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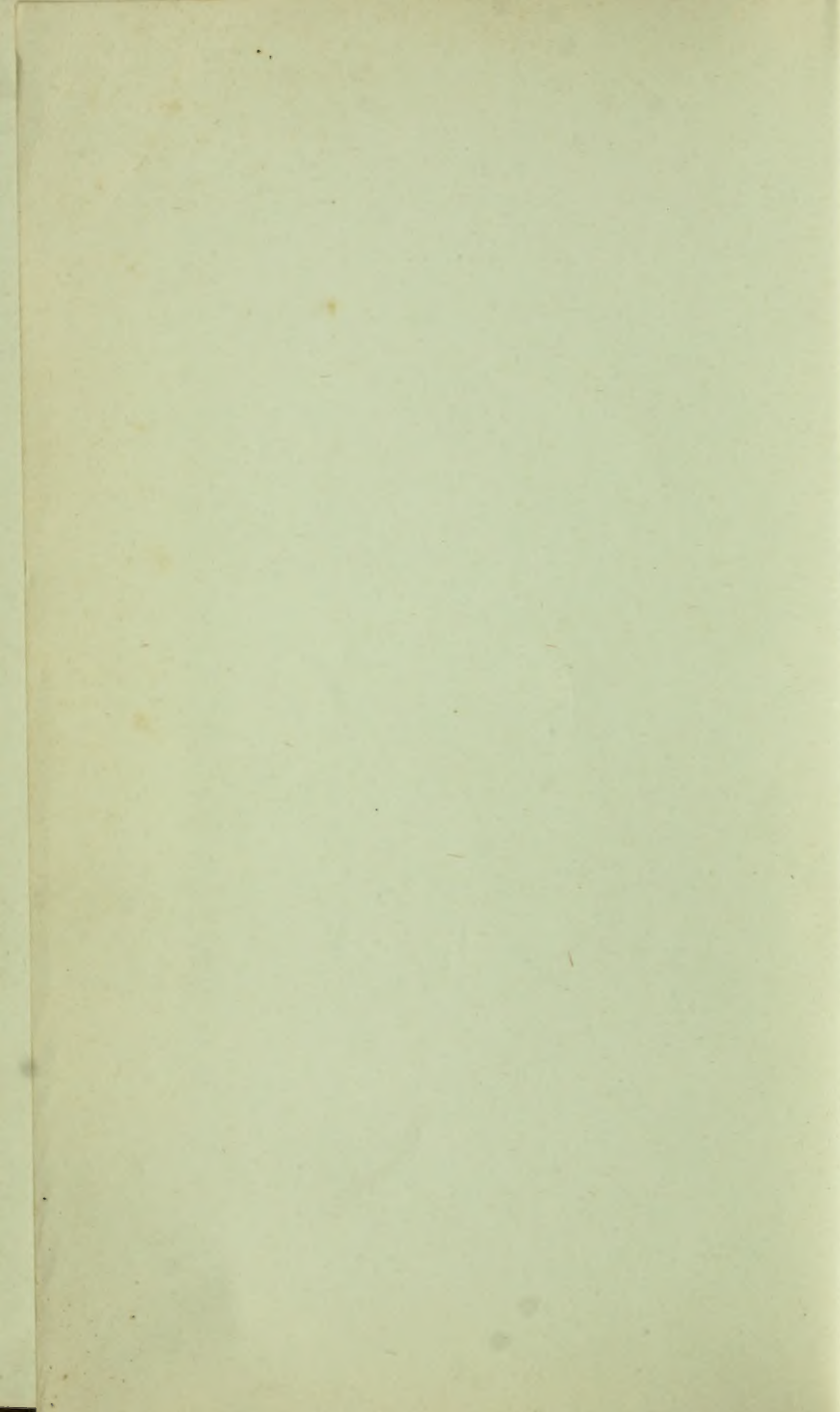
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THE LIBRARY OF  
HAVERFORD COLLEGE

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CATALOGUE

OF THE

*Officers and Students*

OF

HAVERFORD COLLEGE.

1864-65.

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HAVESFORD COLLEGE  
THE LIBRARY OF

THE LIBRARY OF  
HAVERFORD COLLEGE

A

CATALOGUE

OF THE

*Officers and Students*

OF

HAVERFORD COLLEGE,

FOR THE

ACADEMICAL YEAR

1864-65.

