during the year on various subjects connected with machine work in metals: Such as forms, construction and use of the various machines, cutting tools, gearing, gauges, screw threads, etc. During the last term some piece of construction work is given the classes.

Instruction is generally given, first, by black-board drawings or sketches which the student copies, with dimensions in note-book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class, second by inspection and direction at the bench by the instructor. The construction work is made from blue prints made by the class in drawing.

## MECHANICAL ENGINEERING.

J. J. WILMORE.

#### JUNIOR YEAR.

To receive the Degree of B. Sc. in the Electrical and Mechanical Engineering the student must complete the course of Mechanical Engineering as here described.

Principles of Mechanism.—Two terms are devoted to this subject. Under this head machines are analyized and their elementary combinations of mechanism studied. The communication of motion by gear wheels, belts, cams, screws and link-work, the different ways of obtaining definite

velocity ratios and definite changes of velocity, parallel notions and quick return motions as well as the designing of trains of mechanism for various purposes, together with the theoretical forms of teeth for gear wheels to transmit the motion through these trains, are investigated under this subject. The text book work is illustrated by the study and examination of the machines in the laboratory.

The last term will be devoted to the study of the properties of steam, preparatory to the study of the Steam Engine in the Senior year. The subject of steam boilers will receive special attention, and tests will be made to determine the evaporative efficiency of the boiler, furnishing power.

Mechanical Drawing.—During the first term the students make drawings to exact scale, of some of the simpler machines. The student takes his own measurements and makes his own sketches from which to make the finished drawing.

This is followed by work intended to be supplemental to the work in Mechanism. Involute and epicycloidal gear wheels, bevel wheels and endless screws are designed and drawn to scale from data given by the instructor. During the last term each student will make working drawings of some machine in the laboratory with instruction in the making of tracings and the art of blue-printing.

Laboratory Work.—The laboratory work will consist of hand work in iron and machine work in iron, as given in the course in mechanic arts in the third year.

### SENIOR YEAR.

Steam Engine.—One half the year will be given to the study of the theory and efficiency of the steam engine, with discussions of the effects of condensation in cylinder, action of fly-wheels, effect of jacketing, etc. Simple and compound engines, various valves and cut-off motions, and the pricipal types of modern engines are studied. Special attention is given to the steam engine indicator, and the

student is expected to become familiar with its application and uses.

Machine Design.—In the last half of the year the subject of Machine Design will be taken up and carried on in connection with the Strength of Materials, the latter being studied mainly from actual experiments made on the testing machine. In the former, simple machines are given to work under specified conditions. The motions being laid out and the proportion of parts found by calculation.

Mechanical Drawing.—The drawing for the first half year will embrace Practical Perspective with exercises in tinting and line-shading. In the last half year the drawing will be in connection with the work in Machine Design, and machines and parts of machines will be designed and drawn

to scale, with full sets of working drawings.

Laboratory Work.—The laboratory work will consist of making tests of engines under varying conditions of load and speed. These results will be carefully recorded, tabulated and filed away for future reference.

Also of making tests of the strength of the different materials of construction, stone, wood, cast and wrought iron, steel, etc. These will be tested for transverse, tensionial and compressional strains, and all results recorded and tabulated.

## POST-GRADUATE WORK.

Students sufficiently qualified, who desire post-graduate work, can be accommodated to the extent of the appliances at hand. They will be expected to study up the history and development of Mechanics and Engineering, take more in detail the theory and structure of the steam engine, and solve problems in general engineering, such as designing shops for special lines of work, making drawings and specications showing the most economical arrangement of machines and transmission machinery.

#### TESTING APPARATUS.

For the experimental work in Mechanical Engineering the following apparatus has been provided:

A testing Machine, capable of exerting compressional, tensional and transverse strains up to 35,000.

A steam engine Indicator, planimeter, micrometer and other implements for steam engine testing.

A Harris Corliss twenty-five horse power engine, a Westinghouse thirty-five horse power engine, a steam pump, steam boilers and the use of the laboratory for special work.

#### TEXT AND REFERENCE BOOKS.

Stahl and Wood's Elmentary Mechanism.
Goodeve, Steam Engine.
Busbridge, Engineering Drawing Copies.
Barr, Treatise on High Pressure Steam Boilers.
Brown & Sharpe, Treatise on Gearing.
Davidson, Practical Perspective.
Grant, Odontics.
Hemenway, Indicator Practice and Steam Engine Economy.
Klein, Machine Design.
MacCord, Treatise on the Slide Valve.
Pray, Twenty years with the Indicator.
Rose, Mechanical Drawing Self-Taught.
Rose, Modern Steam Engines.
Thurston, Manual of the Steam Engine.
Appleton's Clyeopædia of Applied Mechanics.

## MILITARY SCIENCE AND TACTICS.

LIEUT. J. H. WILLS, U. S. ARMY, COMMANDANT.

Military Science and Tactics are required to be taught in this institution by law. This law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion; also in Guard Mountings, Inspections, Dress Parades, Reviews, etc.

Under section 1225, U. S. Revised Statutes, the College is provided with modern Cadet rifles and accourrements and

two pieces of field artillery. Ammunition for practice firing is used under the direction of an experienced officer. The exercises in target practice and artillery drill begin the first day of the third term, March 27th.

The following uniform of standard Cadet gray cloth has been prescribed for dress, viz.: Coats and pants as worn at West Point, with sack coat for fatigue, dark blue Cadet cap. A neat and serviceable uniform can be obtained here at \$18 to \$19. This is less expensive than the usual clothing. All students are required to wear this uniform during the session.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment and studies. Each company is officered by one. Captain, two 1st Lieutenants, one 2d Lieutenant, and with a proper number of non-commissioned officers. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are confirmed by the President on nomination of the Commandant.

The Junior Class recites once a week in the United States Infantry Tactics.

The Senior Class recites once a week in "Notes on Military Science."

## VETERINARY SCIENCE.

During the second term of this session Dr. C. A. Cary delivered a course of lectures to the students in agriculture on Veterinary Science. To illustrate his instruction he used the mounted skeletons of the horse, ox, hog, and sheep with which the department of Agriculture is now provided.

Special lectures were delivered to the farmers every Saturday, and free clinics, for their benefit, conducted at the Station.

#### POST-GRADUATE DEGREES.

There are three Post-Graduate Degrees-MASTER OF SCIENCE, MINING ENGINEER and CIVIL ENGINEER.

A Post-Graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one year's residence at the College, spent in the successful prosecution of a course of study in applied science prescribed by the Faculty.

Candidates must also present to the Faculty a satisfactory thesis, showing independent investigation upon some subject pertaining to their course of study, and must pass a satisfactory examination on the course of study prescribed. The examination is written, and also oral, in the presence of the Faculty.

Applicants for Post-Graduate Degrees are, by order of the Board, permitted to matriculate without payment of fees.

They are subject to the general regulations as other students, but are exempt from all military duty.

Resident graduates, who are not candidates for a degree, are permitted to matriculate and prosecute the studies in any department of the College, chemical laboratory, without payment of regular fees.

#### DISTINCTIONS.

Distinctions are awarded in the different subjects of each class to those students whose grade for the entire year is above 90 per cent.

Certificates of Distinction are awarded in public on Commencement day to those who obtain an average of 90 per cent. in all the prescribed studies of a regular class, and also to those who obtain three distinctions in the freshman class, four in the sophomore or junior class, and five in the senior class, provided they have satisfactorily passed all the regular examinations of that session.

#### PHOTOGRAPHY.

During the second term there will be given by Professor Mell a course of twelve lectures on photography. This course will be elective, and the instruction will be opened to any student who may desire to learn how to make pictures. It will be necessary for each student to provide himself with an outfit that will cost from \$11.50 to \$16.00.

#### . RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

From the record a monthly circular, or statement, is sent to the parent or guardian.

### EXAMINATIONS.

Written recitations, or monthly examinations on the studies of the month, are held at the option of the professor.

At the end each term written or oral examinations, or both, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination, can be promoted to full standing to the next higher class, only on satisfactory examinations at the opening of the next session.

It is required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within three weeks of the examination, except in extreme cases.

Examinations for degrees, or certificates of proficiency, embrace the entire subject of study in the course.

#### LIBRARY.

A commodious room in the new building has been appropriated to the library. It is designed to make it an important educational feature of the college. At present it contains a number of valuable reference books, books of the standard authors, and others suitable for students. During the present session the library has been increased by the addition of 3500 volumes of carefully selected standard works for general reading, and for investigation. It is kept open daily from six to eight hours for the use of students as a reading room.

#### DISCIPLINE.

The government of the College is administered by the President and Faculty, in accordance with the code of laws and regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, are required of every student.

#### MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapaciated to bear arms, are required to engage in these exercises.

The drills are short, and the duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the Cadet are manifest.

Privates of the first class may be excused by the President from all military drills, and also students over twenty-one years of age at the time of entering College, who are permitted to devote their time to one special study, as chemistry, agriculture, etc.

#### RELIGIOUS SERVICE.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

#### YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings exerts a wholesome Christian influence among the students of the College.

The first week of the session a committee of the Association will meet the trains, whose business will be to give information to, or assist in any way they can, the students entering College for the first time. The Association is commended to all the students.

The following are the officers:

R. C. Spratling, President.

E. B. Mell, Vice-President.

W. C. H. Smith, Corresponding Secretary.

J. S. Johnson, Recording Secretary.

W. F. Clayton, Treasurer.

### GYMNASIUM.

The fourth floor of the college building is one large attic room, well lighted and ventilated. It has been supplied with a number of such appliances as are used in a gymnasium, and is used for athletic exercises by the students, in the afternoon, under prescribed regulations.

## LOCATION.

The College is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railroad.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty-one feet above tide water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

#### THESIS.

Each applicant for a degree is required to write and submit to the Faculty an essay or oration and read or deliver the same at Commencement, if required by the Faculty.

It must be given to the Professor of Engfish by the first of May.

#### LITERARY SOCIETIES.

There are two Literary Societies connected with the College—the Wirt and Websterian. Each has a hall in the college building.

These societies hold celebrations on the evenings of Thanksgiving Day and the 22d of February, and also Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

## EXERCISES IN ELOCUTION.

On every Saturday morning, immediately after chapel services, oratorical exercises in declaration and in original orations are conducted by the Professor of English, in presence of the Faculty and students.

The first and second terms the students of the junior and sophomore classes are exercised in original orations and declamation.

The second and third terms the members of the senior class read essays or deliver original orations.

# SOCIETY OF THE ALUMNI.

The Annual Alumni Oration, by a member of the society, is delivered in the chapel on Alumni Day, Tuesday of Commencement week. The following are the officers of the society.

- T. H. Frazer, M. D., President.
- J. C. Street, Vice-President.
- C. C. Thach, Treasurer and Secretary.

#### BOARDING.

The College has no barracks nor dormitories, and the students board with the families of the town of Auburn, and thus enjoy all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of orderder.

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President, and this permission is given only at the close of a term, except for special reasons.

### EXPENSES.

Incidental fee, per half session\$	2	50
Library fee, per half session	1	00
Surgeon's fee, per half session.	2	50
Board per month, with fuel and lights\$12 to 1	5	00

These fees are payable, \$6.00 on matriculation and \$6.00 on February 1st. By order of the Board no fees can be remitted.

There is no charge for tuition.

For students entering after January 1st, the fees for half session only are required.

## EXPENSES FOR COLLEGE YEAR.

Fees\$ 12	00	to	\$ 12	00
Board, lodging, fuel and lights	00	to	125	00
wasning	00	to	Q	00
Books, etc., say	00	to	15	00

\$137 00 to \$171 00

This does not include uniform, as the cost is not more than ordinary clothing.

#### CONTINGENT FEE.

A contingent fee of five dollars is required to be deposited by each student on matriculation, to cover any special or general damage to college property for which he may be liable.

At the close of the session the whole of the contingent fee, or the unexpended balance, will be refunded to the student.

## AMOUNT OF DEPOSIT.

Each student on entering College should deposit with the Treasurer not less than \$50.00, to pay the expenses of fees, one month's board, uniform, books, etc.

#### UNIFORM.

A uniform of Cadet gray cloth is prescribed which all under-graduate students are required to wear during the session. The uniforms are made by contractor of cloth manufactured at the Charlottsville mills. The suit including cap, costs about \$19.00; the dress coat \$10.00 to \$11.00. It is neat and serviceable and less expensive than ordinary clothing.

#### SURGEON.

The Surgeon is required to be present at the College daily, to visit the Cadets at their quarters who are reported sick, and to give all requisite medical attention without other charge than the regular Surgeon's fee, paid on entering College.

#### FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the Treasurer of the College all funds desired for sons or wards, whether for regular charges of College fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., when approved.

When funds are deposited, checks are drawn on the Treasurer of the College by the cadet to pay his necessary expenses. These checks are paid only when approved by the President. This approval is given only for necessary expenses, as stated in the Catalogue, unless specially requested in writing by the parent.

The College cannot be held responsible for the expenses of a student, unless the funds are deposited with the Treasurer. No student should be permitted to have a large amount of pocket money, as it only brings

trouble and encourages idleness.

#### ACADEMIC YEAR.

The Academic Year commences on Wednesday, 14th September (second Wednesday after first Monday), and ends on Wednesday, 14th June (the second Wednesday after the first Monday), which is Commencement day.

It is divided into three terms. The first term extends from the opening of the session to the 23d of December; the second term begins January 2d, and ends March 25th; the third term continues from March the 27th to the close of the session.

## RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the Trustees:

That in view of increased facilities for instruction in Agriculture and the technical departments of education now possessed by this College, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the Faculty are authorized, in addition to the legal name of this College, to print on the Catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the courses of education now provided for.

### DONATIONS TO LIBRARY.

Secretary of the Interior—Senate and House Reports, Mineral Resources, Consular Reports, Geological Survey, Ordnance Report, Bureau of Ethnology, Geodetic Survey., 50 vols.

Hon. John T. Morgan, Public Documents, 7 vols.

Hon. James L. Pugh, Public Documents, 2 vols.

Hon. W. C. Oates, War of Rebellion, Congressional Record, 7 vols.

Hon. Robert Porter, Superintendent of Census, Bulletins, etc.

Hon. W. T. Harris, Commissioner of Education, Pamphlets, etc., 8 vols.

Sir John B. Lawes, England, Rothamstead Memoirs, 9 vols.

Prof. Joseph H. Gilbert, F. R. S., Lectures on Agricultural Chemistry, 1 vol.

#### DONATIONS TO THE ELECTRICAL DEPARTMENT.

The following donations have been made to the Electrical Department by the manufacturers named:

The Lunkenheimer Brass Co, Cincinnati, Ohio, sight feed lubricator.

The Economic Electric Manufacturing Co., Boston, incandescent

Leffel Water Wheel Engine Co., Springfield, Ohio, photographs of turbines.

The Pittsburg Reduction Co., Pittsburg, Pa., samples of aluminum and aluminum bronze.

American Electrical Works, Providence, R. I., samples of wire and cordage.

Holmes, Booth & Hayden, New York, samples of wires, cables, &c. Maine Electric Improvement Co., Brunswick, Me., incandescent

Standard Underground Cable Co., Pittsburg, Pa., samples of cables.
Bowers Bros., Chicago, Ill samples of electrical mica.
Bowers Bros., Chicago, Ill samples of electrical mica. Solar Carbon Co., Cleveland, O, samples of carbon, carbon brushes,
battery carbons, &c.
Gethin's Electrical Manufacturing Co Gethin's gravity battery.
New York Insolated Wire Co., New York, case of wires, cables, &c.
Western Electric Co., New York,samples of wire.
The Simplex Electrical Co, Bostonsamples of caoutchouc wires.
U. S. Mineral Wool Co., New York copper gaskets.
Southern Electric Co., Lynchburg, Vaincandescent lamps.
Wilmot & Hobb's Manufacturing Co., Bridgeport, Conn., . steel gong.
American Circular Saw Co., Boston, samples of woven covered insu-
lated wires.
Alfred F. Moore, Philadelphia, Pa samples of wires.
Union Porcelain, Works, Brooklyn, N. Y., samples of porcelain goods.
The S. S. White Dental Manufacturing Co., Philadelphia, Pa., Partz
acid gravity battery.
Consolidated Electric Manufacturing Co., Boston Davis' cut out.
The Standard Paint Co., New York
Union Hardware Co., Torrington, Connpush button shells.
Wallace and Sons, Ansonia, Conn., samples of hard drawn copper wire.
The Goodrich Hard Rubber Co., Akron, O., samples of hard rubber
goods.
Pass & Seymour, Syracuse, N Y samples of porcelain goods.
A. W. Harris' Oil Co., Providence, R. Idynamo oil.
Taylor & Son, New York
The Underwood Manufacturing Co, Tolland, Conn belting.
Hart & Hegeman Manufacturing Co., Hartford, Conn., Hart switch.
H. T. Paiste, Philadelphia, PaPaiste sockets.
Solar Carbon Co., Pittsburg, Pa., battery carbons, carbon brushes,
electric light carbons.
Vulcanized Fibre Co., Wilmington, Del., samples of vulcanized fibre.
The Gould & Watson Co., Boston, samples of moulded mica insulators.
National Electric Manufacturing Co., Eau Claire, Wis., 30 lt, 1,000-
50 volt transformer.
F. Reddiway & Co., New York
Atlantic Covering Co., Plymouth, Masssamples of wire.
Steele Johnson Manufacturing Co., Waterbury, Conn., shade holders.
The C. McIntire Co., Newark, N. Jconnectors.
A. O. Schoonmaker, N. Ymica
T. M. Robertson, N. Y
N. Y. & Ohio Co., Warren, Oincandescent lamps.
John Simmons Co., N. Y., model electric pole and lightning tapper.
The Perkins Electric Switch Co., Hartfordsocket.
H. W. Johns, Manufacturing Co., New York, sample case of pipe cov-
erings, etc.

Jenkins Bros., New York
Eureka Tempered Copper Co., North East, Pacommutator bars.
Pierce Bros. & Co., Leominister, Mass Trolley fixtures.
Wm. H. Weston & Co., Philadelphia, 50 ampere double pole quick
break switch.
Dean Steam Pump Co., Holyoke, Mass., steam pump built in section.
J. W. Devol & Co., New York samples of "Ozokerite."
Burnhan & Sluggan Railway Appliance Co., Boston, bracket for pole.
A. J. Wilkinson & Co., Bostonnickel oil cups.
Berlin Iron Bridge Cophotograph.
Forest Electric Cotransformer switch.
The Reis Electric Specialty Co., Baltimore, Md regulating socket.
A. S. Cameron Pump Co., New York, N. Y, steam pump built in section.
Dean Steam Pump Co., Holyoke, Mass. photographs of steam pumps.
Brush Electric Co., Cleveland, O photograph of generator.
National Electric Mf'g Co, Eau Claire, Wis. photographs of generator.
Crocker Wheeler Metor Co., New York photograph.
Pennsylvania Engineering Co., Philadelphia lamps.

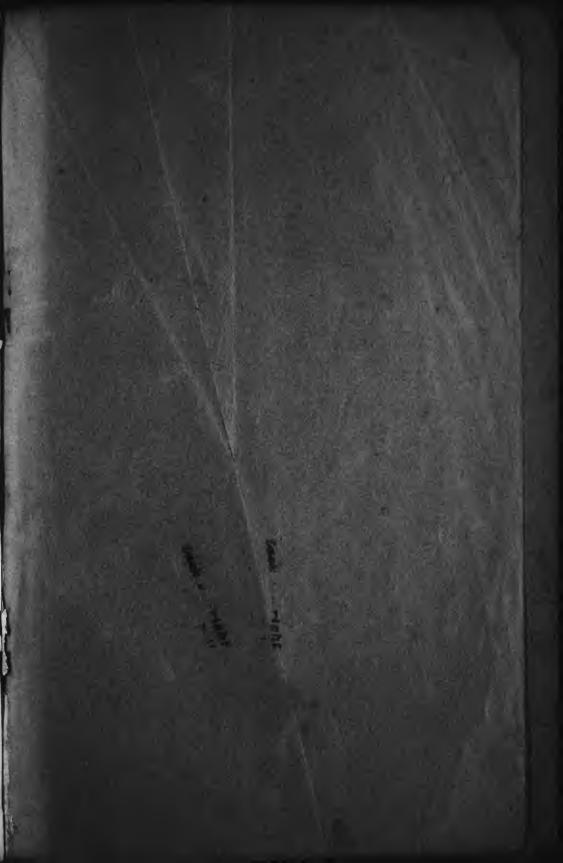
## DONATIONS TO THE MECHANICAL DEPARTMENT.

Frasse & Co., New York, Lathe and Planer Tool.
Billings & Spencer Co., Hartford, Conn., Screw Cutting Tool.
Prentice Bros., Worcester, Mass., Lathe Fixture.
Dodge Manufacturing Co., Mishawaka, Sample Wood Pulley, 24x8 in.
F. E. Reed & Co., Worcester, Mass., Lathe Fixture.
The Sebastian-May Co., Sidney, Ohio, Ten-inch Speed Lathe.
Gordon Steam Pump Co., Hamilton, Ohio, Framed Engraving.
Brown & Sharpe Mf'g Co., Providence, R. I., Book on Construction and Use of Universal Grinding Machines.

John T. Slocomb, Providence, R. I., Sample Center Drill.
Buckeye Engine Co., Salem, Ohio, complete set of Blue Prints of
Engine.

Westcott Chuck Co., Oneida, New York, complete Drawings and Plans of a Light-House.

Agricultural and Mechanical College. CALENDAR 1892-93. Session begins ..... Examination for admission. ..... Wednesday, Sept. 14, 1892 First term ends ...... Friday, Dec. 23, 1892 Second term begins ...... Monday, Jan. 2, 1892 Third term begins ...... Monday, March 27, 1893 Commencement sermon ...... Sunday, June 11, 1893 Annual meeting of Trustees ...... Monday, June 12, 1893 Junior class celebration 10 A. M ... ....... Monday, June 12, 1893 Military exercises 4 P. M .... Monday, June 12, 1893 Celebration of Literary Societies 8 P. M......... Monday, June 12, 1893 Alumni day ...... Tuesday, June 13, 1893 Military exercises 5 P. M ......Tuesday, June 13, 1893 Address before Literary Societies 8 P. M..... Tuesday, June 13, 1893 Zack i. si righ "CON



Catalogue of the State
Agricultural and Mechanical
College of
Alabama.

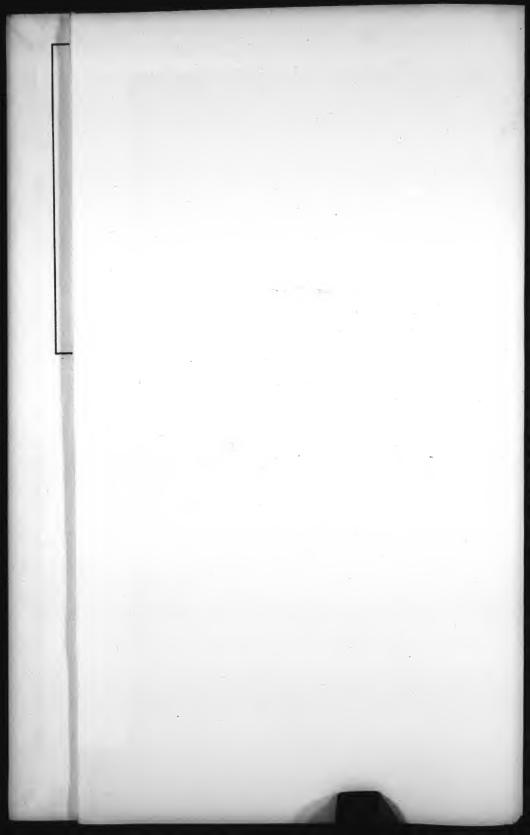
1892

```
OCLC: 36819601
                          Rec stat:
            19970429
                                     19970429
                        Replaced:
                                                  Used:
                                                           19970429
  Entered:
 Type: a
            ELvl: I
                         Srce: d
                                     GPub: s
                                                Ctrl:
                                                            Lang: eng
  BLvl: s
           Form: a
                         Conf: 0
                                   Freq: a
                                                MRec:
                                                            Ctry: alu
       Orig:
  S/L:
                         EntW:
                                    Regl: r
                                                ISSN:
                                                            Alph: a
  Dates: 1873,1893 ¶
   3 043 n-us-al 1
   4 090 LD271 +b .A76 ¶
   5 090
            *b ¶
   6 049
             AAAA ¶
   7 110 2
             Agricultural and Mechanical College of Alabama. ¶
   8 245 10 Catalogue of the State Agricultural and Mechanical College of
Alabama +h [microform] ¶
   9 246 10 Catalogue of the State Agricultural and Mechanical College,
Alabama Polytechnic Institute ¶
▶ 10 246 10 Rules and regulations of the State Agricultural and Mechanical
College at Auburn, Alabama ¶
> 11 246 10 Catalog of the State Agricultural and Mechanical College of
Alabama ¶
  12 246 10 Catalogue of the State Agricultural & Mechanical College,
Auburn, Alabama ¶
 13 260
             Auburn, Ala. : +b The College, 1
 14 300
             21 v. ; +c 21 cm. ¶
 15 310
             Annual 1
 16 362 0 1872-73-1892-93. ¶
             Title varies slightly. ¶
 17 500
18 533
             Microfilm. +m 1873-1893. +b Mobile, Ala. +c Document Technology,
‡d 1997. ‡c microfilm reels : negative ; 35 mm. ¶
19 539
             d +b 1873 +c 1893 +d alu +e u +f u +g a ¶
 20 650 0 Universities and colleges +z Alabama +x Periodicals. 1
 21 610 20 Agricultural and Mechanical College of Alabama +x Curricula +x
Periodicals. ¶
> 22 780 00 Agricultural and Mechanical College of Alabama. +t Catalogue and
circular of the Agricultural and Mechanical College of Alabama ¶
```

> 23 785 00 Agricultural and Mechanical College of Alabama. *t Catalogue of

▶ 24 830 0 USAIN State and Local Literature Preservation Project ¶

the Alabama Polytechnic Institute ¶



# STATE

Agricultura) # Mechanical College,

O BANK CONTRACTOR DESTRICTS



AGRICULTURAL AND MECHANICAL COLLEGE.
ALABAMA POLYTECHNIC INSTITUTE.

## CATALOGUE

OF THE

STATE

# AGRICULTURAL ** MECHANICAL

COLLEGE.

ALABAMA POLYTECHNIC INSTITUTE.

1892-93.

AUBURN, ALABAMA.

MONTGOMERY, ALABAMA:
THE BROWN PRINTING CO., PRINTERS, BINDERS AND STATIONERS.

1893.

# TRUSTEES.

His Excellency Thomas G. Jones, President ex-officio.
J. G. Harris, Superintendent of Educationex-officio.
I. F. Culver
J. C. Rich
H. CLAY ARMSTRONG (term expires 1899) Auburn.
R. H. Duggar(term expires 1899)
* Militaria de Maria
J. G. GILCHRIST (term expires 1897) Hope Hull.
Wm. Smaw (term expires 1897)Boligee.
C. C. HARRIS (term expires 1897) Decatur.
JONATHAN HARALSON(term expires 1895)Selma.
R. F. Ligon (term expires 1895) Tuskegee.
J. A. Bilbro(term expires 1895)Gadsden.

E. T. GLENN, Treasurer.

# FACULTY AND OFFICERS.

WM. LEROY BROUN, M. A., LL. D., President and Professor of Physics and Astronomy.

> OTIS D. SMITH, A. M., Professor of Mathematics.

P. H. MELL, M. E., Ph. D., Professor of Natural History and Geology.

JAMES H. LANE, C. E., A. M., LL. D., Professor of Civil Engineering and Drawing.

CHARLES C. THACH, A. M.,
Professor of English and Political Economy

N. T. LUPTON, A. M., M. D., LL. D., Professor of General and Agricultural Christry and State Chemist.

> GEORGE PETRIE, M. A., Ph. D., Professor of History and Latin.

LIEUT. J. H. WILLS, 22nd Infantry, U. S. A. (West Point), Commandant and Professor of Military Science.

A. J. BONDURANT,

Professor of Agriculture and Agriculturist of Experiment Station.

A. F. McKISSICK, A. M., Professor of Electrical Engineering.

J. M. STEDMAN, B. S., Professor of Biology.

CHARLES H. ROSS, C. E., Ph. D., Adjunct Professor of Modern Languages and English

J. J. WILMORE, M. E.,

Director of Laboratory and Instructor of Mechanical Engineering.

# C. A. CARY, B. Sc., D. V. M., Professor of Physiology and Veterinary Science.

# L. W. WILKINSON, M. Sc., Assistant in Chemical Laboratory.

# B. H. CRENSHAW, M. E., S. J. BUCKALEW, M. Sc., Assistant Instructors in Mechanic Arts.

C. B. GLENN, M. Sc	Assistant in Physics and Library.
G. S. CLARK, B. Sc	Assistant in Botany.
C. A. Brown, B. So	Assistant in Drawing
W. F. Feagin, B. Sc	Assistant in Agriculture.
R. F. HARE, B. Sc	
L. P. HEYMAN, B. Sc	
F. M. Mosley, B. Sc.	Assistant in Electrical Engineering.
L. W. PAYNE, B. Sc	
W. E. RICHARDS, B. Sc	Asssistant in Biology.
Е. В. Sмітн, В. Sc	Assistant in English and Mathematics.
R. J. TRAMMELL, B. Sc	
J. H. DRAKE, M. D	Surgeon.
C. C. THACH	Librarian and Recording Secretary.

O. D. SMITH.

# OFFICERS

OF THE

# AGRICULTURAL EXPERIMENT STATION.

#### BOARD OF VISITORS.

#### COMMITTEE OF TRUSTEES ON EXPERIMENT STATION.

Hon. J. G. GILCHRIST	Hope Hull.
Hon. R. F. Ligon	Tuskegee.
HON. H. CLAY ARMSTRONG	

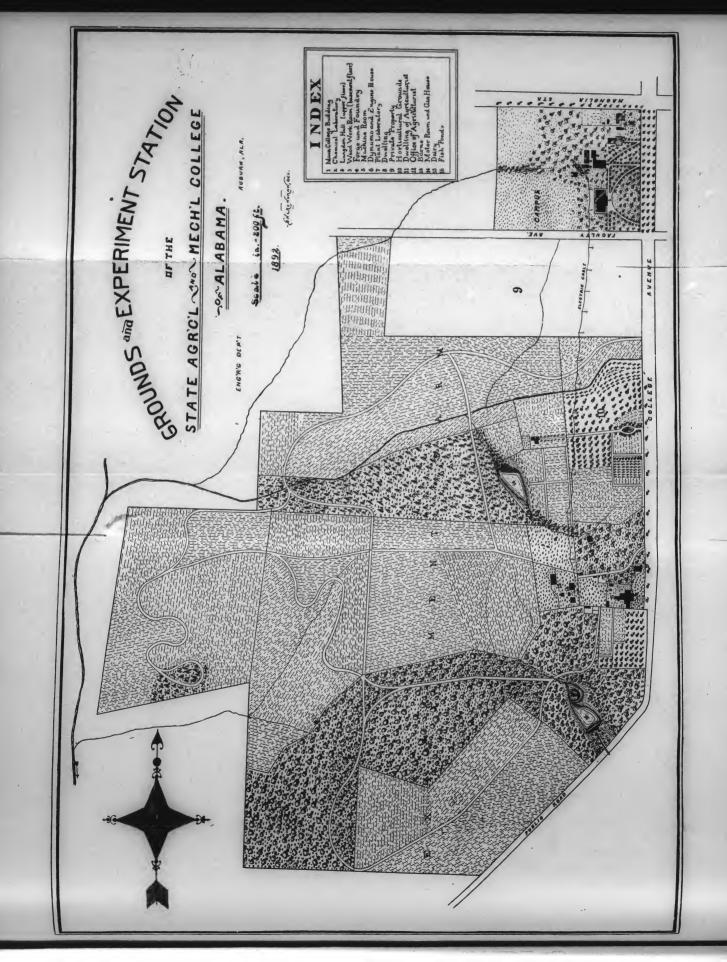
## BOARD OF DIRECTION.

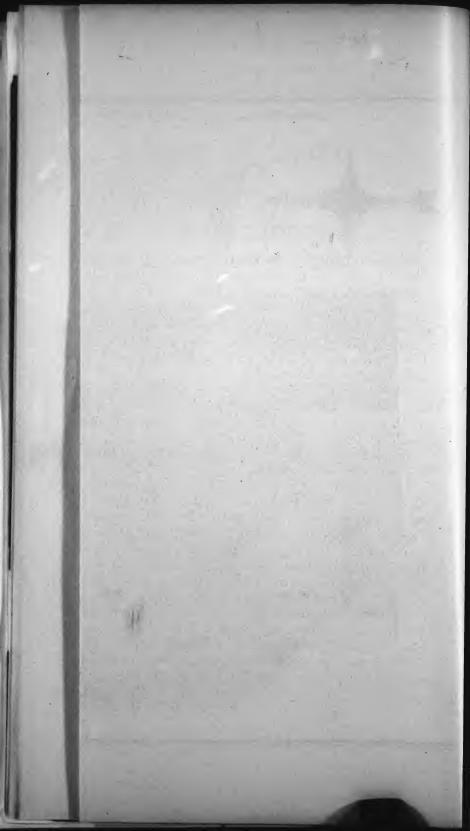
WM. LEROY BROUN	President.
A I RONDURANT	Agriculturist.
N. T. LUPTON	Chemist.
D II Mass	Botanist and Meteorologist.
I M Sampuray	Biologist.
C. A. CARY	Veterinarian.
	,

#### ASSISTANTS:

JAMES CLANTON	Assistant Horticulturist.
*A F CORV R Se	Assistant Agriculturist.
I T Avpragay Ph D	First Assistant Chemist.
I W War war M Co	Second Assistant Chemist.
D. A. T. O. C.	Third Assistant Chemist.
F. A. LUPTON, M. Sc	Fourth Assistant Chemist.
K. F. HARE, B. Sc	Clerk and Assistant Botanist.
G. S. CLARK, B. Sc	OIGIR WILL TIPPING

^{*} In charge of Soil-test Experiments.





#### OBJECT OF THE COLLEGE.

The leading object of the College, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and the applications of science.

In its course of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts; and at the same time the discipline obtained by the study of languages and other sciences is not neglected.

All students are required to study the English language. The Latin, French and German languages are also taught, and opportunity for their study is offered to students in any course.

The special or technical instruction given is thus based on a sound, general education.

The College, in fact, is a distinctive school of industrial science—or Polytechnic Institute—a title which by resolution of the trustees is permitted to be inscribed on the catalogue,—and work of great value to the youth of the State is now being accomplished by fitting them by a thorough science-discipline, in which manual training in the lo wer classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the Faculty.

# LABORATORIES AND FACILITIES FOR INSTRUCTION.

The College now possesses facilities for giving laboratory instruction in applied science in the following departments:

#### I .- IN AGRICULTURE AND HORTICULTURE.

The farm contains 226 acres and is supplied with illustrative specimens of stock of select varieties.

The agricultural experiment station, established in connection with the College, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professor in the field, garden, conservatory, stock-yard, etc., where lectures are delivered in presence of the objects discussed, and during the year exercises in practical agriculture of an educational character are given the students who enter upon this course of study.