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PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1864.



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PRESIDENT.

PAUL SWIFT, M. D.,

PROFESSOR OF MORAL, POLITICAL, AND NATURAL SCIENCE.

THOMAS CHASE, A. M.,

PROFESSOR OF CLASSICS AND BELLES-LETTRES.

SAMUEL J. GUMMERE,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

EDWARD D. COPE, A. M.,

PROFESSOR OF COMPARATIVE ZOOLOGY AND BOTANY.

CLEMENT L. SMITH, A. M.,

ASSISTANT PROFESSOR OF CLASSICS AND MATHEMATICS,  
AND LIBRARIAN.

WILLIAM WETHERALD,

SUPERINTENDENT.



INSTRUCTOR IN DRAWING,

JOHN B. WILSON.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Bringhurst, John Richardson	Wilmington,	Del.
Brown, Edward Taylor	Doylestown,	Pa.
Chase, James Anthony	Philadelphia,	Pa.
Clapp, Samuel Hicks	Philadelphia,	Pa.
Downing, Joseph Miller	West Whiteland,	Pa.
Haviland, Arthur	Brooklyn,	N. Y.
Nichols, David Holder	East Vassalborough,	Me.
Sharpless, Henry Williams	Philadelphia,	Pa.

NAMES.	RESIDENCE.	
Smith, Jr., George	Upper Darby,	Pa.
Taber, Robert Barney	New Bedford,	Mass.
Thomas, Allen Clapp	Baltimore,	Md.
Vail, Benjamin Augustus	Rahway,	N. J.
Wistar, Caleb Cresson	Philadelphia,	Pa.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Brown, Harry Clay	Doylestown,	Pa.
Cloud, Joseph Cooper	Woodbury,	N. J.
Elliott, Aaron Marshall	Westminster,	N. C.
Redman, Samuel Bispham	Haddonfield,	N. J.
Valentine, Benjamin Eyre	Salem,	Mass.



## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Ashbridge, John	West Whiteland,	Pa.
Ashbridge, George	West Whiteland,	Pa.
Chase, Robert Howland	Union Springs,	N. Y.
Clark, William Penn	Centre Valley,	Ind.
Coles, Isaac Woolston	Moorestown,	N. J.
Collins, Samuel Craft	Trenton,	N. J.
Crenshaw, Nathaniel Bacon	Richmond,	Va.
Darlington, Charles Howard	Davenport,	Iowa.
De Cou, Franklin	Yardville,	N. J.
Dorsey, William Tagart	Baltimore,	Md.
Eshleman, B. Franklin	Lancaster,	Pa.
Griffith, Richard Edward	Winchester,	Va.
Haines, Zebedee	Medford,	N. J.

NAMES.	RESIDENCE.	
Heulings, Isaac W	Moorestown,	N. J.
Hopkins, Frank N.	Baltimore,	Md.
Jones, Richard Mott	Dirigo,	Me.
Levick, Lewis Jones	Richland,	Pa.
Lippincott, Joseph Kay	Woodstown,	N. J.
Morris, John Thompson	Philadelphia,	Pa.
Parrish, Alfred	Philadelphia,	Pa.
Sharpless, Charles Williams	Philadelphia,	Pa.
Swift, William L.	Hart's Village,	N. Y.
Tomlinson, Benjamin Albert	Laurel Mills,	N. J.
Wistar, John	Salem,	N. J.
Witmer, A. Exton	Paradise,	Pa.
Wood, Walter	Philadelphia,	Pa.
Coles, David Budd	Mount Holly,	N J

## FRESHMAN CLASS

NAMES.	RESIDENCE.	
Coffin, Elijah	Richmond,	Ind.
Cook, Edward Hanson	North Vassalborough, Me.	
Cope, Alexis Thomas	Philadelphia,	Pa.
Cope, Henry	Philadelphia,	Pa.
Evaul, Henry	Palmyra,	N. J.
Hunt, Howard Abbot	Burlington,	N. J.
Pinkham, Gilbert Latey	Salem,	Ohio.
Starr, Louis	Philadelphia,	Pa.
Satterthwaite, Benjamin Cad- wallader	Oxford Valley,	Pa.
Taylor, William Shipley	Cincinnati,	Ohio.
Thompson, David Allen	Salem,	N. J.
Tomlinson, Ephraim	Laurel Mills,	N. J.