#### II .- IN MECHANIC ARTS.

The laboratory of mechanic arts is used as an auxiliary in industrial education, as a school of manual training in the arts that constitute the foundation of various industrial pursuits. The work performed by the students is *instructive* in character, as in any other laboratory, and the classes are taught in sections by a series of graded lessons under the supervision of the professor. In the lower classes of the College each student enters this school, and is assigned three exercises a week, each exercise being tw hours long.

The object of this laboratory is not to teach a trade, but to educate, to discipline and train the eye and the hand, as well as the mind, and thus by associating manual and mental training, to educate thoroughly the student for the duties of life, whatever his vocation may be. There is no attempt to teach students special skill in constructing articles of commercial value, but all the exercises are systematically arranged and designed for purposes of education.

The wood department is located in a commodious hall 90 x 50 feet, and is provided with a twenty-five horse-power Corliss engine, a planer, circular saw, hand-saw, two scroll saws, a buzz planer, twenty-four stands with lathe and full set of lathe tools for each, and thirty benches for carpenter work with the tools requisite for construction.

A brick building, 30 x 87 feet with two rooms, has been constructed especially for instruction in working iron.

One room is equipped with sixteen forges and tools required for a forge department, and the other with a cupola furnace, having a capacity of 1000 pounds per hour, a core oven, a brass furnace, moulding benches and special tools for use in a foundry.

The forge and foundry rooms are furnished with a Sturtevant fan and exhauster, supplied with power from a ten horse-power engine, constructed by the students in mechanic arts.

The machine department occupies a brick building, 30 x 50 feet, and is equipped with ten engine lathes, one speed lathe, one 20-inch drill press, one 10-inch sensitive drill, one post drill, one 16-inch shaper, one 5-foot planer, one universal milling machine, a corundum tool grinder, a small emery grinder, and a universal cutter and reamer grinder.

The chipping and filing department is arranged with benches, vises and tools for twelve students.

The tool room is well supplied with special tools for use in instruction, including a machine for grinding twist drills.

A Weston dynamo is used at present for lighting the rooms when necessary.

#### III.-IN PRACTICAL CHEMISTRY.

The chemical laboratory is supplied with new and modern apparatus, and in its entire equipment affords excellent facilities for instruction in practical chemistry.

The investigations that are undertaken in this laboratory by scientific experts, in connection with the work of the agricultural experiment station, are of especial value to advanced students, and afford them unusual opportunities to learn the methods of scientific research. The building contains a large general laboratory that will accommodate sixty students, a lecture room with capacity for one hundred seats, and nine other rooms, all appropriated to instruction and research in chemistry.

It is equipped with the improved modern appliances necessary for instruction and investigation.

#### IV .-- IN ELECTRICAL ENGINEERING.

The electrical laboratory is well supplied with modern appliances for instruction in electrical engineering. It occupies two large rooms in the basement, and is equipped with a Weston 150 volt, 20 ampere dynamo; one Brush 6 arclight dynamo, with regulator; one Edison compound wound 12 kilo-watt generator; a Crocker-Wheeler one horse-power motor and rheostat, and one alternator, made by special students.

The dynamos occupy a separate room from the laboratory, and are operated by a thirty-five horse-power Westinghouse vertical engine.

The equipment comprises many fine instruments of precision: Sir Wm. Thomson's standard 100 ampere balance, and his graded current galvanometer, reading to 600 amperes; also his graded potential galvanometer, reading to 600 volts; Cardew voltmeter, reading to 150 volts; Weston's standard ammeter and voltmeter; ballistic reflecting galvanometer, mirrow galvanometer, Thomson watt-meter, etc.

A battery of fifty-five Julien accumulators has also been installed in the laboratory. There is also in connection with this department a ten horse-power motor at the experiment station farm (a thousand yards from the College,) which is run by the Edison generator at the electrical laboratory.

#### V .- IN PHYSICS.

In the College building provision is made for laboratory work in the department of physics. Special rooms in the basement are appropriated for this purpose, and are equipped with the necessary appliances for instruction in practical physics.

#### VI.-IN MINERALOGY.

This laboratory occupies a convenient room in the basement, and is provided with tables and appliances to accommodate thirty students, with an excellent collection of minerals.

#### VII.-IN BOTANY.

In the work of the agricultural experiment station, investigations in botany are given special attention, and opportunities are offered advanced students for practical work in a laboratory especially fitted with microscopes, tables, a dark room for photographic work, and appliances needed for instruction and research. This department is provided with Auzoux's clastic models of seeds and flowers for teaching botany.

## VIII.-IN BIOLOGY.

The laboratory in this department adjoins the lecture room of the professor, and is furnished with tables, microscopes and appliances for investigation. Each student of the class works under the supervision of the professor.

#### IX.—IN ENGINEERING AND SURVEYING.

The necessary apparatus for field work, including transits, levels, plane table, models of bridges, etc., is provided for the use of the students, and the customary exercises in the field are given.

#### X .- IN DRAWING.

All the students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. A large, well-lighted drawing room, that will accommodate fifty students, is provided with tables, lock boxes, etc.

#### MILITARY TACTICS.

Instruction in this department is given in conformity with the act of Congress. Students receive the benefit of regular military drill, and in addition the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties.

This department is under the charge of Lieut. J. H. Wills, 22nd Infantry, U. S. A.

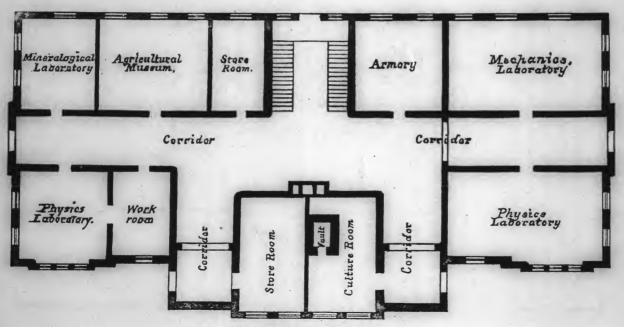
It is supplied with new cadet muskets and accourrements for the corps, and for artillery practice, with two three-inch rifle guns, carriages and limbers.

#### COLLEGE BUILDING.

The frontispiece is a representation of the recently constructed main College building. It is 160 by 71 feet, and contains, exclusive of the basement floor, thirty-five rooms. This building is not used for dormitories for students, but is appropriated for purposes of instruction and investigation.

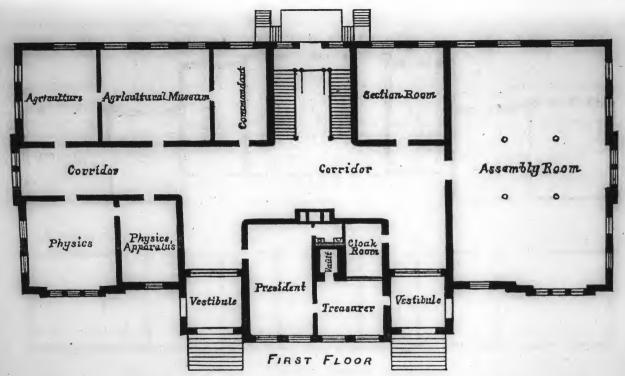
It contains the lecture rooms and offices of the professors, laboratories, library, museum, armory, etc. The illustrations of the four floors on the following pages indicate the uses to which the rooms have been assigned.

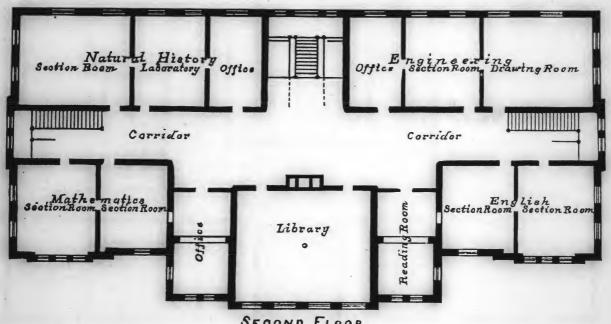
The rooms marked in the plan for the laboratories of physics and mechanics are used for electrical engineering and physics, and the office adjacent to library is the library of government publications.



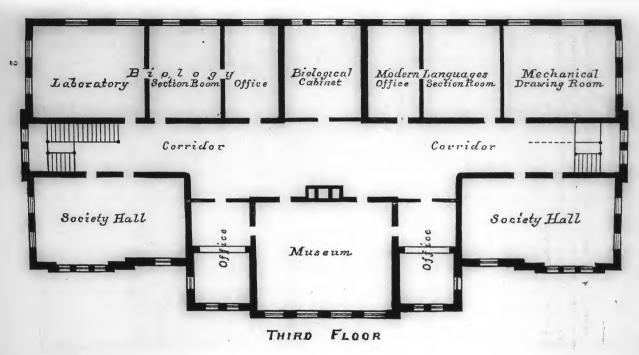
BASEMENT FLOOR







SECOND FLOOR



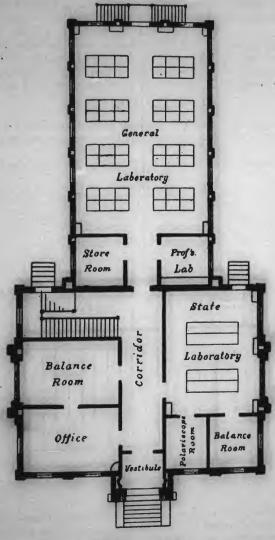
#### THE CHEMICAL LABORATORY,

As shown on the opposite page, is a handsome two-story structure 40 by 60 feet, with a rear projection 35 by 60 feet of one-story and basement. The exterior is of pressed brick, with cut stone trimmings and terra-cotta ornamentation.



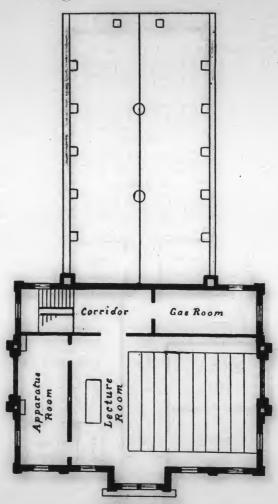
CHEMICAL LABORATORY.





FLOOR FIRST

The first room to the left is the office of the professor, to the rear of which is the balance-room. On the right, extending the whole length of the floor, is the State laboratory and laboratory for research. Two small rooms are cut off from this, one abalance-room, and the other for the spectroscope. Leading from the rear of the balance-room, aloo which enters the large laboratory for general work. Two rooms are cut off from this—one for combustion furnaces and the other, a private working-room.



#### SECOND FLOOR.

In the basement are ample accommodations for assaying and storage. The main laboratory will accommodate sixty students, and contains improved working-tables, with water, gas and every necessary appliance for chemical work. Niches in the wall opposite each working-table, with hoods, where necessary, connect with flues, and furnish the best possible means of escape for deleterious vapors, while ventilators in the ceiling furnish additional means for getting rid of noxious gases.

The height is sixteen feet in the clear, with paneled ceiling of oiled southern pine. The rooms are wainscotted throughout and finished in natural wood.

The second story contains a lecture-room and room for gas analysis. Around this lecture room are cases for containing crude and manufactured products, illustrating the subjects of agricultural and industrial chemistry, which are prominent subjects taught in this institution.

#### LANGDON HALL.

This is a two-story building, ninety by fifty feet. The second story is the audience hall, used for Commencement and other public occasions.

The first story is appropriated to the laboratory of mechanic arts.

## GRADUATES IN 1892.

## CLASS OF 1892.

## HONOR GRADUATES.

COURSE IN CHEMISTRY AND AGRICULTURE.

THE AUTHORITORE.
Walter Evan Richards
COURSE IN MECHANICS AND ENGINEERING.
Louis Philip Heyman
Leonidas Warren PayneLee.
BACHELOR OF SCIENCE.
William Sayre Allen
Archie Struggs Averett
Shaller Shaller
Leigh Stanord Boyd
Charles Allen Brown
Montage Market M
Montgo Damuel Clark.
Montage Manage
Montgoment Workson
Rullcol-
Montgon
Tofforgon Tofforgon
Henry Farris Dobbin

William Francis Feagin	Barbour.
James Edward Gachet	$\dots$ Lee.
Eugene Hamiter Graves	Barbour.
Raleigh Williams Greene	
Raleigh Frederick Hare	$\dots$ Lee.
Louis Philip Heyman	Georgia.
Arthur Lyne Jones	Autauga.
Robert Dibrell McAllister	
Frank McLemore Mosley	Montgomery.
Leonidas Warren Payne	Lee.
Charles Teed Pollard	$\dots$ Montgomery.
Walter Evan Richards	$\dots$ Chambers.
Edward Broadus Smith	
Signor Sidney Strong	Georgia.
George Adams Thomas	$\dots$ Montgomery.
Robert Jefferson Trammell	$\dots$ Lee.
David Marshall Walker	$\dots$ Marengo.
David Louis Whetstone	$\dots$ Elmore.
David Edwin Wilson	$\dots$ Jefferson.
MASTER OF SCIENCE.	
Harmon Benton, B. Sc	Barbour.
Benjamin Minge Duggar, B. Sc	Hale.
Charles Bowls Glenn, B. Sc	Lee.
Frank Allemong Lupton, B. Sc	Lee.
CIVIL ENGINEER.	
Seaborn Jesse Buckalew, B. Sc	Chambers.
Charles Cicero Johnson, B. Sc	Coosa.
Alexander Dowling McLennan, B. Sc	Barbour.
MINING ENGINEER.	
William Audley Marshall, B. Sc	Georgia.
William Audioy Indiana,	

## DISTINGUISHED STUDENTS

## AWARDED CERTIFICATES IN 1892.

The students of each class who secure a grade above 90 in three or more subjects are distinguished for excellence in scholarship, and are awarded

## HONOR CERTIFICATES.

The following students received honor certificates in 1892:

## SENIOR CLASS.

Leigh Stafford Boyd	Tien
Charles Allen Brown	Sumton
George Samuel Clark	Montgomowy
Henry Lee Davidson	Montgomorre
neary licknor DeBardeleben	Tofforgon
Henry Farris Dobbin	Florida
William Francis Feagin.	Bankana
Raieigh Williams Greene	Т
naleigh Frederick Hare	T
Louis I milp fleyman	Commi
The state of the s	1-00
Trank medemore mosiev.	Montan
Liconidas Warren Layne	T.00
waiter Evan Kichards	Chamban
Edward Droadus Smith	Tion
George Adams Thomas	Mand
Robert Jefferson Trammell	T.o.
	.1100.

## HONOR STUDENTS IN JUNIOR CLASS.

COTTREE	TN	CHEMISTRY	AND	AGRICULTURE.

Robert Lee	Gordon	Bivins	.Lee.
------------	--------	--------	-------

#### COURSE IN MECHANICS AND ENGINEERING.

Walter Merritt Riggs	South Carolina.
Thomas Litchfield Kennedy	Lee.

#### GENERAL COURSE.

Joel Franklin Webb	
--------------------	--

## JUNIOR CLASS.

Robert Lee Gordon Bivins	Lee.
Massey Robert Burton	Lee.
Walter Scott Crump	
Clarence William Daugette	
Joel Dumas	
John Henry Holt	$\dots$ Georgia.
Thomas Litchfield Kennedy	
James Monroe Little	
Nicholas Barnett Marks	Kentucky.
Edward Baker Mell	
Hampton Knox Miller	Talladega.
Walter Merritt Riggs	So. Carolina.

## SOPHMORE CLASS.

Robert Park Clower	. Lee.
Roseberry Covington Connor	. Macon.
Ogden Ellery Edwards	. Calhoun.
Charles Gordon Greene	. Lee.
Paul Pratt McKeown	. Florida.
Peyton Herndon Moore	. Blount.
Peter Preer	. Georgia.
Jack Thorington	. Montgomery.
William Douglass Trawick	. Liee.
Rinaldo Groone Williams	. Lee.

## Freshman Class.

Frank Stuart Barnes	Jefferson.
David French Boyd	.Lee.
Henry Clay Burr	. Georgia.
Solon Lycurgus Coleman	Perry.
Benjamin Browning Haralson	. Dallas.
Sumpter Lea Harwood	.Perry.
Andrew Hamilton Milstead	.Elmore.
Henry Hinds Peevey	. Madison.
Percy Hilton Smith	Georgia.
John Adams Wills	Lee.

## CATALOGUE OF STUDENTS.

### FOR THE SESSION 1892-93.

#### GRADUATE STUDENTS.

[Residence is Alabama when State is not named.]

RESIDENCE.

NAME. Charles Allen Brown.... . Sumter. William Francis Feagin.....Barbour. Walter Edward Fitzgerald......Georgia. James Edward Gachet.....Lee. Raleigh Frederick Hare.....Lee. Louis Philip Heyman......Georgia. Leonidas Warren Payne.....Lee. Walter Evan Richards......Chambers. Edward Broadus Smith.....Lee. Robert Jefferson Trammell.....Lee.

#### SENIOR CLASS.

Lee Ashcraft	Lauderdale.
Wallace Reverdy Bishop	$\dots$ Talladega.
Robert Lee Bivins	$\dots$ Lee.
Francis Marshall Boykin	Montgomery.
Massev Robart Burton	Lee.
Walter Scott Crump	St. Clair.
Clarence William Daugette	Lee.
Joel Dumas	Wilcox.
Daniel B. Edwards	Dallas.