## SUMMARY.

Seniors . . . . .	13
Juniors . . . . .	5
Sophomores . . . . .	27
Freshmen . . . . .	12
	<hr/>
Total . . . . .	57

## Calendar.

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Winter Term, 1864-65, began . . . . .	9 Mo. 14th.
Winter Term, 1864-65, ends . . . . .	2 Mo. 1st.
Summer Term, 1865, begins . . . . .	2 Mo. 22d.
Summer Term, 1865, ends . . . . .	7 Mo. 12th.
Biennial Examinations, 1865, begin . . . . .	5 Mo. 29th.
Oration before Loganian Society, 1865 . . . . .	1 Mo. 31st.
Junior Exhibition, 1865 . . . . .	2 Mo. 1st.
Address before Alumni, 1864 . . . . .	10 Mo. 15th.
Public Meeting of Loganian Society, 1865 . . . . .	7 Mo. 11th.
Commencement, 1865 . . . . .	7 Mo. 12th.
Examinations for Admission, 1865, 2 Mo. 21st, 9 Mo. 12th.	
Winter Term, 1865-66, begins . . . . .	9 Mo. 13th.

## Requisites for Admission.

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Candidates for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.

Andrews and Stoddard's, or Harkness's Latin Grammar,  
 Cæsar's Commentaries,  
 Virgil's Eclogues,  
 Cicero's Orations against Catiline,  
 and the first twenty exercises in Arnold's Latin Prose Com-  
 position.

Sophocles's, Crosby's, or Hadley's Greek Grammar,  
 Felton's or Jacob's Greek Reader,  
 and the first fifteen exercises in Arnold's Greek Prose Com-  
 position (to be written with the accents).

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,  
 Alsop's First Lessons in Algebra,  
 and the first two books of Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar,  
 Mitchell's Ancient and Modern Geography,  
 and Worcester's Elements of History.

The candidates must be well prepared, also, in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, CHARLES YARNALL, No. 109 North Tenth Street, Philadelphia. Candidates will present themselves at the College, for Examination by the Faculty, the morning preceding the opening of the term.

Students can be admitted to ADVANCED STANDING, when they can pass a satisfactory Examination in all the previous studies of the course.

## Course of Study.

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### FRESHMAN CLASS.

#### MATHEMATICS.

Geometry . . . . .	<i>Euclid.</i>
Algebra . . . . .	<i>Alsop.</i>
Plane Trigonometry . . . . .	<i>Gummere.</i>

#### GREEK AND LATIN.

The Anabasis of Xenophon . . . . .	<i>Crosby.</i>
Herodotus . . . . .	<i>Johnson.</i>
Greek Syntax . . . . .	<i>Crosby or Hadley.</i>
Greek Prose Composition continued . . . . .	<i>Arnold.</i>
Virgil . . . . .	<i>Schmitz or Frieze.</i>
Cicero . . . . .	<i>Folsom or Johnson.</i>
Latin Syntax and Prosody.	
Latin Prose Composition continued . . . . .	<i>Arnold.</i>
Classical Geography and Antiquities . . . . .	<i>Kiepert and Smith.</i>

#### ENGLISH.

Compositions.	
Universal History . . . . .	<i>Weber.</i>
Chemistry . . . . .	<i>Stoeckhardt.</i>
Geology commenced . . . . .	<i>Dana.</i>
Drawing.	



## SOPHOMORE CLASS.

## MATHEMATICS.

Surveying . . . . .	<i>Gummere.</i>
Spherical Trigonometry, Conic Sections, and Spherical Projections . . . . .	<i>Lewis.</i>
Physics . . . . .	<i>Loomis.</i>
Astronomy . . . . .	<i>Herschel.</i>

## GREEK AND LATIN.

The Iliad of Homer . . . . .	<i>Felton or Owen.</i>
Plato's Apology and Crito . . . . .	<i>Tyler.</i>
Greek Composition.	
Livy . . . . .	<i>Lincoln.</i>
The Odes of Horace.	
Latin Composition.	

## ENGLISH.

Geology continued . . . . .	<i>Hitchcock.</i>
Physical Geography . . . . .	<i>Guyot.</i>
Organic Chemistry . . . . .	<i>Johnson.</i>
Evidences of Christianity . . . . .	<i>Paley.</i>
Zoology . . . . .	<i>By Lectures.</i>
Drawing.	

## JUNIOR CLASS.

## MATHEMATICS.

Astronomy, continued . . . . .	<i>Herschel.</i>
Analytical Geometry . . . . .	<i>Davies.</i>
Differential and Integral Calculus . . . . .	<i>Davies.</i>

## GREEK AND LATIN.

The Seven against Thebes of Æschylus.	
Demosthenes or Isocrates.	
Thucydides . . . . .	<i>Owen.</i>
Greek Composition.	
Horace . . . . .	<i>Lincoln.</i>
The Germania and Agricola of Tacitus . . . . .	<i>Tyler.</i>
The Captivi of Plautus.	
Latin Exercises and Extemporalia.	
Greek Testament . . . . .	<i>Tischendorf.</i>

## ENGLISH.

The History of the English Language.	
Rhetoric . . . . .	<i>Whately.</i>
Logic { the Aristotelian system . . . . .	<i>Whately.</i>
{ the Hamiltonian system . . . . .	<i>By Lectures.</i>
Political Economy . . . . .	<i>Wayland.</i>
The Law of Nations, and American Law . . . . .	<i>Kent.</i>
Themes.	
Drawing.	

## SENIOR CLASS.

## MATHEMATICS.

Analytical Mechanics . . . . .	<i>Snell's Olmsted.</i>
Optics . . . . .	<i>Snell's Olmsted.</i>
Practical Astronomy . . . . .	<i>Loomis, with practice in the Observatory.</i>

## GREEK AND LATIN.

Thucydides . . . . .	<i>Owen.</i>
The Antigone of Sophocles . . . . .	<i>Woolsey.</i>
Greek Composition.	
Cicero's Tusculan Disputations, and Som- nium Scipionis . . . . .	<i>Chase.</i>
The Letters of Pliny the Younger.	
Cicero de Officiis	
Latin Themes and Extemporalia.	
Greek Testament . . . . .	<i>Tischendorf.</i>
Modern Greek . . . . .	<i>By Lectures.</i>

## ENGLISH.

Ethics . . . . .	<i>Dymond.</i>
Analogy of Natural and Revealed Reli- gion . . . . .	<i>Butler.</i>
Gurney's Observations.	
History of Modern Civilization . . . . .	<i>Guizot.</i>
Lectures on Modern History . . . . .	<i>Arnold.</i>
Psychology . . . . .	<i>Haven.</i>
Forensics.	

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Instruction is given in COMPARATIVE ZOOLOGY AND BOTANY, in lectures to all the classes, by PROFESSOR COPE.

## Lectures.

THE Special Courses of Lectures to the whole College, for the winter of 1864-5, are as follows:—

<i>Properties of Numbers</i>	. . .	PRESIDENT GUMMERE.
<i>The English Poets</i>	. . .	PROFESSOR CHASE.

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## Examinations.

IN determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of each Summer Term there is a private examination, in writing, of the Sophomore and of the Senior Classes: of the former, upon the studies of the first two years of the course, preparatory to advancement to the Junior Class; and of the latter, upon those of the last two years, for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject.

A student's answers must be sufficiently meritorious to

receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the Junior Class, or receive the diploma of Bachelor of Arts.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

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## Degree of Master of Arts.

GRADUATES of three years' standing can take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well written thesis on some literary or scientific subject, which shall receive the approbation of the Managers and Faculty. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. The fee for the diploma is Five Dollars.

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## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations. The Observatory is lighted and the instruments illuminated with gas.

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## Library and Apparatus.

THE LIBRARY of the College contains about 3,300 volumes; that of the Loganian Society about 1,500; making the whole number of books in the two Libraries 4,800.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suites illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished LABORATORY, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor of Chemistry.



## Library and Alumni Hall.

A commodious and elegant building of stone has been recently erected on the College lawn, to be used in part as a Hall for the public exercises of the College, and the meetings of the Alumni Association; in part for the accommodation of the two Libraries and a Reading-room. The cost of the building was about ten thousand dollars, of which the sum of five thousand dollars was generously presented by a graduate, on condition that it should be devoted to the erection of a Library, while the amount expended upon the Hall was raised by the Alumni.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of about 1500 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large and well-furnished GYMNASIUM, also, is under its direction.