	,
Thomas Gardner Foster	Montgomery.
John Henry Holt	
Thomas Litchfield Kennedy	$\dots$ Lee.
James Monroe Little	$\dots$ Lee.
James Berry Loveless	Marshall.
Nicholas Barnett Marks	Kentucky.
Edward Baker Mell	Georgia.
Hampton Knox Miller	Talladega.
Walter Merritt Riggs	So. Carolina
John Shelton Robinson	Jefferson
Guy Allen Shafer	Perry
Charles Henry Smith	Georgia
Henry Hamilton Smith	Montgomery
Linton Sparks Smith	Georgia
Rosser Colbert Spratling	Chambers
Margaret Kate Teague	Tree
Sheldon Lynn Toomer	Tipo
Joel Franklin Webb	Coogs
Thomas Felton Wimberly	T _{iee}
Typyron, C-	

## JUNIOR CLASS.

George Smith Anderson	T.o.
Champe Seabury Andrews	There
Mate Conway Droun	T
John Morgan Burns	D. 11
Greene Watley Carlisle	Dallas.
William DeLamar Clayton	Lee.
Robert Park Clower.	Lee.
Robert David Corner	Lee.
Robert David Conner	Macon.
Palmer Payne Daugette	Macon.
Charles Fairchild DeBardeleben	Lee.
Joseph Addison Driver	Jefferson.
Joseph Addison Driver. Rufus Thomas Dorger	Perry.
Rufus Thomas Dorsey.	Georgia.
Waverly Goode Duggar.	Hale.
James Archibald Duncan	Pike.
Julius Confree Dunham	Montgomery.

(	Charles Dunlap	. Madison.
	James Dunlap	. Madison.
	John Thomas Eckford	. Lee.
(	Ogden Ellery Edwards	. Calhoun.
Ť	Thomas Preston Flanagan	.Lee.
	Robert Cherry Foy	.Barbour.
	Frederic Almet Fulghum	. Jefferson.
	Jackson Wise Gammill	. Chambers.
1	Charles Gordon Greene	. Lee.
,	Crosland Clarence Hare	.Lee.
	Augustus J. Harris	. Morgan.
	Arthur William Holstun	.Lee.
	Jacob Samuel Johnson	. Autauga.
	Josep Drewry Lane:	. Randolph.
	Sidney Leach	. Tuscaloosa.
	Willie Gertrude Little	.·Lee.
	Paul Pratt McKeown	. Florida.
	Herman Meislahn	. Florida.
	Lauriston Greene Moore	. Lee.
	Peyton Herndon Moore	. Blount.
	William Washington Moore	. Diount.
	Peter Preer	. Georgia.
	Samuel Arthur Redding	. Georgia.
	Joseph Beasly Rudulph	. Lowndes.
	Tohn Droglay Slaton	. Macon.
	Took Thorington	. Mronigomery.
	Frank Atkinson Vernon	. Chambers.
	Rinaldo Greene Williams	.Lee.
	Arthur Zachariah Wright	. Lee.
	Cary Ocear Wright	· Liee.
	Graham Golson Vaughan	Dallas.
	SOPHOMORE CLASS.	
		T
	Daniel Spigner Anderson	Dilee.
	Robert Winging Adams	· · I III.
·	Wolfer Coatt Aglrow	Chambers
	Frank Stuart Barnes	Jenerson.

Frank Stuart Barnes.....

David French Boyd	Lee.
Frank Asbury Boykin	
George Perkins Bondurant	
Henry Clay Burr	Georgia.
William Wallace Bussey	Georgia
Gordon Flewellen Chambers	$\dots$ Lee.
Sir Hugh DeLacy	Russell.
Robert Eugene Dumas	Wilcox
Charles Grigsby Foulks	Dale.
William Wherton Fulghum	Jefferson
Langdon Bowie Gammon	Georgia
James Robert Haigler	Montgomery
William Washington Ham	Coffee
Benjamin Browning Haralson	Dallag
Claud Holstun	Loo
Pleasant Reese Holstun	Lina
Inomas Arnold Hurt.	Magon
William Coats Hurt	Magon
Frederick Ingate	Mobile
George Ulivar Jannay	3.5
WILL IXOHOV	Coomi
menty meanst Kyser	Tallada
Charles Lilling	T M
Cary Fark McElhanev	T
oames Near McLean	TAT 1
William Cumilingiam McMillan	FT1 22 2
Thurswittamilton Milistead.	1711
James Newsome	C
TIOMY TIMUS FRAVEV	35 21
That Hendricks Filling	α .
Warter Trassell Chaler	D.
Hairy Howell Smith.	T
James Auger Smythe	Q 17 A 24
oumos Claude Inomagon	D 1 1 1
Trugh rearson inormion	T CO
THUISW HEATHE WILLMAN	T.
Frank Lewis Whitman	Lee.

	4,	o o troge.	OI
	ohn Adams Wills		
J	ames Alexander Wilson	Frank	lin.
	Freshman Class.		
Δ	lfred Summers Andrews	Barbo	ur.
	alph Emmerson Andrews		
E	rister Ashcraft	Laude	rdale.
	ohn Bigham Barnett		
	Villiam James Beeson		h.
	harles Inman Belt		
-	Iorris Jefferson Burts	4.5	
	Ienry Rozier Casey		
T	homas Erwin Collins	Georg	ia.
T	homas Spyker Cowan	Lee.	
J	ames Artemus Culver	Georg	ia.
J	eptha Thomas Culver	Georg	ia.
J	ames Washington Culver	Lee.	
V	Valter Earnest Culver	Lee.	
	Villiam Rozier Daughtry		
S	terling William Dudley	$\dots$ Georg	ia.
V	Valter Micajah Eckford	Lee.	
J	ohn Steele Edwards	Maren	igo.
C	lifton Henry Feagin	Barbo	ur.
F	lmer Wynn Grav	Georg	ia.
Т	ohn Fletcher Heard	Lee.	
C	harles Wadsworth Hill	Green	.e.
C	Loorge Michael Holley	Georg	124.
T	Cohort Comphell Holley	South Ca	m Onna.
Т	abo Ago Hudgon	Georg	120.
т	among Winkland Inchinet	South Ca	dronna.
T	Sighard Sporks Tackson	эепет	30H.
	lario William Janking		1000
٨	wthun Daniel Johnson	· · · · · · · Maurs	ющ.
T	Parton Tonog	Georg	100.
S	trother Trahne Key	денег	son.
T	Verla Tracker Too	Lee.	

Earle Foster Lee......Lee.
Fuller McLaren Longley......Georgia.

32	Agricultural and Mechan	cical College.
Hubert	Johnston Magruder	Florida.
	Leonidas McKinstry	
	Emmet Pace	
	Lynn Pringle	
	lvin Reeves	
	Baxter Sloss	
Robert	Milard Stevens	Barbour.
David (	Compton Tallichet	
Benjam	in Asberry Taylor	Autauga.
Douglas	ss Taylor	
William	Abner Tippin	Florida.
James I	Richard Torbert	Macon.
Frank T	urner	Georgia
Clarence	William White	Georgia
John H	udson White	Georgia.
Bryce H	Iewitt Wilson	Franklin
Charles	Wilson	Franklin
William	Herring Winship	Georgia
Frederic	Henry Winston	Tree.
John Ba	nks Yonge	Georgia
	SPECIAL AND IRREGULAR	
TO 1		
Robert I	Emmet Anderson	···· Georgia.
Warren	Elbert Andrews	·····Pike.
George	Doan Boruss	Montgomery.
James v	andiver Brown	Georgia
William	Henry Chambers	Lee.
Solon Ly	veurgus Coleman	·····.Perry.
Thomas	Cowper Daniels	North Carolina.
Sumpter	Lea Harwood	Power
Cassey R	ex Hudson	· · · · Lee.
Walter L	ee Humphrey	Madison.
Bunen W	Jackson	Lee.
John All	atts Jones	Lee.
OF CHILL A 116	AII AICHIAG	

John Allen Jones. Lee.
Welborn Jones. Lee.
Hunter Allen Lang. Jefferson.
Frank Inman McRee. Georgia.

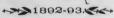
Oscar Granville McPhail	Georgia.
Edward Charles Mandy	Jefferson.
John D. Martin	Barbour.
James Pinkney Palmer	Calhoun.
George Orr Shackelford	Georgia.
Samuel James Shivers	
Joseph Franklin Siler	$\dots$ Pike.
Percy Hilton Smith	
Robert Otis Stone	
Hallett Webster Thompson	
James Walker	
Henry Clayton Walthour	
William Dunbar Wills	

## SUB-FRESHMAN CLASS.

•	
Paul Otey Anderson	Lee.
Samuel Rutherford Bondurant	$\dots$ Lee.
George Adair Christian	Calhoun.
Brooks Carlisle	Lee.
Edgeworth Stephens Casey	$\dots$ Jefferson.
Maury Cecil	$\dots$ Tennessee.
Walter Marvin Culver	Georgia.
John Douglass	Franklin.
Walter Jefferson Dudley	Georgia.
George Dudley Glass	Tennessee.
Walter Hampton Godwin	Georgia.
Charles Edwin Goulding	Florida.
David Barnebus Harrell	Georgia.
Milledge Henry Hart	Georgia.
Author Marvin Herron	Montgomery.
Charles Leitner Howard	Georgia.
Edward Camot Janney	Montgomery.
Leon Joseph	Jefferson.
John Furniss Knowlen	Dallas.
William Anderson Kine	Lee.
William Anderson Kille	Lee.
Josiah Thomas Mangum	Georgia.
George Eugene Miller	

John Boyd Nabers  John Purifoy.  William Cary Slocumb  James Leonard Thomas  Leonard Alvie Thomas	Montgomery. Lee. Lee. Lee.
John Norton Todd	Iontgomery.
Edward Richardson Upham	Mobile.
Eugene David Whatley	Dallas.
Summary.	
Graduates	12
Senior Class	28
Junior Class	47
Sophomore Class	43
Freshman Class	53
Special and Irregular Students.	30
Total in College Classes	213
Sub-Freshman Class	30
Total	243
NUMBER OF STUDENTS IN EACH SUBJECT OF	STUDY.
Fralish .	
History. 124 Geology	
French	
German 30 Electrical Engine	ering. 35
Latin	eering. 25
Mental Science 16 Drawing	144
Political Economy 26 Mechanic Arts	
Mathematics 182 Military Tactics .	
Chemistry 96 Photography	
Analytical Chemistry. 49 Mineralogy.	
Agriculture 103 Physical Laborat	orv 22
Physics 129 Veterinary Scien	ce 25

## MILITARY ORGANIZATION.





W. L. BROUN.

Commandant:

JOHN H. WILLS, 1st Lt. 22nd Infantry.

Surgeon:

J. H. DRAKE.

Battalion Staff:

Cadet 1st Lieutenant J. F. WEBB, Adjutant. Cadet 1st Lieutenant J. H. HOLT, Quartermaster. Cadet Sergeant R. T. DORSEY, Sergeant Major. Cadet Sergeant C. S. ANDREWS, Quartermaster Sergeant.

## Cadet Captains:

1. JOEL DUMAS,

3. W. S. CRUMP,

4. E. B. MELL. 2. C. H. SMITH,

#### Cadet 1st Lieutenants:

W. R. BISHOP,

5. T. G. FOSTER,

2. R. L. BIVINS,

6. F. M. BOYKIN,

3. W. M. Riggs,

7. M. R. BURTON,

8. J. M. LITTLE.

4. H. K. MILLER,

#### Cadet 2nd Lieutenants:

1. G. A. SHAFER,

3. T. L. KENNEDY,

2. C. W. DAUGETTE,

4. LEE ASHCRAFT.

#### Cadet 1st Sergeants:

1. P. P. McKEOWN,

3. C. J. DUNLAP,

2. JACK THORINGTON,

4. R. C. Foy.

#### Cadet Sergeants:

- 1. F. A. FULGHUM,
- 2. J. C. DUNHAM,
- 3. W. W. MOORE,
- 4. G. S. ANDERSON,
- 5. C. G. GREENE,
- 6. R. C. CONNER,
- 7. R. G. WILLIAMS,

- 8. J. A. DRIVER,
- 9. C. F. DEBARDELEBEN,
- 10. PETER PREER.
- 11. O. E. EDWARDS.
- 12. S. A. REDDING,
- 13. SIDNEY LEACH,
- 14. G. G. VAUGHAN,

#### 15. P. H. MOORE.

### Cadet Corporals:

- 1. H. H. PEEVEY,
- 2. S. L. COLEMAN,
  - 3. S. L. HARWOOD, 9. J. A. WILLS,
  - 4. R. E. DUMAS,
  - 5. G. O. JANNEY,6. H. C. BURR,
  - 6. H. C. BURR,

- 7. L. B. GAMMON,
- 8. CLAUD HOLSTUN,

  - 10. W. C. McMillan, 11. J. A. Wilson,

    - 12. J. A. SMYTHE.

13. W. C. HURT.

## REQUIREMENTS FOR ADMISSION.

Applicants for admission must be of good moral character. To enter the freshman class the applicant must be not less than fifteen years of age, and should be qualified to pass a satisfactory examination on the following subjects:

1. Geography and History of the United States.

2. English—(a) An examination upon sentences containing incorrect English. (b) A composition giving evidence of satisfactory proficiency in spelling, punctuation, grammar and division into paragraphs.

The composition in 1893 will be upon subjects drawn from one or more of the following works: Shakespeare's Julius Cæsar and Merchant of Venice, Longfellow's Evangeline, Irving's Sketch Book, Scott's Marmion, Hughes's Tom Brown at Rugby, Dickens's David Copperfield, Scott's Ivanhoe, Hawthorne's House of the Seven Gables.

3. Mathematics—(a) Arithmetic, including fundamental operations; common and decimal fractions; denominate numbers; the metric system; percentage, including interest and discount; proportion; extraction of square and cube roots.

(b) Algebra, to quadratic equations.

Those applicants who desire to continue the study of Latin should be qualified to pass a satisfactory examination in Latin grammar and the first two books of Cæsar, in addition to the

above subjects.

For admission to the higher classes, students should be prepared to stand a satisfactory examination on all the studies of the lower classes, as shown in the courses of study. Where opportunity has not been offered to pursue special studies required at this College, the system of equivalents will be adopted, and studies which denote an equivalent amount of discipline and training will be accepted as satisfactory.

#### ADMISSION OF YOUNG WOMEN.

The privilege of becoming students in this College is granted by the Trustees to young women of mature mind and character, on the following conditions:

The applicant must be eighteen years of age and be able to pass a satisfactory examination in two of the follow-

ing subjects, one of which must be Mathematics:

(a). In English—Proficiency in spelling and punctuation; Grammar (Whitney's Essentials of English); Rhetoric (Lockwood, Abbott's How to Write Clearly, Genung); Scudder's American Prose Selections; Scudder's American Poems.

(b). In History—Macy's Our Government; Johnston's History of the United States; Myers's General History.

- (c). In Mathematics—Arithmetic; Algebra, including quadratic equations, logarithms and series; Plane and Solid Geometry; Plane and Analytical Trigonometry, as in Wentworth.
- (d). In Latin—Grammar, including the forms and syntax; Jones's Latin Prose Composition; Translations of selections from Cæsar, Nepos, Virgil, Cicero's Orations, Cicero's Letters, or the equivalent.

The equivalents of these subjects, as in above text-books, may be substituted.

If the applicant is a candidate for a degree, she will be required to pass a satisfactory examination in each of the four subjects named.

Certificates will be granted to those who are not candidates for a degree upon the satisfactory completion of any subject as pursued by the Senior class.

When admitted, upon complying with the conditions above stated, they can enter upon the study of any subjects taught in the College, join any class, and enter any laboratory, for which, upon examination, they may be found qualified. The only condition imposed will be that they engage in earnest study, and attend the exercises regularly. They will board in the village with private families, and attend College only at the hours of their exercises.

There will be no charge for tuition. The incidental fees, amounting to \$12.00 per year, will be paid, as stated elsewhere in the Catalogue.

# ENTRANCE EXAMINATIONS.

Entrance examinations will be held on Wednesday, the 13th of September, the day on which the session opens. Candidates will also be examined during the session, when application is made for admission.

Applicants who are not prepared to stand the entrance examinations for full admission to the Freshman class are admitted to the sub-college department.

They will be advanced to full admission to the Freshman class when they are qualified to pass satisfactorily the required examinations.

Students upon their arrival at Auburn will report immediately to the President. No student will be admitted to a recitation in any class previous to matriculation.

# NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than fifteen recitations per week, or their equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week and in all give twenty-seven exercises per week required.

# SPECIAL STUDENTS.

Students who are qualified to prosecute the studies of the Junior class, and those over twenty-one years of age who are not candidates for a degree, are permitted to take, with the advice of the Faculty, the subjects of study they may prefer and for which they may be qualified; all other students will be assigned to one of the regular prescribed courses of study, unless for special reasons otherwise ordered by the Faculty.

Regular students who fail to pass satisfactory final examinations in any one study become special students. They will be classed as regular students pursuing a course for a degree, whenever they can pass the examinations in those subjects in which they were found deficient.

Students, candidates for a degree, who are are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greater number of studies, and their names are so placed in the Catalogue.

# COURSES OF INSTRUCTION.

The courses of study include the Physical, Chemical and Natural Sciences, with their applications; Agriculture, Biology, Mechanics, Astronomy, Mathematics, Drawing, Civil, Electrical and Mechanical Engineering, English, French, German, and Latin Languages, History, Political Economy, Mental and Moral Sciences.

These studies are arranged in regular courses so as to offer a liberal and practical education as a preparation for the active pursuits of life.

There are four degree courses for undergraduates, each leading to the degree of Bachelor of Science (B. Sc.) and requiring four years for its completion:

- I. COURSE IN CHEMISTRY AND AGRICULTURE.
- II. COURSE IN MECHANICS AND CIVIL ENGINEERING.
- III. COURSE IN ELECTRICAL AND MECHANICAL ENGINEERING.
- IV. GENERAL COURSE,

There are also two partial courses, each requiring two years for its completion:

V. TWO-YEAR COURSE IN AGRICULTURE.

VI. TWO-YEAR COURSE IN MECHANIC ARTS.

Course I includes theoretical and practical instruction in those branches that relate to chemistry and agriculture, and is especially adapted to those who propose to devote themselves to agriculture or chemical pursuits.