THE ATHENÆUM and EVERETT are literary societies of the students.

## Alumni Prize Essays.

Prizes are offered by the Alumni Association for English Essays, on alternate years, as follows:—

A Prize of *one hundred dollars*, called the Alumni Prize, for the best Essay by any member of the Association or undergraduate of the College.

And a prize of *fifty dollars*, called the Under-Graduates' Prize, for the best Essay by any member of the Senior or Junior Class of the College.

For the academical year 1864-65 the Under-Graduates' Prize is offered.

The Essays must be written upon good letter-paper, of the ordinary quarto size, with a margin of not less than one inch at the top and bottom and on each side, and the leaves securely stitched together. No Essay shall exceed in length twenty-five printed pages of the *North American Review*.

The subjects of the essays shall be optional with the writers.

The Under-Graduates' Prize for 1863 was conferred upon JOSEPH G. PINKHAM, of the Graduating Class of that year.

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## Situation of the College.

The College has a remarkably pleasant and healthy location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. The buildings are situated on a lawn of fifty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at

the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, ELIZABETH B. HOPKINS.

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## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms; the first Term, beginning nine weeks after Commencement, and continuing twenty weeks—and the second Term of twenty weeks, beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations—one of nine weeks in the Summer—and one of three weeks in the Winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that “The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society.”

The price of Board and Tuition is \$350 per annum, payable as follows:—\$100 at the beginning of each Term, and \$75 at the middle of it.

## Graduates.

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1836.

Thomas F. Cock, M. D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith,	Philadelphia,	Pa.
B. Wyatt Wistar,	Philadelphia,	Pa.

1838.

James V. Emlen, M. D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, A. M., M. D.,	Philadelphia,	Pa.
Nereus Mendenhall, M. D.,	Guilford Co.	N. C.
Richard Randolph, Jr., M. D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
John R. Winslow, M. D.,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M. D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M. D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M. D.	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

\* Obiit.

## 1845.

Edmund Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A. M.,	Vassalborough,	Me.
Alfred H. Smiley, A. M.,	Vassalborough,	Me.

## 1851.

Joseph L. Bailey,	Berks Co.,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A. M.,	Weare,	N. H.
Zaccheus Test, M. D., A. M.,	Richmond,	Ind.
James C. Thomas, M. D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M. D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whittall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A. M.,	Raysville,	Ind.
William H. Pancoast, M. D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

\* Obiit.



## 1855.

*Samuel Bettle,	Philadelphia,	Pa.
John R. Hubbard, A. M.,	New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,	Philadelphia,	Pa.
Joel Cadbury, Jr.,	Philadelphia,	Pa.
Jonathan J. Comfort, M. D.,	Tecumseh,	Mich.
James M. Walton,	Philadelphia,	Pa.
Edward R. Wood, A. M.,	Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A. M.,	Thornbury,	Pa.
†Cyrus Mendenhall,	Plainfield,	Ind.
Stephen Wood,	Bedford,	N. Y.

## 1858.

Thomas H. Burgess,	Harveysburg,	Ohio.
Thomas Clark,	Carthage,	Ind.
Daniel W. Hunt,	Annapolis,	Ind.
Samuel T. Satterthwaite,	Chesterfield,	N. J.
William G. Tyler,	Salem,	N. J.
Thomas Wistar, A. M., M. D.,	Philadelphia,	Pa.
Ellis H. Yarnall,	Philadelphia,	Pa.

## 1859.

‡Richard W. Chase,	Burlington,	N. J.
James R. Magee,	Philadelphia,	Pa.
§Richard C. Paxson,	San Francisco,	Cal.
Edward Rhoads, M. D.,	Philadelphia,	Pa.
Edward C. Sampson,	Manchester,	Me.
George Sampson,	Manchester,	Me.
Abram Sharples, M. D.,	Ivy Mills,	Pa.
Benjamin H. Smith,	Upper Darby,	Pa.

\* Obiit 1859.

† Obiit 1858.

‡ Obiit 1862.

§ Obiit 1864.