Course II includes the principles and applications of the sciences that directly relate to civil engineering, and is adapted to those who expect to enter that profession.

Course III includes, besides the general principles and applications of the sciences, a special course in the applications of electricity and mechanics, and is arranged for the profession of electrical and mechanical engineering.

Course IV has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as of those who propose ultimately to engage in teaching, or in some commercial or manufacturing business.

Courses V and VI have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and to take one of the regular degree courses.

Students who complete either of these two-year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

Those who have completed the general course in each department of the school of Mechanic Arts, and are qualified, can enter upon a more extended technical course in mechanical engineering.

# PREPARATORY COURSE IN PHARMACY.

Students who expect to become practical pharmacists can enter upon a special course of Chemistry and Natural History and occupy all their time in the laboratories of these departments, under the immediate direction of the professors. With the excellent facilities offered in the chemical and botanical laboratories, scientific preparation of great value to the practical pharmacist can be obtained.

# COURSE IN MINING ENGINEERING.

Students who have received the degree of B. Sc. in Engineering, or who have prosecuted an equivalent course of study, can enter upon a special course of Mining Engineering, which includes the following subjects of study, and will require a residence of one year:

Industrial Chemistry, Assaying, Reduction of Ores, Mineralogy, Economic Geology, Mining Machinery, Drifting, Tunnelling, Timbering, Ore Dressing, and the various operations connected with the exploitation of mines.

This course of study will be under the charge of the Professors of Chemistry, Engineering and Natural History.

# SPECIAL ONE-YEAR COURSE IN AGRICULTURE.

Young men over twenty-one years of age who desire to study Agriculture will be permitted, without examination, to enter any class under the Professor of Agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied.

They can attend the lectures in Agriculture in all the classes and engage in the practical work at the experiment station, in the field, stock-yard, dairy, garden, orchard, vineyard, etc., and may thus, in one year, acquire valuable practical knowledge of Scientific Agricul-

ture.

# LABORATORY INSTRUCTION.

Laboratory instruction constitutes an important feature in the courses of education provided for the students of this College, and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in the following departments:

I.—CHEMISTRY.

II .- Engineering, Field Work, Surveying, etc.

III.—AGRICULTURE.

IV.—BOTANY.

V .- MINERALOGY.

VI.—BIOLOGY.

VII.—TECHNICAL DRAWING.

VIII .- MECHANIC ARTS.

IX.—PHYSICS.

X.—ELECTRICAL ENGINEERING.

XI.—Special work in History may be taken by Students in the General Course as a substitute for Laboratory work. First Term.

5. English.

# I.—COURSE IN CHEMISTRY AND AGRICULTURE.

The first of the organization with

The numerals opposite the subjects indicate the number of hours per week.

# FRESHMAN CLASS.

5. English.

Second Term. Third Term.

5. English

0		· LINGALDII.	0	. Inglish,
2. History.		. History.		History.
5. Mathema		Mathematics.		Mathematics.
	ry Physics. 3	Element'ry Phy	siol'gy.2.	Agriculture.
3. Drawing.	3	. Drawing.	3.	Drawing
6. Mechanic	Art Labor'y.6	. Mechanic Art 1	labo'ry.6.	Mechanic Art Labo'ry
3. Military	Drill. 3	. Military Drill.	3.	Military Drill.
		SOPHOMORE C	LASS.	
First	Term.	Second Term	n	Third Term.
3. English.	3	. English.	2.	English.
3. History.	3	. History.	3.	Botany (a).
5. Mathema	tics. 5	. Mathematics.	5.	Mathematics.
3. General (			strv. 3.	General Chemistry.
2. Agricultu	re. 2	. Agriculture.	2.	Agriculture.
3. Drawing.	3	Drawing	0	T)
4. Mechanic	Art Labo'ry.4	. Mechanic Art I	nhowler 4	Marks ! A . T .
	anginoutout C. 2	Practical Agrica	ilture. 3.	Physiology
3. Military 1	Orill. 3	Military Drill.	3.	Military Drill.
		JUNIOR CLA	SS.	
	Term.	Second Term	i. ( 7 př	Third Term.
3. English.		English.	3.	English.
3. Physics.	3.	Physics.	0	DI .
8. Industrial	Chemistry. 3.	Industrial Chen	nistry. 3.	Industrial Chemistry.
	2.	Agriculture.	2	Agriculture.
4. Botany (		Botany (Lab'y	). 4.	Botany (Lab'y).
1. Military T	actics. 1.	Military Tactics	. 4	B # * 7 * 1
2 Practical	Laboratory, 9.	Chemical Labor	-A 0	Military Tactics. Chemical Laboratory.
3. Military I	0 darento. 2.	vecermary Scie	nce. 2.	Veterinary Science.
-		Military Drill.	2.	Military Drill.
(a) Begins Ma	rch 1st.			

## SENIOR CLASS.

First Term.	Second Term.	Third Term.
2. English Literature.	2. Political Economy.	2. Political Economy.
2. Mental Science.	2. Mental Science.	2. Mental Science.
2. Physics.	2. Astronomy.	2. Astronomy.
2. Geology.	2. Geology.	2. Geology.
5. Biology.	5. Biology.	5. Biology.
	.2. Agricultur'l Ch'mistry	
	1. Military Science.	
	9. Chemical Laboratory.	
2. Practical Agriculture.	2. Veterinary Science.	2. Veterinary Science.

# II.—COURSE IN MECHANICS AND CIVIL ENGINEERING.

The numerals opposite the subjects indicate the number of hours per week.

# FRESHMAN CLASS.

First Term	Second Term.	Third Term.
5. English.	5. English.	5. English.
2. History.	2. History.	3. History.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. Elementary Physics.	3. El. Physiology.	2. Agriculture.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.
3. Military Drill.	3. Military Drill.	3. Military Drill.
	SOPHOMORE CLASS.	
-	1 0 1 7	Thind Town

First Term.	Second Term.	Thera Term.
3. English. 3. History.	<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture (b)</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>Botany (a)</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Agriculture (b).</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>

⁽a) Botany begins March 1st.

⁽b) For Agriculture may be substituted Physical Laboratory. (-) For agriculture may be substituted Physical Laboratory.

First Term.

German.

3. Physics.

# JUNIOR CLASS. Second Term.

3. English, French, or 3. English, French, or 3. English, French, or

German.

3. Physics.

Third Term.

Third Term.

German.

5. Mathematics.

1. Military Tactics.

3. Military Drill.

3. Physics.

German.

3. Physics.

O. A HJ DIOD.	o. I Hjoros.	o. Laybarb.
5. Mathematics.	5. Mathematics.	5. Mathematics.
5. Engineering.	5. Engineering.	5. Engineering.
5. Drawing.	5. Drawing.	5. Drawing.
1. Military Tactics.	1. Military Tactics.	1. Military Tactics.
4. Lab'y, Mineralogy (	a).4. Lab'y, Mineralogy (	(a).6. Field W'rk, Engin'g(a)
4. Field Work, Engin'	g. 4. Field Work, Engin'	g. 3. Military Drill.
3. Military Drill.	3. Military Drill.	
	SENIOR CLASS.	
First Term.	Second Term.	Third Term.
2. English Literature (	b).5. Political Economy (	(b).2. Political Economy (b).
2. Physics.	2. Astronomy.	2. Astronomy.
2. Geology.	2. Geology.	2. Geology.
3. Mathematics.	3. Mathematics.	4. Mathematics.
5. Engineering.	5. Engineering.	5. Engineering.
5. Drawing.	5. Drawing.	5. Drawing.
1. Military Science.	1. Military Science.	1. Military Science.
Field W'rk, Engineer	r'g. Field W'rk, Engineer	r'g. Field W'rk, Engineer'g.
III.—COURSE	IN ELECTRICAL A	ND MECHANICAL
	ENGINEERING	
and the second		
The numerals opposite	the subjects indicate the	e number of hours per week.
In Freshman and Soph	omore classes same as in	n course in Mechanics and
	Civil Engineering.	
4.	JUNIOR CLASS.	

Second Term.

3. English, French, or 3. English, French, or 3. English, French, or

Electrical Engineeri'g.
 Mech. Engineering.
 Mech. Engineering.
 Mech. Engineering.
 Mech. Engineering.
 Mechanical Drawing.
 Mechanical Drawing.
 Electrical Laboratory.
 Electrical Laboratory.
 Mech. Art Laboratory.
 Mech. Art Laboratory.

1. Military Tactics.

3. Military Drill.

German.

5. Mathematics.

3. Physics.

(a) Or Mechanic Arts.

1. Military Tactics.

3. Military Drill.

First Term.

German.

5. Mathematics.

3. Physics.

⁽b) For Eng. Lit. and Pol. Econ. may be substituted French or German.

# SENIOR CLASS.

First Term.		Second Term.		Third Term
2. English Literature.	2.	Political Economy.	2.	Political Economy.
2. Physics.	2.			Astronomy.
2. Geology.	2.	Geology.	2.	Geology.
3. Mathematics	3.	Mathematics.	4.	Mathematics.
5. Electrical Engineeri'g				
5. Mech. Engineering.	5.	Mech. Engineering.	5.	Mech. Engineering.
2. Electrical Designing.	2.	Electrical Designing.	2.	Electrical Designing.
6. Electrical Laboratory	.6.	Electrical Laboratory	.6.	Electrical Laboratory.
1. Military Science.	1.	Military Science.	1.	Military Science.

# IV.—GENERAL COURSE.

The numerals opposite the subjects indicate the number of hours per week.

## FRESHMAN CLASS.

First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
2. History.	2. History.	3. History.
5. Latin.	5. Latin.	3. Latin.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. Drawing.	3. Drawing.	3. Drawing.
6. Mechanic Art Lab'y.	6. Mechanic Art Lab'y.	2. Agriculture.
3. Military Drill.	3. Military Drill.	6. Mechanic Arts.
		3. Military Drill.

# SOPHOMORE CLASS.

First Term.	Second Term.	Third Term.
<ol> <li>Latin.</li> <li>History.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>Latin.</li> <li>History.</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>Latin.</li> <li>Botany (a).</li> <li>Mathematics.</li> <li>General Chemistry.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>

⁽a) Botany begins March 1st.

# JUNIOR CLASS.

First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
3. Physics.	3. Physics.	3. Physics.
3. Mathematics.	3. Mathematics.	3. Mathematics.
3. French.	3. French.	3. French.
3. German.	3. German.	3. German.
3. Latin.	3. Latin.	3. Latin.
	1. Military Tactics.	1. Military Tactics.
6. Laboratory Work (b).	6. Laboratory Work (b)	. 6. Laboratory Work (b).
3. Military Drill.	3. Military Drill.	3. Military Drill.
	SENIOR CLASS.	
First Term.	Second Term.	Third Term.
2. English Literature.	2. Political Economy.	2. Political Economy.
2. Mental Science.	2. Mental Science.	2. Mental Science.
2. Physics.	2. Astronomy.	2. Astronomy.
2. Geology.	2. Geology.	2. Geology.
3. French.	3. French.	3. French.
3. German.	3. German.	3. German.
2. Latin.	2. Latin.	2. Latin.
1. Military Science.	1. Military Science.	1. Military Saignes
6. Laboratory Work (b).	6. Laboratory Work (h)	6. Laboratory Work (b).

# V.—TWO-YEAR COURSE IN MECHANIC ARTS.

#### FIRST YEAR.

	First Term.	Second Term.	Third Term.
· 2 · 5 · 3 · 3 · 6	English. History. Mathematics. Elementary Physics. Drawing. Mechanic Art Lab'y. Military Drill.	<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>Element'ry Physiol'gy</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>	<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>Agriculture.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> <li>Military Drill.</li> </ol>
	First Term.	SECOND YEAR.  Second Term.	Third Term.

First Term.	Second Term.	Third Term.
3. English.	3. English.	3. English.
5. Mathematics.	5. Mathematics.	5. Mathematics.
3. Physics.	3. Physics.	3. Physics.
3. Drawing.	3. Drawing.	3. Drawing,
12. Mechanic Art Lab'y.	12. Mechanic Art Lab'y.	12. Mechanic Art Lab'y.
3 Military Drill.	3. Military Drill.	3. Military Drill.

# VI.—TWO-YEAR COURSE IN AGRICULTURE.

## FIRST YEAR.

First Term.	Second Term.	Third Term.
<ol> <li>English.</li> <li>History.</li> <li>Mathematics.</li> <li>Elementary Physics.</li> <li>Drawing.</li> <li>Mechanic Art Lab'y.</li> </ol>	5. English. 2. History. 5. Mathematics. 3. Element'ry Physiol'gy 3. Drawing. 4. Mechanic Art Lab'y.	3. Drawing. 4. Mechanic Art Lab'y. 3. Military Drill.
	THE WEAD	

## SECOND YEAR.

First Term. 3. English. 5. Mathematics. 3. General Chemistry. 4. Agriculture. 2. Veterinary Science. 12. Practical Agricult're. 3. Military Drill.	Second Term. 3. English. 5. Mathematics. 3. General Chemistry. 5. Agriculture. 2. Veterinary Science. 12. Practical Agricult're 3. Military Drill.	Third Term: 3. English. 5. Mathematics. 3. General Chemistry. 4. Agriculture. 2. Veterinary Science. 12. Practical Agricult're. 3. Military Drill.
----------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------

# SCHEDULE OF EXERCISES.

Hours.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8–9 .	3. Latin. 2. French.	2. Botany.	2. French. 1 and 2 Drawing. 1. Vetin'vSci.(2.3).	2. Botany.	4. Algebra. 3. Latin. 2. French. 1 and 2 Drawing. 1. Vetin'y Sci.(2.3) 1. Elec. Engin'r'g.	Exerc's. in Elocution
II.	3. Chemistry. 2. Engineering.			4. History(1.2). 3. Agriculture. 2. Engineering. 2. Botany. 1. Physics. 2. Elec. Engin'r'g	4. English. 3. Chemistry. 2. Engineering. 2. Latin. 1. Biology. 1. Calculus. 1. French. 2. Elec. Eng'r'n'g 2. Vet. Sci'ce (2.3)	
	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
III. 10-11	<ol> <li>German.</li> <li>Engineering.</li> <li>Biology.</li> </ol>	3. History (1. 2). 3. Botany (2. 3). 1. Biology. 1. Engineering. 4. English.	3. Botany (2. 3). 2. Physics. 1. German. 1. Engineering. 1. Biology.	<ol> <li>Botany (2. 3).</li> <li>Engineering.</li> <li>English.</li> <li>Mech. Engi'n'g.</li> </ol>	4. History (3)	3. Mechanic Arts. 3. Machine Work. Laboratory Work. Field Work, Engineering. Elec. Labor'y Work.

IV. 11–12	4. Agriculture (3). 4. Latin (1. 2).	3. Drawing. 2. Agriculture. 2. Mathematics. 1. Chemistry.	3. History (1. 2). 3. Physiology (3). 2. Mathematics. 2. Chemistry.	2. Agriculture. 2. Mathematics. 1. Chemistry. 3. Physiology (3).	<ol> <li>Chemistry.</li> <li>Physiology (3).</li> <li>Milita'y Science</li> </ol>	3. Machine Work. 3. Mechanic Arts. Field Work, Eng'ng. Laboratory Work. Elec'trc'l Lab. Work.
12-1	3. Mathematics.	2. English. 1. Geology.		3. Mathematics. 2. English. 1. Geology.	4. Drawing. 3. Mathematics. 1. Latin. 4. Mech. Arts. 1. Elec. Designing	Laboratory Work,
	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
VI.VII 2–4	3. Field W'rk,Agr. 1 & 2 Laboratory Chem 1 & 2 Field Work Eng	2. Mineralogy Laboratory. Military Drill (*) 3. Mach. Work. Elec. Lab'y Work. 1 & 2 History.	3. Field W'rk Agr. 1 & 2 Laboratory, Chem. 1 & 2 Field Work Eng'ng.	2. Mineralogy Laboratory Military Drill (*) 3. Machine Work. Elec. Lab'ry Work 1 & 2 History.	4. Mech. Arts. 3. Field W'rk, Agr. 1 & 2. Lab., Chem.	

Chapel services daily at 7:50 n. m. Numbers prefixed denote classes,—1 denotes 8. nior, 2 Junior, &c. Numbers affixed—(1), (2), (3), denote terms. * From 4:30 to 5:30 p. m.

# DEPARTMENTS OF INSTRUCTION.

# PHYSICS AND ASTRONOMY.

#### PRESIDENT BROUN.

The instruction is given by recitations from text-books and lectures, illustrated by experiments. The first part of the course is occupied with Elementary Rational Mechanics, treated graphically.

This is followed by a full discussion of Molecular Mechanics; while due prominence is given to principles, frequent reference is made to the applications of science.

The studies of the junior class include the properties of matter, units of measure, force, work, energy, kinematics, kinetics, mechanic powers, friction, pendulum, molecular forces of solids, liquids and gases, theory of undulations, heat, electricity, magnetism, etc.

The studies of the senior class include Optics and Astronomy.

Post-Graduate Course. This includes the study of Analytical Mechanics, and requires a knowledge of differential and integral calculus.

### MATHEMATICS.

#### PROF. SMITH.

The general course for the first two years embraces the first year, Algebra and Geometry, six books; second year, Solid Geometry, Plane and Spherical Trigonometry, Surveying, Mensuration.

Two objects are sought to be attained: first, mental dis-

cipline; second, a thorough knowledge of the principles of pure mathematics and their practical applications.

Theoretical and practical instruction is given to the sophomore class in farm, town, and government land surveying, dividing land, mapping, plotting, and computing of areas, etc.; also in the theory, adjustment and use of instruments.

The class, in sections of six or eight, devote three afternoons a week during the second and third terms to field practice.

Mensuration includes an extended course in measurements of heights and distances, plane, rectilinear and curvilinear figures, surfaces and volumes.

The completion of this course, common to all students, lays the foundation for the pure and applied Mathematics of the Mechanical and Engineering courses. Analytical Geometry, Descriptive Geometry, and Calculus are pursued in the Mechanical and Engineering courses. Especial attention is given to their practical applications.

During the entire course, instruction in text-books is supplemented by lectures. Solutions of original practical problems are required of the student, to make him familiar with the application of principles and formulæ.

#### TEXT-BOOKS.

Wentworth's Algebra, Wentworth's Geometry, Wentworth's Trigonometry and Surveying, Wentworth's Analytical Geometry, Waldo's Descriptive Geometry, Taylor's Calculus.

# NATURAL HISTORY AND GEOLOGY.

#### PROF. MELL.

Geology.—This subject is studied in the senior class, and extends through the entire session. Special attention is given to the geology of Alabama, and many illustrations are drawn from the coal and iron fields and other natural deposits

of minerals in the State. The origin of ore deposits, mineral springs and geological relations of soils are carefully studied.

There is also a course of advanced work in practical geology for the post-graduate students. This subject is pursued by applicants for degrees of Master of Science and Mining Engineer.

The junior class in Engineering spends two terms in Mineralogy and blow-pipe work.

Botany.—The students of the sophomore class begin the study of Botany the first of March and continue it through the session. Analytical work is made an important feature. This class is provided with plants from the fields, and taught how to determine their specific names. The work is sufficiently exhaustive to enable the student, after completing the course, to name any of the ordinary weeds and grasses that he will encounter in this section.

In the junior class, in the course of Chemistry and Agriculture, an amount of time is devoted to systematic and structural Botany, and to advanced laboratory work with the microscope in the preparation of specimens showing plant structure; this work is sufficient to familiarize the students with the methods of plant building and cellular organization. Excellent microscopes of the most improved patterns, and all the necessary chemicals and apparatus for preparing and mounting vegetable tissues, are used by the students. A dark room is attached to this laboratory for photomicrography.

#### TEXT-BOOKS.

LeConte's Geology, Gray's Botany, Dana's Mineralogy, Goodale's Physiological Botany, Nelson's Herbarium and Plant Descriptions.

# ALABAMA WEATHER SERVICE.

The United States Weather Bureau has established in Alabama a State system for collecting meteorological data

relating to climatic changes. The service is now in successful operation with the central office located at this College. Bulletins are issued at the close of each month, compiled from reports sent from numerous stations throughout the State. During the crop season, from April 1st to November 1st of each year, there is also issued every week special bulletins indicating condition of weather and effects on the crops. An opportunity is thus offered the students in Meteorology of becoming familiar with the system operated by the Department at Washington.

# CIVIL ENGINEERING AND DRAWING.

PROF. LANE.

## CIVIL ENGINEERING.

The special studies of this department begin in the junior class, and require a good knowledge of Algebra, Geometry, Trigonometry and Analytical Mechanics. They are as follows:

Junior Class,—Simple, compound, reversed and parabolic curves, turnouts and crossings, leveling, gradients, setting slope stakes, &c.

Special attention will be paid in this class to the location, re-construction, drainage and maintenance of country roads; and the various pavements and foundations for the same.

Senior Class,—Classification, appearances, defects, seasoning, durability and preservation of timber; classification and description of natural building stones; bricks and concretes; cast and wrought iron, steel and other metals; limes, cements, mortars and their manufacture; paints and other preservatives; classification of strains and a general mathematical discussion of same; joints and fastenings; solid and open built beams; classification, construction and mechanics of masonry; foundations on land and in water; bridges and roofs of different kinds; their construction and strains deter-

mined mathematically and graphically; common roads, their coverings, location and construction; location and construction of railroads; navigable, irrigation, and drainage canals; river and sea-coast improvements.

Theory and practice are combined in both classes.

#### TEXT-BOOKS.

Junior Class.-Henck's Field Book for Railway Engineers and Byrne's Highway Construction.

Senior Class.-Wheeler's Civil Engineering and Von Ott's Graphic Statics.

#### DRAWING.

All of the students of the freshman and sophomore classes are required to take Drawing; but only the students in Mechanics and Engineering in the junior and senior classes.

The freshman class is taught linear and free-hand drawing. The sophomore class is instructed in the principles of orthographic and isometric projections, shade and shadows, perspective and tinting. In the junior class the instruction embraces a more extended course in orthographic and isometric drawing, perspective, shades and shadows, and tinting; also sketches of tools and machines, plaus, elevations and cross-sections of buildings, and blue prints. The senior class make topographical drawings, and drawings of machines, roofs, bridges, etc., to different scales, and blue prints. Plans, profiles and sections of railroad surveys complete the instruction in this department.

### TEXT-BOOKS.

Freshman Class.—Kitchener's Geometrical Note Book, Thorne's Junior Course in Mechanical Drawing, and Davidson's Model Drawing. Sophomore Class.—Davidson's Projections, Davidson's Practical Perspective, Keuffel & Esser's Alphabet.

Junior Class.—Davidson's Building Construction, Davidson's Drawing for Mechanics and Engineers, Plates belonging to the College, Keuffel & Esser's Alphabet.

Senior Class.-French, English and American Plates belonging to the College, Keuffel & Esser's Alphabet.

# ENGLISH AND POLITICAL ECONOMY.

PROF. THACH.

#### OBJECTS AND METHODS.

In this department the students pursue a systematic course in the English Language and Literature.

Language is the avenue of approach to all knowledge; the interpretation of words is the fundamental process in education of whatsoever kind. A full course of English is, therefore, considered especially important in the technical courses of study that do not include the ancient classics. Accordingly, the course of English is continued throughout the four years of the College curriculum, three hours a week, and is made obligatory upon all students, with the exception of those pursuing the two first years of the course in Latin. In this extended drill in the grammar and literature of the English language, the endeavor is made to afford a training somewhat equivalent to the ordinary course in the classical languages.

In view of the ill preparation in languages, especially in their mother tongue, exhibited by many of the candidates for admission to the Freshman Class, it is deemed advisible, for the sake of honest work, to devote a portion of the first year to grounding such students in the principles of grammar. Further, with the idea that an ability to speak and write correctly English of the present, and to appreciate the literary excellencies of standard authors, is more desirable than training in the philological curiosities and literary crudities of Anglo-Saxon literature, the course of study in this institution is confined exclusively to the literature of

Modern English.

Especial attention is given to the study of the writings, themselves, of leading English authors, since direct contact with literature is considered more profitable than information merely about literature.

#### COURSE OF STUDY.

Freshman Class.—Five hours a week; study of grammar, the principles of special and general composition, with frequent brief papers illustrating the laws studied; study of American authors: Irving, Hawthorne, Holmes.

Whitney's Essentials, Lockwood's Rhetoric, Scudder's American

Sophomore Class.—Three hours a week; study of style, analysis of selections of prose and poetry, frequent essays on historic and literary themes.

Abbott's How to Write Clearly, Genung's Rhetoric, Scudder's Selections from Longfellow, Lowell, Emerson.

Junior Class.—Three hours a week; lectures on the history of English Literature, Logic, critical study of English Classics—Milton, Gray, Goldsmith, etc., Essays.

Shaw's History of English Literature, Hale's Longer English Poems. Senior Class.—Two hours a week, first term. Principles of Criticism, Shakespeare's Julius Cæsar, Hamlet, etc.

# ESSAYS AND ORATIONS.

Theory without practice is as fruitless in the study of English as in any other department of study. Practical work is indispensable to the successful teaching of English.

Besides numerous brief papers, illustrative of the subject matter of the text-books, set essays or orations are required of all students: for the freshman class, six essays a year; six for the sophomore; for the senior and junior classes, three orations each.

## DECLAMATION.

The old practice of committing pieces to memory for "speaking" is cultivated as a means, both of training in the art of thinking on the feet, and of storing the mind with the diction of finished specimens of English style.

The sophomore class is heard weekly throughout the year in sections of ten, once for an hour and a half in rehearsal, afterwards in the study hall before the body of students.

The senior and junior classes also deliver their orations in public.

# PHILOSOPHY AND POLITICAL ECONOMY.

The entire senior class pursues the study of Intellectual Science, twice a week, through the year; and Political Economy twice a week, during the two last terms. The instruction in this department is by lectures in combination with text-books

Intellectual Science.—Psychology defined. Value in relation to moral culture, education, and Natural Sciences. The Relations of the Soul to matter. The argument of the materialist. Counter arguments. The Faculties of the Soul. The nature of Consciousness. Sense Perception. Memory, its nature, development, education. Fancy. Imagination. Nature of conceptions. Language. Judgment. Reasoning. Deduction. Induction, etc. Porter's Intellectual Science.

Political Economy.—Value; production of wealth; land; labor; capital; division of labor; distribution of wealth; wages; trades union; co-operation; money; credit; functions of government; taxation; tariff; education, etc. Ely's Political Economy. Lectures by Professor.

A Post-graduate Course has been established in Political Economy. The texts used as the basis of the work are F. A. Walker's Advanced Political Economy, and Woodrow Wilson's State. Topics are assigned for research by the student, who is facilitated in his labor by a well chosen library, including most of the standard works on political economy and government.

A Post-graduate Course has also been established in English. The course is as follows: Shakespeare's Hamlet, Othello, Macbeth, Merchant of Venice, As You Like It, Henry IV. Part I, Richard III, King John.

REFERECE BOOKS—Ward's Shakespeare; Furness's Variorum; Hudson's Shakespeare; Clark and Wright's Select Flays of Shakespeare; Rolfe's Shakespeare; Halliwell-Phillips's Life of Shakespeare; Richard Grant White's Life of Shakespeare; Collier's Annals of the Ard Grant White's Life of Shakespeare; Predecessors; Hudson's Art, Stage; J. A. Symonds's Shakespeare's Predecessors; Hudson's Art, Life, etc., of Shakespeare; Giles's Human Life in Shakespeare; Mrs. Jameson's Woman in Shakespeare; Dowden's Shakespeare's Art.

### CHEMISTRY.

ASSISTANT, L. W. WILKINSON.

Instruction in this department embraces-

- A course of lectures in General Chemistry.
- A course of lectures in Industrial Chemistry. 2.
- A course of lectures in Agricultural Chemistry.
- Systematic laboratory work in connection with each course of lectures, for the practice of chemical analysis and chemical research.
- 1. Course in General Chemistry: This consists of a series of lectures (three per week) extending throughout the entire session, and includes a discussion of the fundamental principles of Chemical Philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements, with the main facts and principles of Organic Chemistry. In this course the more common applications of Chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and most approved instruments necessary for presenting the subject in the most attractive and instructive form.

# REFERENCE BOOKS.

Roscoe & Schorlemmer, Fownes, Frankland, Remsen, Cooks's Chemical Philosophy, Chemical Journals.

The lectures on Industrial Chemistry (three per week) extend throughout the session, and include a discussion in detail of the processes and chemical principles involved in the most important applications of Chemistry in the arts and manufactures to the reduction of ores, the preparation of materials for food and drink, for clothing, shelter, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufacturing products, together with models and diagrams.

#### REFERENCE BOOKS.

Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Richardson and Watt's Chemical Technology, Percy's Metallurgy.

3. Course in Agricultural Chemistry: This consists of lectures on Chemistry in its applications to Agriculture (two per week), and includes a thorough discussion of the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock, and the various operations carried on by the intelligent and successful agriculturist.

#### REFERENCE BOOKS.

Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in relation with Chemistry, Scientific Journals, Reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign Agricultural Departments and Stations.

4. The course of systematic Laboratory Work: This course of practical work in the laboratory is carried on in connection with each course of lectures, and embraces the practical operation of chemical analysis and synthesis, being varied somewhat to suit the individual object of the student.

The laboratories, which are open from 9 A. M. to 5 P. M., during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation, in the qualitative and quantitative analysis of soils, fertilizers, minerals, mineral waters, technical products, etc., and in the method of prosecuting chemical researches. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the Chemical Laboratory is furnished with a work table, a set of re-agent bottles, and the

common re-agents and apparatus used in qualitative and quantitative analysis. At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from the deposit.

#### BOOKS USED.

In Qualitative Analysis-Jones, Fresenius, Plattner.

In Quantitative Analysis—Fresenius, Sutton, Rose, Bunsen, Rickett's Notes on Assaying, Mitchell's Manual of Practical Assaying. In Agricultural Chemical Analysis—Church, Frankland. Official methods of the Association of Agricultural Chemists.

## CHEMICAL LABORATORY.

[For description of the building see page 18.]

The Chemical Apparatus recently purchased for the laboratory consists of a full supply of the most approved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of medern scientific instruction and research. In addition to the apparatus usually supplied to first-class laboratories, there have been imported a new and improved Schmidt and Hensch's Polariscope, four short-arm Becker Balances of latest pattern, Bunsen Spectroscope, Zeiss Microscope, and other instruments for delicate and accurate work.

# BIOLOGY.

#### PROF. STEDMAN.

Practical Biology.—This subject is presented by lectures and laboratory work to the senior students in Agriculture and Chemistry. The first part of the year will be devoted to the study of fungi, giving prominence to those which cause diseases of cultivated plants. This will be followed with the study of insects, including those injurious and beneficial to Agriculture. Special attention will be given to methods employed in combating the attacks of fungi and insects upon plants.

The reference books will be announced to the classes. The department contains a carefully selected library of the standard works on mycology and many rare and valuable works,

besides current periodicals adapted to aid in the special investigations carried on in the laboratory.

Especial opportunities are offered to graduate students who desire to pursue advanced work and engage in original investigations.

FACILITIES FOR WORK.

At present three rooms are occupied by the department-an office, lecture room, and laboratory. The office contains the cabinet of fungi, the technical library for the department, slate table with a Zeiss microscope, re-agents, gas and water fittings. The work in the office consists of the examination, indentification and cataloguing of the specimens of fungi, beside the special work peculiar to such an office, The cabinet is provided with tight drawers, for receiving the mounted specimens of fungi.

LABORATORY .- Five slate top tables are devoted to the use of students, there being 10 Leitz microscopes set apart for them.

Two small culture rooms contain the plate and test tube cultures of fungi and bacteria which are being studied in relation to the plant diseases they cause. Here they can be handled and studied with little danger of contamination from the dust of the laboratory. In these rooms are kept Rohrbeck Thermostats fitted with automatic cut off burners and Lautenschlager's most recent thermoregulator for maintaining constant temperatures.

A Winkel microscope is kept here for the examination of cultures. It consists of stand No. 2, with condenser, triple revolver, homogeneous immersion lens 1-24 and 1-14, dry objectives No. 3 and No. 7. oculars 1, 3 and 5, and micrometer ocular.

A Winkel microscope is also kept for the use of the students, like the former, except the 1-24 homogeneous immersion lens.

The other piece of apparatus are follows:

Steam sterilizer, dry sterilizer, domestic still, instantaneous water heater, Pasteur filter, fine and common balances, apparatus for demonstrating intramolecular breathing of yeast, the Brendel models of parasitic and sapro-phytic fungi, bacteria and yeast plants, automatic device for rolling culture tubes of nutrient agar agar, and micro-

There are also cases containing a large quantity of the various glass vessels, paper, dry and liquid dyes and re-agents, culture media, etc., required in modern investigation.

The laboratory is well lighted from southern and western exposure. All the rooms are well fitted with gas and water supply.

A phytopathological laboratory has recently been fitted up for conducting investigations on the diseases of plants. While this constitutes part of the equipment for the Biologist in Experiment Station work, it will be at the disposal of the department for instruction,

## HISTORY AND LATIN.

gue

#### PROF. PETRIE.

#### HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that History is not a succession of isolated facts but a progressive whole, each event being at once the cause and the effect of other events. The students are taught to investigate the growth of ideas and institutions, the rise and progress of great historical movements and the reciprocal influence of men and circumstances. Frequent use is made of diagrams, photographs, charts and maps, with which the department is well equipped. Instruction is given by textbooks, lectures and class discussion, but a constant effort is made to stimulate to wider reading and research in the library.

In the freshman class, the subjects studied are the United States and England. The first term (two hours per week) is devoted to the History of the United States, the second term (two hours per week) to its government, and the third term (three hours per week) to the history of England.

#### TEXT-BOOKS.

Johnston's History of the United States, Macy's Our Government, Montgomery's English History.

In the sophomore class, (three hours per week until March) the subject studied is General History.

Text-Book: Myers's General History.

In the junior and senior classes (six hours each per week) opportunity for special historical work is given to those students in the general course who wish to elect it instead of laboratory work. Each student investigates under the direction of the professor selected topics, reports the results of his research to the class, and a general discus-

sion follows. Thoroughness is insisted on. The trend of the work is toward a comparative study of Government, but wide liberty of choice is allowed. Some of the topics studied during the last year were:

In the History of Government: The Origins of Government, the Growth and Influence of Roman Law, the Governments of England and France, Methods of Electing Presidents.

In Biography and Great Movements: Pericles, Charlemagne, Cromwell, Bismarck, Fall of the Roman Empire, Rise of Mohammedanism, Renaissance, Home Rule for Ireland.

During the last term a course of lectures is given on the governments of the leading nations of Europe.

A prominent feature of the work is frequent talks from men who are experts in some field of present or past history, on the institutions and customs of some country, or upon some geographical topic. These talks are informal and are followed by general discussion.

Text-book: Woodrow Wilson's State.

#### LATIN.

In this department two objects are kept in view: a knowledge of the language, and an appreciation of the literature.

In teaching the language the following methods are used: A systematic course is given in Etymology and Syntax. These are taught both deductively from a text-book on Grammar and inductively from the Latin text read. Latin texts are translated, sometimes at sight, sometimes after being assigned for preparation. English passages based on a familiar author or illustrative of special constructions are translated into Latin orally and on the blackboard. Simple conversation is carried on in Latin.