## 1860.

*Lindley M. Clark,	Carthage,	Ind.
William B. Corbit, M. D.,	Odessa,	Del.
William M. Corlies,	Philadelphia,	Pa.
Cyrus Lindley,	Monrovia,	Ind.
Theodore H. Morris,	Philadelphia,	Pa.
Frederick W. Morris,	Philadelphia,	Pa.
Richard Pancoast,	Philadelphia,	Pa.
John W. Pinkham,	North Vassalborough,	Me.
Francis Richardson,	Philadelphia,	Pa.
Clement L. Smith, A. M.,	Upper Darby,	Pa.
James Tyson, M. D.,	Reading,	Pa.
Silas A. Underhill, LL. B.,	Brooklyn,	N. Y.

## 1861.

Edward Bettle,	Philadelphia,	Pa.
Henry Bettle,	Philadelphia,	Pa.
Charles Bettle,	Philadelphia,	Pa.
William B. Broomall,	Media,	Pa.
Charles H. Jones,	Tamaqua,	Pa.
Thomas W. Lamb,	Newby's Bridge,	N. C.
William N. Potts,	Philadelphia,	Pa.
Jehu H. Stuart, A. M.,	Westminster,	N. C.
John C. Thomas,	Baltimore,	Md.

## 1862.

Henry T. Coates,	Philadelphia,	Pa.
Samuel A. Hadley,	Osceola,	Iowa.
George B. Mellor,	Philadelphia,	Pa.
Horace Williams,	Newport,	R. I.
F. Augustus Wood,	New York,	N. Y.

\* Obiit 1861.

## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
Richard T. Jones,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham,	Manchester,	Me.

## 1864.

Franklin Angell,	South Corinth,	N. Y.
William Ashbridge,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
E. Pope Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

Whole number of Graduates, 132.

## Honorary Degrees.

1858.

Hugh D. Vail, A. M.,            Plainfield,            N. J.

1859.

Joseph W. Aldrich, A. M.,    Philadelphia,       Pa.

1860.

John G. Whittier, A. M.,      Amesbury,           Mass.

1864.

Edward D. Cope, A. M.,       Caln,               Pa.

## REMARKS

UPON THE

*Courses of Study and the Discipline.*

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## MORAL, POLITICAL, AND NATURAL SCIENCE.

IN these Departments the method of instruction aims at making the lessons, whatever the subject, as nearly practical as possible. In Moral or Political Science, for example, the principle is illustrated and enforced by applying it to the practices and the wants of every-day life. If the subject be Natural Science, the student is brought into direct communication with the objects studied; so that nature becomes her own interpreter; her great volume supplying abundant types and analogies to illustrate the teachings of the class-book.

The facilities for this kind of instruction, already in possession of the College, are highly creditable, and are annually becoming more ample; the Mineralogical Cabinet, for example, contains 2700 specimens, and the Geological Cabinet about 2500; together, over 5000. In Zoology less has been done; yet a beginning has been made, and many valuable specimens are already in the Cabinet. These collections, together with illustrations by diagrams, models, and maps, and occasional excursions in the neighboring country, enable the Professor to occupy the time allotted to these studies, in a manner at the same time profitable and pleasant to the student, and satisfactory to himself.

The course in Chemistry embraces recitations in Inorganic



Chemistry, occupying the greater part of one term, and accompanied with daily exercise in a Laboratory fitted up for this purpose, and well furnished with material and apparatus. Here students are required to conduct with their own hands, under the direction and supervision of the Professor, experiments illustrative of the day's lesson; thus familiarizing them, by actual practice, with the principles and laws of the science, as well as securing dexterity in manipulation. The study of the Physics of Chemistry, and of Organic Chemistry occupies a considerable portion of another term, and is accompanied with experiments.

### COMPARATIVE ZOOLOGY AND BOTANY.

The course of Organic Science embraces a series of lectures by Professor Cope, on these subjects, illustrated by specimens, models, and diagrams. Notes taken on these lectures by the students are criticized, or examination upon the subject of them is held. The series is arranged in the following succession:—

The relations of individual beings as species—as inferior or superior organisms, etc.

The situation of individuals on the earth as regards climate, food, topographical position, etc.

Sketch of anatomy in general, followed by a detailed series on human anatomy.

On resemblances and differences, homologies, etc.

The peculiar characteristics of the primary types or branches of the animal kingdom.

The vertebrata in general, and in its primary divisions.