Special emphasis is laid upon the subject of Latin literature. In connection with each author studied in class there

is prescribed a course of reading in English descriptive of his life, writings and times. The artistic value of his writings is carefully studied and discussed, and frequent comparisons are made with modern writers.

#### TEXT-BOOKS.

Freshman Class—Nepos, Virgil, Sallust, Grammar, Composition.
Sophomore Class—Cicero's Orations, Livy, Jones's Latin Prose Composition.

Junior Class-Ovid, Tacitus, Horace, Wilkins' Latin Literature,

Collar's Practical Latin Composition.

Senior Class-Cicero's De Natura Deorum, Plautus, Terence.

## AGRICULTURE.

#### PROF. BONDURANT.

The course of instruction in this department embraces: I, Soils; II, Plants; III, Domestic Animals.

The freshman class is taught by lectures and text-books, during the third term of the session.

The subjects taught are the treatment of soils, their classification, defects and remedies, causes of diminished fertility, and the means used to protect them from waste and to restore fertility, and the theory and practice of surface and sub-drainage.

These subjects are treated with special reference to the different classes of soil in Alabama and the Southern States.

In the sophomore class, in addition to the discussion of the physical properties and treatment of soils, the methods of studying their defects and their remedies are also considered.

The sources of the important elements of plant food and their use upon different soils and plants, method of saving and applying farm manures, making composts, proportioning and applying commercial fertilizers, the relation of plant growth to soil and atmosphere, terracing and grading land to prevent washing, plows and plowing, and in fact everything connected with tilling the soil, pass under review as foundation works.

Southern Agriculture is then treated; the history, nature and cultivation of field crops discussed as regards their adaptation to and treatment upon the soils of the Southern States.

Attention is also given the raising of stock, horses, sheep, swine and other animals, and to the proper feeding of dairy, beef cattle, and all farm stock.

In the junior class instruction is given in Pomology, including the propagation of nursery stock, planting, manuring, pruning, cultivating, harvesting and marketing every species of fruit.

Lectures are delivered to this class upon subjects relating to Agriculture, namely: a thorough and judicious system of rotation of crops, diversified farming, the selection, purchase, equipment and management of the farm, employment and management of labor.

Landscape gardening is also taught with special reference to the improvement of country houses.

Drainage and models of agricultural implements and farm products are used to illustrate the subjects treated in the lectures.

Reference will be made to suitable agricultural books, and especial reference to the experiments contained in bulletins of other Agricultural Stations, whenever applicable to the subject under discussion. In this department practical agriculture is combined with class instruction. Opportunities are given, and students are required, in the junior and sophomore classes, to do practical field work of an educational character, under the directions of the Professor.

The farm instruction will embrace the details of farm work, assisting in field and feeding experiments, which are conducted daily on the station farm, aiding in dairy work, care and management of farm stock, machinery, propagating fruits, grafting, budding, and pruning vines and fruit trees.

#### TEXT AND REFERENCE BOOKS.

(1) Winslow's Principles of Agriculture. (2) Gulley's Lessons in Agriculture. (3) Wrightson's Principles of Agricultural Practice. (4) Fream's Soils and their Properties. (5) Webb's Agriculture. (6) Norton's Elements of Scientific Agriculture. (7) Stewart's Irrigation for the Farm, Garden and Orchard. (8) Griffith on Manures. (9) Harris on Manures. (10) Mills's Silos and Ensilage. (11) Allen's American Cattle. (12) Willard's Practical Dairy. (13) Black's Cultivation of Fruits. (14) Thomas's Cultivation of Fruits. (15) Strong's Cultivation of Fruits. (16) Fuller's Grape Culturist.

# MODERN LANGUAGES.

PROF. ROSS.

The following regular courses are given in French and German:

French.—First Year: Three recitations a week. During this year the principal object is to acquire a thorough knowledge of the elements of grammar, and a correct pronunciation, together with facility in translating ordinary French. Reading is begun at an early stage, and the principles of grammar are illustrated and impressed by frequent exercises in rendering English into French.

Second Year: Three recitations a week. During this year, almost the same line of work is pursued as that begun in the previous year. More difficult and varied French is read, and careful instruction is given upon the laws of grammar, the construction of the language, and the history of the literature.

German.—Two Years: Three recitations a week the first year, three a week the second year. In this course the aim and the methods are similar to those in French.

#### TEXT-BOOKS,

French—First Year: Edgren's French Grammar, Whitney's Introductory French Reader, Lamartine's Jeanne d'Arc, Sand's La Mare au Diable.

Second Year: Moliere's Les Precieuses Ridicules and Le Misanthrope, Racine's Esther, Taine's Notes sur l'Angleterre, Saintsbury's Short History of French Literature.

German—First Yeur: Otis's Elementary German, Grimm's Kinder-

und Haus-Maerchen, Hauff's Das Kalte Herz.

Second Year: Schiller's Ballads, Goethe's Hermann und Dorothea, Heine's Harzreise, Conant's Primer of German Literature.

# ELECTRICAL ENGINEERING.

#### PROF. MCKISSICK.

The students in this course will study English, French, or German, Physics, Mathematics, &c., as now prescribed for the course of Civil Engineering in the junior and senior years; and in addition thereto, will prosecute their studies in Electricity and Mechanics, as herein described.

# COURSE IN ELECTRICAL ENGINEERING.

#### JUNIOR YEAR.

Five hours a week for the entire session are devoted to the study of the principles of Electricity and Magnetism. The student is made familiar with the theoretical principles by experiments, illustrations, recitations and lectures.

LABORATORY WORK.—Six hours per week are given to work in the laboratory. This includes management of batteries, construction of instruments, electrical measurements, verification of the principles upon which the measurements of currents, electromotive force and resistance are based, etc.

#### TEXT-BOOKS.

Ayrton's Practical Electricity, Desmond's Electricity for Engineers, S. P. Thompson's Electricity and Magnetism, Stewart and Gee's Practical Physics.

#### SENIOR YEAR.

In the senior year five hours per week are devoted to theoretical instruction in Electricity and Magnetism, supplemented by a course of lectures and practical demonstrations on the applications of electricity to lighting, electrical transmission of energy, electrical welding, telegraphy and telephony.

Encouragement is offered to advanced students for conducting original investigations, and opportunity is taken to stimulate a spirit of scientific inquiry. Courses of reading are suggested to such students in connection with their experimental work.

LABORATORY WORK.—Six hours per week are devoted to practical laboratory work, including construction of instruments, electrical measurements, electrolysis, and relation of electrical currents to heat and mechanical work, care and tests of dynamo, the adjustment and calibration of voltmeters and ammeters, electric lighting, management and care of accumulators, energy consumed in lamps, adjustment and care of arc lamps, proper wiring of buildings, the application of electricity to street railways, magnetic measurements, tests of transformers and motors.

Drawing and Construction.—Five hours per week in the senior year are devoted to the design and construction of electrical machinery. The student is required to make original designs of dynamos, motors, transformers, galvanometers, etc., and will be required to construct at least one piece of apparatus of his own design.

#### TEXT-BOOKS.

Slingo and Brooker's Electrical Engineering, S. P. Thompson's Electro Magnet, Thompson's Dynamo Electric Machinery, Fleming's Alternate Current Transformer.

#### REFERENCE BOOKS.

Treatise on Electricity and Magnetism, Vols. I and II, by Gordon; Electricity and Magnetism, by Clerk Maxwell; Emtage's Introduction to the Mathematical Theory of Electricity and Magnetism; Kempe's Electrical Testing; Dredge's Electric Illumination, Vols. I and II; Dynamo Electric Machinery, by Carl Hering; The Electro Motor and its Applications, by Wetzler and Martin; Electric Transmission, by Kapp; Electric Lighting, by Atkinson; Electric Light Installations, by Salomons; Alternating Currents of Electricity, by Blakesley; London Electrician; Proceedings of American Institute of Electrical Engineers.

#### EQUIPMENT.

The Electrical Laboratory has a complete line of batteries, call-bells, annunciators, telegraph sounders, relays, keys, magnets, and all apparatus necessary for first year students in Electrical Engineering. The equipment comprises many fine instruments of precision: Sir Wm. Thomson's standard 100 ampere balance (either for direct or alternating currents); Sir Wm. Thomson's graded current galvanometer, reading to 600 amperes; also, his graded potential galvanometer, reading to 600 volts, Cardew voltmeter (for direct or alternating currents), reading to 150 volts; Weston's standard ammeter and voltmeter, box of resistance coils; Queen's magnetic vane voltmeter and ammeter, standard a micro-farad condenser and Sabine key; Thompson Watt-meter ballistic reflecting galvanometer, mirror galvanometer, Fein ammeter and voltmeter, Ayston & Perry ammeter, Kohl's solenoid ammeter, Wood ammeter, Deprez ammeter, Hartman & Braun voltmeter, D'Arsonval galvanometer, Hughl's induction balance, tasimeter, microphone, telephones, electrolytic apparatus and several minor and other galvanometers for first year students. A battery of fifty-five Julien accumulators has been installed in the Laboratory, and a like battery in the department of Natural History.

In the Dynamo room the following are installed: One

Weston 150 volt, 20 ampere dynamo, with rheostat; one Brush 6 arc-light dynamo, with regulator and six lamps; one Edison compound wound 12 kilo-watt generator; a Crocker-Wheeler one-horse power motor and rheostat, and one alternator, made by special students, furnish current to the laboratory and light up the different buildings.

The dynamos occupy a separate room from the Laboratory, and are operated by a 35 horse-power Westinghouse

vertical engine.

This department, being provided with Sir Wm. Thomson's standard electrical instruments for exact measurements, will calibrate, free of expense, any ammeter or voltmeter that may be sent to the College.

An electro-motor, supplied with current from a generator at a distance of 3,000 feet, operates a gin, gin press, silo cutter and feed cutter at the Experiment Station farm. This motor not only subserves a useful purpose in the operation of these machines, but is an excellent illustration of the electric transmission of power.

# PHYSICAL LABORATORY.

The exercises in this Laboratory are given in connection with the Electrical Laboratory. Especial attention is paid to mechanics. The following apparatus is arranged for the use of students: Jolly's specific gravity balance, Queen's specific gravity balance, Mohr's balance, Hare's apparatus, hydrometers, apparatus for studying parallelogram of forces, apparatus for studying sliding and rolling friction, models of mechanical movements, sections of steam pumps and engines, still and boiler, Carre's ice machine, Riehle's testing machine, thermometers, micrometer screws, Atwood's machine, cathetometer, Kater's pendulum, and other apparatus.

Six hours a week is given to this work, in which the student is taught to verify experimentally the laws of mechanics.

# MECHANIC ARTS.

J. J. WILMORE, DIRECTOR.

B. H. CRENSHAW. S. J. BUCKALEW, ASSISTANTS.

The course in Manual Training covers three years as follows: First year, wood-working—carpentry and turning; second year, pattern-making and foundry and forge work—moulding, casting and smithing; third year, machine shop—chipping and filing and machine work in metals.

This course is obligatory upon the students of the three lower classes. For satisfactory reasons a student may be excused from this laboratory work by the Faculty.

The full work of each class is six hours per week, in three exercises of two hours each.

The power for running the apparatus in this department is derived from a twenty-five horse-power Harris-Corliss automatic engine, which is supplied with steam by a thirty horse-power steel horizontal tubular boiler. A steam pump and a heater for the feed water form a part of the steam apparatus. For the steam plant a substantial brick boiler-house and chimney have been erected.

The equipment for the wood-working shop comprises the following: 30 wood-working benches, each with complete set of carpenter's tools; 24 turning-lathes, 10 inch swing, each with complete set of tools; 1 double circular saw; 1 hand saw; 1 board-planing machine; 1 buzz planer; 2 scroll saws (power); 1 large pattern-maker's lathe, 16-inch swing; 1 36-inch grindstone. In addition to these, the tool room is supplied with a variety of extra hand-tools for special work.

The equipment for the foundry consists of moulding-benches for 18 students, each supplied with a complete set of moulder's tools; a 14-inch cupola, with all modern improvements, capable of melting 1,000 pounds of iron per hour; a brass furnace in which can be melted 100 pounds of brass at a heat, with a set of crucible tongs, etc. Also a pounds of brass at a heat, with a set of crucible tongs, etc. full supply of ladles, large and small moulding flasks, special tools, etc.

The forge shop equipment consists of 16 hand forges of new pattern, each with a set of smith's tools, anvil, etc. The blast for all the forges is supplied by a No. 3 Sturtevant steel pressure blower (which also furnishes blast for the foundry cupola), and a No. 15 Sturtevant exhaust blower draws the smoke from the fires into the smoke-flues and forces it out through the chimney.

The machine department occupies a brick building, 30x50 feet, and is equipped with 6 engine-lathes (screw-cutting), 14-inch swing, 6-foot bed; 2 engine-lathes, 16-inch swing (one with taper attachment); 1 engine-lathe, 18-inch swing, with compound rest and taper attachment; 1 screw cutting lathe, 12-inch swing; 1 speed lathe, 10-inch swing: 1 20-inch drill press (power-feed); 1 10-inch sensitive drill: 1 15-inch shaper; 1 22-inch x 22-inch x 5 foot friction planer; 1 universal milling machine; 1 corundum tool-grinder (14-inch wheel); 1 bench grinding-machine (small); 1 universal cutter and reamer grinder; 1 post drill press (14-inch). A part of this room is set apart for vise-work. chipping and filing; and benches for 12 students are provided, each with vise and sets of files, chisels, hammers, etc. In the tool-room is to be found a good supply of machinists' tools for general shop use. such as lathe and drill chucks, drills, reamers, taps, dies, gauges, files, cutting and measuring tools, and special appliances for machine work, with machine for grinding twist drills.

The nature of the work in each department is as follows:

# FIRST YEAR.

I. A course of carpentry (hand work covering the first two terms and part of the third, or about five months).

The lessons include instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, saw, chisel, different kinds of joints, timber-splices, cross joints, mortise and tenon, mitre and frame work, dovetail work, comprising different kinds of joints used in cabinet making, light cabinet work, examples in building, framing, roof-trusses, etc.

II. A course in turning, extending through the third term. The lessons comprise nature and use of lathe and tools, plain straight turning caliper work to different diameters and lengths, simple and compound curves, screw plate and chuck work, hollow and spherical turning.

# SECOND YEAR.

I. A course in pattern-making, covering the first half of the first term. The work includes a variety of examples of whole and split patterns, core work, etc., giving the students familiarity with the use of patterns for general moulding. II. A course in moulding and casting in iron and brass occupying ten weeks. The work consists for the most part of small articles, such as light machine parts, but a sufficient variety of forms are introduced for the student to acquire a good general and practical knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two part flasks; core work is also given, and some three part flask and some dry sand work is introduced.

The same patterns which have been previously made by students are used, besides special patterns for occasional larger or more complicated work. Instruction and practice is given in working the cupola, each student in turn taking

charge of a melting.

III. A course in forge work in iron and steel, occupying the remainder of the year. The lessons are arranged so that the students, in making the series of objects, become familiar with the nature of the metals and the successive steps in working them by hand into simple and complex forms, as drawing, upsetting, bending, cutting, punching, welding by various methods, tool-forging, tempering, hardening, etc.

In connection with this second year work, a series of lectures is given on the metallurgy and working of the metals used in the industrial arts, cast and wrought iron, steel,

brass, etc.

## THIRD YEAR.

I. A course of chipping and filing, covering ten weeks of the first term. The lessons comprise work on cast and wrought iron; chipping to line on flat and curved surfaces, key-seating, etc.; filing and finishing to line (straight and curved), surface filing and finishing, fitting, slotting, dovetail work, sliding and tight fits, sawing, pin, screw and key filing, surface finishing with scraper, etc.

II. Machine work occupying the remainder of the year.

The work includes cast and wrought iron, steel and brass; turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling—both in lathe and drill press,—reaming, boring, screw-cutting in lathe and with taps and dies, planing, slotting, etc., with planer and shaper, milling various forms with the milling machine, including exercises in making taps, reamers, etc., fitting, grinding, polishing, etc.

Lectures are also given during the year on various subjects connected with machine work in [metals, such as forms, construction and use of the various machines, cutting tools, gearing, gauges, screw threads, etc. During the last term some piece of construction work is given the classes.

Instruction is generally given, first, by black-board drawings or sketches which the student copies, with dimensions in note-book, with which each one provides himself; thus each one works from his own notes. This is supplemented, whenever necessary, by the actual construction of the lesson by the instructor before the class, second by inspection and direction at the bench by the instructor. The construction work is made from blue prints, the work of the class in drawing.

## MECHANICAL ENGINEERING.

PROFESSOR WILMORE.

#### JUNIOR YEAR.

To receive the degree of B. Sc. in the Electrical and Mechanical Engineering the student must complete the course of Mechanical Engineering as here described.

Principles of Mechanism.—Two terms are devoted to this subject. Under this head machines are analyzed and their elementary combinations of mechanism studied. The communication of motion by gear wheels, belts, cams, screws and link-work, the different ways of obtaining definite velocity ratios and definite changes of velocity, parallel

notions and quick return motions as well as the designing of trains of mechanism for various purposes, together with the theoretical forms of teeth for gear wheels to transmit the motion through these trains, are investigated under this subject. The text-book work is illustrated by the study and examination of the machines in the laboratory.

The last term will be devoted to the study of the properties of steam, preparatory to the study of the Steam Engine in the senior year. The subject of steam boilers will receive special attention, and tests will be made to determine the evaporative efficiency of the boiler, furnishing power.

Mechanical Drawing.—During the first term the students make drawings to exact scale, of some of the simpler machines. The student takes his own measurements and makes his own sketches from which to produce the finished drawing

This is followed by work intended to be supplemental to the work in Mechanism. Involute and epicycloidal gear wheels, bevel wheels and endless screws are designed and drawn to scale from data given by the instructor. During the last term each student will make working drawings of some machine in the laboratory with instruction in the making of tracings and the art of blue-printing.

Laboratory Work.—The laboratory work will consist of hand work in iron and machine work in iron, as given in the course in Mechanic Arts in the third year.

## SENIOR YEAR.

Steam Engine.—One-half the year will be given to the study of the theory and efficiency of the steam engine, with discussions of the effects of condensation in cylinder, action of fly-wheels, effects of jacketing, etc. Simple and compound engines, various valves and cut-off motions, and the principal types of modern engines are studied. Special attention is given to the steam engine indicator, and the student is expected to become familiar with its application and uses.

Machine Design.—In the last half of the year the subject of Machine Design will be taken up and carried on in connection with the Strength of Materials, the latter being studied mainly from actual experiments made on the testing machine. In the former simple machines are given to work under specified conditions, the motions being laid out and the proportion of parts found by calculation.

Laboratory Work.—The laboratory work will consist of making tests of engines under varying conditions of load and speed. These results will be carefully recorded, tabu-

lated and filed away for future reference.

Also of making tests of the strength of the different materials of construction, stone, wood, cast and wrought iron, steel, etc. These will be tested for transverse, tensional and compressional strains, and all results recorded and tabulated.

## POST-GRADUATE COURSE.

Students sufficiently qualified, who desire post-graduate work, can be accommodated to the extent of the appliances at hand. They will be expected to study up the history and development of Mechanics and Engineering, take more in detail the theory and structure of the steam engine, and solve problems in general engineering, such as designing shops for special lines of work, making drawings and specifications showing the most economical arrangement of machines and transmission machinery.

#### TESTING APPARATUS.

For the experimental work in Mechanical Engineering the following apparatus has been provided:

A testing Machine, capable of exerting compressional, tensional and transverse strains up to 35,000.

A steam engine Indicator, planimeter, micrometer and other implements for steam engine testing.

A Harris-Corliss twenty-five horse-power engine, a Westinghouse thirty-five horse-power engine, a steam pump, steam boilers, and the use of the laboratory for special work.

#### TEXT AND REFERENCE BOOKS.

Stahl and Wood's Elementary Mechanism; Goodeve, Steam Engine; Busbridge, Engineering Drawing Copies; Barr, Treatise on High Pressure Steam Boilers; Brown & Sharpe, Treatise on Gearing; Davidson, Practical Perspective; Grant, Odontics; Hemenway, Indicator Practice and Steam Engine Economy; Klein, Machine Design; MacCord, Treatise on the Slide Valve; Pray, Twenty years with the Indicator; Rose, Mechanical Drawing Self-Taught; Rose, Modern Steam Engines; Thurston, Manual of the Steam Engine; Appleton's Cyclopædia of Applied Mechanics.

## MILITARY SCIENCE AND TACTICS.

LIEUT. J. H. WILLS, U. S. ARMY, COMMANDANT.

Military Science and Tactics are required by law to be taught in this institution. This law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms, practical instruction in the School of the Soldier, of the Company and of the Battalion; also in Guard Mountings, Inspections, Dress Parades, Reviews, etc.

Under section 1225, U. S. Revised Statutes, the College is provided with modern Cadet rifles and accourrements and two pieces of field artillery. Ammunition for practice firing is used under the direction of an experienced officer. The exercises in target practice and artillery drill begin the first

day of the third term, March 27th.

The following uniform of standard Cadet gray cloth has been prescribed for dress, viz.: Coats and pants as worn at West Point, with sack coat for fatigue, dark blue Cadet cap. A neat and serviceable uniform can be obtained here at \$18 to \$19. This is less expensive than the usual clothing. All students are required to wear this uniform during the session.

The entire body of students is divided into companies. The officers are selected for proficiency in drill, deportment, and studies. Each company is officered by one Captain, two 1st Lieutenants, one 2d Lieutenant, and with a proper number of non-commissioned officers. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are confirmed by the President on nomination of the Commandant.

The junior class recites once a week in the United States Infantry Tactics.

The senior class recites once a week in "Notes on Military Science."

# PHYSIOLOGY AND VETERINARY SCIENCE.

PROF. CARY.

#### PHYSIOLOGY.

The freshman classs during the second term and the sophomore during the third term will study Physiology.

Instruction will be given in the form of lectures; the students, also, have access in the College library to a number of the best works on human and comparative physiology, anatomy and hygiene. At an early date it is the aim of the department to equip rooms, in a properly located building, with tables and instruments for dissecting the smaller animals. The lecture will be supplemented by laboratory work in dissections and the study of healthy organs and tissues.

## VETERINARY SCIENCE AND ART

Will occupy two hours per week in the class room, during the entire junior and senior years.

The first part of the junior year will be devoted to the study of the general anatomy of the horse, including comparisons with the other domestic animals. The anatomy of the exterior of the horse will receive special attention.

The study of comparative anatomy is to be followed by lectures upon lamenesses of domestic animals, chiefly of the horse.

Lectures will then be given upon such surgical operations as can be done by the farmer or the average stock raiser.

Instruction will also be given upon the use, actions, etc., of the most common medicines and materials used in treating domestic animals. The study of materia medica and therapeutics is to be followed by lectures upon the principles and practice of Veterinary Medicine. The methods of meat inspection, and the means of protecting the health of man and of domestic animals will receive attention under the head of sanitary science.

When weather and occasion permit, dissections of domestic animals in health and diseased conditions will be made. Furthermore, free clinical work will be given, two to three hours one day of each week, during the entire college year; this practical work is given for the special benefit of the classes in Veterinary Science.

# POST-GRADUATE DEGREES.

The Post graduate Degrees are—Master of Science, Mining Engineer, Civil Engineer, and Electrical and Mechanical Engineer.

A Post-graduate Degree may be obtained by a graduate of this College, or of any other institution of equal grade, by one year's residence at the College, spent in the successful prosecution of a course of study approved by the Faculty.

Candidates must also present to the Faculty a satisfactory thesis, showing independent investigation upon some subject pertaining to their course, and must pass an examination at the close of each term on the course of study prescribed, in which he must attain a grade of 75 per cent. The examination is written, and also oral in the presence of the Faculty.

Applicants for Post-graduate Degrees are, by order of the Trustees, permitted to matriculate without payment of fees.

They are subject to the general regulations as other students, but are exempt from all military duty.

Resident graduates, who are not candidates for a degree, are permitted to matriculate and prosecute the studies in any department of the College, without payment of regular fees.

The following courses are prescribed for the degrees named:

Mining Engineer.—Geology, Civil Engineering, Chemistry.

Civil Engineer.—Civil Engineering, Mathematics, Analytical Mechanics.

Electrical and Mcchanical Engineer.—Electrical Engineering, Mechanical Engineering, Analytical Mechanics, or Mathematics.

Master of Science.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class.

A certificate of proficiency will be given when any one subject of a post-graduate course is satisfactorily completed.

## DISTINCTIONS.

Distinctions are awarded in the different subjects of each class to those students whose grade for the entire year is above 90 per cent.

Certificates of Distinction are awarded in public on Commencement day to those who obtain an average of 90 per cent. in all the prescribed studies of a regular class, and also to those who obtain three distinctions in the freshman class, four in the sophomore or junior class, and five in the senior class, provided they have satisfactorily passed all the regular examinations of that session.

#### PHOTOGRAPHY.

During the first term there will be given by Professor Mell a course of twelve lectures on photography. This course will be elective, and the instruction will be opened to any student who may desire to learn how to make pictures. It will be necessary for each student to provide himself with an outfit that will cost from \$11.50 to \$16.00.

# RECORDS AND CIRCULARS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

From the record a monthly circular, or statement, is sent to the parent or guardian.

## EXAMINATIONS.

Written monthly examinations on the studies of the month, are held by each professor.

At the end of each term written examinations, or written and oral, are held on the studies passed over during that term.

Special examinations are held only by order of the Faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination, can be promoted to full standing to the next higher class, only on satisfactory examinations at the opening of the next session.

It is required that every student who enters the College shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within three weeks of the examination, except in extreme cases.

# LIBRARY.

The Library occupies an elegant, well-lighted room in the main building, and is made an important educational feature

of the College. Besides a number of valuable reference books, it contains select editions of the standard authors and others suitable for students. It has recently been increased by the addition of 4,000 volumes of carefully selected standard works. It is kept open eight hours daily for the use of students as a reading room.

#### MUSEUM.

The Museum occupies a large room in the third story. It is provided with suitable cases and is gradually becoming equipped with valuable specimens and models of an instructive character.

#### DISCIPLINE.

The government of the College is administered by the President and Faculty, in accordance with the code of laws and regulations enacted by the Trustees.

Attention to study, and punctuality in attendance on recitations and all other duties, are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using, or causing to be brought into the College limits, intoxicating liquors.

#### MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapacitated to bear arms, are required to engage in these exercises.

The drills are short, and the duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

Privates of the senior class may be excused by the President from all military drills, and also students over twenty-one years of age at the time of entering College, who are permitted to devote their time to one special study, as chemistry, agriculture, etc.

#### RELIGIOUS SERVICE.

Religious services are held every morning in the chapel.

All students are required to attend these exercises, and also to attend the church of their choice at least once on Sunday.

Opportunities are also offered for attending Bible classes every Sunday.

#### YOUNG MEN'S CHRISTIAN ASSOCIATION.

This Association is regularly organized, and through its weekly meetings exerts a wholesome Christian influence among the students of the College.

The first week of the session the trains will be met by a committee of the Association, whose business will be to give information to, or assist in any way it can, the students entering College for the first time. The Association is commended to all the students.

The following are the officers:

E. B. MELL, President.

J. A. DUNCAN, Vice-President.

H. H. SMITH, Recording Secretary.

W. F. CLAYTON, Treasurer.

## GYMNASIUM.

The fourth floor of the College building is one large attic room, well lighted and ventilated. It has been supplied with a number of such appliances as are used in a gymnasium, and is used for athletic exercises by the students, in the afternoon, under prescribed regulations.

### LOCATION.

The College is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railroad.

The region is high and healthful, noted for its general

good health and freedom from malaria, having an elevation of eight hundred and twenty-six feet above tide water. By statute of the State, the sale of spirituous liquors and keeping saloons of any kind are forbidden.

#### BOARDING.

The College has no barracks or dormitories, and the students board with the families of the town of Auburn, and thus enjoy all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who, without permission, leave their rooms after the "call to quarters," or are guilty of any violation of order.

Students, after selecting their boarding-houses, are not permitted to make changes without obtaining permission from the President, and this permission is given only at the close of a term, except for special reasons.

#### EXPENSES.

Incidental fee, per half session	2	50
Library fee, per half session	1	00
Surgeon's fee, per half session	2	50
Board, per month, with fuel and lights\$12 to 18	5	00

These fees are payable, \$6.00 on matriculation and \$6.00 on February 1st. By order of the Board no fees can be remitted.

There is no charge for tuition.

For students entering after January 1st, the fees for a half session only are required.

#### EXPENSES FOR COLLEGE YEAR.

Fees	12	00 to	\$ 12 0	0
Board, lodging, fuel and lights		00 to	135 0	0
Washing		00 to	9 0	0
Books, etc., say	8	00 to	15 00	n

This does not include uniform, the cost of which is not more than ordinary clothing.

#### CONTINGENT FEE.

A contingent fee of five dollars is required to be deposited by each student on matriculation, to cover any special or general damage to college property for which he may be liable.

At the close of the session the whole of the contingent fee, or the unexpended balance, will be refunded to the student.

## AMOUNT OF DEPOSIT.

Each student on entering College should deposit with the Treasurer not less than \$50.00, to pay the expenses of fees, one month's board, uniform, books, etc.

#### FUNDS OF STUDENTS.

Parents and guardians are advised to deposit with the Treasurer of the College all funds desired for sons or wards, whether for regular charges of College fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc., when approved.

When funds are deposited, checks are drawn on the Treasurer of the College by the cadet to pay his necessary expenses. These checks are paid only when approved by the President. This approval is given only for necessary expenses, as stated in the Catalogue, unless specially requested in writing by the parent.

The Collège cannot be held responsible for the expenses of a student, unless the funds are deposited with the Treasurer. No student should be permitted to have a large amount of pocket money, as it brings only trouble and encourages idleness.

#### THESIS.

Each applicant for a degree is required to write and submit to the Faculty an essay or oration and read or deliver the same at Commencement, if required by the Faculty.

It must be given to the Professor of English by the first of May.

#### LITERARY SOCIETIES.

There are two literary Societies connected with the College—the Wirt and Websterian. Each has a hall in the College building.

These societies hold celebrations on the evenings of Thanksgiving Day and 22d of February, and also during Commencement week. They elect annually, with the approval of the Faculty, an orator to represent them at the close of the year.

## EXERCISES IN ELOCUTION.

On every Saturday morning, immediately after chapel services, oratorical exercises in declamation and in original orations are conducted by the Professor of English, in presence of the Faculty and students.

The first and second terms the students of the junior and sophomore classes are exercised in original orations and declamation.

The second and third terms the members of the senior class read essays or deliver original orations.

## SOCIETY OF THE ALUMNI.

The Annual Alumni Oration, is delivered by a member of the society, in Langdon Hall, on Alumni day, Tuesday of Commencement week. The following are the officers of the Society:

L. W. Wilkinson, President.

T. D. Samford, Vice-President.

C. C. Thach, Treasurer and Secretary.

## UNIFORM.

A uniform of Cadet gray cloth is prescribed, which all under-graduate students are required to wear during the

session. The uniforms are made by contractor of cloth manufactured at the Charlottesville mills. The suit, including cap, costs about \$19.00; the dress coat \$10.00 to \$11.00. It is neat and serviceable and less expensive than ordinary clothing.

#### SURGEON.

The Surgeon is required to be present at the College daily, to visit the Cadets at their quarters who are reported sick, and to give all requisite medical attention without other charge than the regular surgeon's fee, paid on entering College.

#### ACADEMIC YEAR.

The Academic year for 1893-94, commences on Wednesday, 13th September, 1893, (second Wednesday after first Monday), and ends on Wednesday, 13th June, 1894 (the second Wednesday after the first Monday), which is Commencement Day.

It is divided into three terms. The first term extends from the opening of the session to the 22d of December; the second term begins January 2d, and ends March 24th; the third term continues from March the 26th to the close of the session.

# RESOLUTION OF THE TRUSTEES.

The following resolution was adopted by the Trustees:

That in view of increased facilities for instruction in Agriculture and the technical departments of education now possessed by this College, especially in the department of Mechanic Arts, made possible by the recent donation from the State, the Faculty are authorized, in addition to the legal name of this College, to print on the Catalogue the words ALABAMA POLYTECHNIC INSTITUTE, as significant of the expanded system of practical instruction in industrial science in the course of education now provided for.

#### DONATIONS TO LIBRARY.

Edwin G. Klose-Klein's Elements of Machine Design.

Rev. G. S. Anderson-The Sermon Builder.

Dr. Geo. Petrie-Church and State in Early Maryland.

Secretary of the Interior-Senate Executive Documents. House Executive Documents, Senate Miscellaneous, House Miscellaneous Documents, Congressional Globe and Record, American State Papers, etc. 143 vols.

Hon. W. C. Oates-"War of Rebellion." 5 vols.

Hon. Samuel A. Greene-"Proceeding of the Proceeds of the Peabody Educational Fund, 1887-1892."

#### DONATIONS TO DEPARTMENT OF ELECTRICAL ENGINEER-ING.

Bernstein Electric Co., Boston, Mass.-Fan Motor.

American Electrical Mfg. Co., St. Louis, Mo.--Incandescent Lamps.

W. R. Brixley, New York—Samples of Wires.

The Geo. F. Blake Mfg. Co., New York—Blue Prints of Pumping En-

Huebel & Manger, Brooklyn, N. Y.—Electric Bells.

Indiana Rubber and Insulated Wire Co., Chicago-Samples of Wires.

A. D. Isham, Buffalo, New York-Parallel Wire Stretcher.

The King Bridge Co., Cleveland, Ohio-Photographs.

New York Insulated Wire Co., New York-Samples of Wires.

Peru Electric Mfg. Co , Peru, Ind .- Samples of Percelain.

Schultz Belting Co., St. Louis, Mo. -Double Leather Belt.

Washburn & Moen Mfg. Co., New York-Samples of Wires.

The D. A. Tompkins Co., Charlotte, N. C .- Photograph of Switch-Board.

### OTHER DONATIONS.

Crescent Steel Co., Pittsburg-Specimens of Steel. Smithsonian Institute-67 specimens of Minerals; 100 specimens of Fish.

# CALENDAR, 1893-94.

Session begins	Wednesday, Sept. 13, 1893
Examinations for admission	Wednesday, Sept. 13, 1893
First term begins	Wednesday, Sept. 13, 1893
First term ends	Friday, Dec. 22, 1893
Second term begins	Tuesday, Jan. 2, 1894
Second term ends	Saturday March 24 1894
Second term ends	Monday March 26, 1894
Third term begins	Tuesday May 1 1904
Sophomore class exercises	Iuesday, may 1, 1004
Final examinations begin	Wednesday, May 30, 1894
Commencement sermon	Sunday, June 10, 1894
Annual meeting of Trustees	Monday, June 11, 1894
Junior class celebration, 10 A. M	Monday, June 11, 1894
Military exercises, 4 P. M	Monday, June 11, 1894
Celebration of Literary Societies, 8 P. M.	Monday, June 11, 1894
Alumni day	Tuesday, June 12, 1894
Military exercises, 5 P. M.	Tuesday, June 12, 1894
Military exercises, 5 P. M	Tuesday June 12 1894
Address before Literary Societies, 8 P. M	Wadnesday Tune 13 1894
Commencement day	Wednesday, June 15, 1601