The peculiarities and successive modifications of systems of organs in these primary groups: first, the osseous, then the circulatory, the nervous, the respiratory, etc.

The successive appearance of these groups in time.

The divisions of the primary groups—the families, genera,

etc. ; their peculiarities and relations, as living or extinct : their distribution on the earth.

The Articulata, Mollusca, Radiata, and Protozoa, to receive a similar explanation.

A classification of tissues, and a physiological course on their functions, and those of the organs they compose.

Embryology, metamorphoses, and parthenogenesis.

Finally, a short series on Anthropology ; the human races, living and extinct.

The characteristics of the primary divisions of plants.

The more detailed anatomy and homologies of the vegetable kingdom.

The botanical series will be similar to the zoological, embracing, like it, the histology, physiology, and palæontology of the subject.

As far as possible, the students will be exercised in examinations of specimens or models, and determinations from them.

## HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson ; the pupil being required to come to his recitation prepared to delineate upon the black-board the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature—the history of a people and their geographical position—he is greatly assisted in acquiring, and especially in retaining, a knowledge of both.

## PHILOSOPHY AND BELLES-LETTRES.

The recitations in Psychology, Logic, Rhetoric, and the history of the English language, are conducted by Professor

Chase. The effort is made, in presenting the different subjects, to stimulate thought, and train the mind to exactness and vigor. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

### GREEK AND LATIN CLASSICS.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons.

### MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. The students are allowed to perform experiments themselves, under the direction of the Professor. The well-furnished Observatory presents peculiar advantages for the study of Astronomy.

### DRAWING.

Instruction in Perspective and Mechanical Drawing is given by a competent teacher.

### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament, except during a part of one term, in which Gurney's Observations are studied.

### DISCIPLINE.

In the discipline of the College, while the officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feelings and Christian principle, are the means most relied upon.

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CATALOGUE

OF THE

Officers and Students

OF

HAVERFORD COLLEGE.

1865-66.

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A

CATALOGUE

OF THE

Officers and Students

OF

HVERFORD COLLEGE,

FOR THE

ACADEMICAL YEAR

1865-66.

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PHILADELPHIA:

MERRIHEW & SON, PRINTERS.

No. 243 Arch Street.

1865.

# Corporation.

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TREASURER,

JOHN M. WHITALL.

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HENRY HARTSHORNE, M. D.,	DAVID SCULL, JR.

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CHARLES YARNALL.

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JEREMIAH HACKER,	HENRY HARTSHORNE, M. D.,
JOHN M. WHITALL,	BENJAMIN V. MARSH,
HARRISON ALDERSON,	JOSEPH W. TAYLOR, M. D.,
WILLIAM S. HILLES,	ANTHONY M. KIMBER,
JAMES WHITALL,	THOMAS P. COPE,
JAMES E. RHOADS, M. D.	

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WILLIAM S. HILLES,	BENJAMIN V. MARSH,
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JAMES WHITALL.	

**Committee on Investments.**

BENJAMIN V. MARSH,	T. WISTAR BROWN.
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## Faculty.

SAMUEL J. GUMMERE, A. M.,  
PRESIDENT.

THOMAS CHASE, A. M.,  
PROFESSOR OF CLASSICS AND BELLES-LETTRES.

SAMUEL J. GUMMERE, A. M.,  
PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

EDWARD D. COPE, A. M.,  
PROFESSOR OF COMPARATIVE ZOOLOGY AND BOTANY.

JOHN H. DILLINGHAM, A. M.,  
ADJUNCT PROFESSOR OF CLASSICS AND BELLES-LETTRES, AND  
LIBRARIAN.

WILLIAM WETHERALD,  
SUPERINTENDENT.

*Undergraduates.*

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**SENIOR CLASS.**

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NAMES.	RESIDENCE.
Elliott, Aaron Marshall	Jamestown, N. C.
Valentine, Benjamin Eyre	Salem, Mass.

## JUNIOR CLASS.

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NAMES.	RESIDENCE.
Ashbridge, John	West Whiteland, Pa.
Ashbridge, George	West Whiteland, Pa.
Chase, Robert Howland	Union Springs, N. Y.
Clark, William Penn	Centre Valley, Ind.
Collins, Samuel Craft	Morrisville, Pa.
Crenshaw, Nathaniel Bacon	Richmond, Va.
Darlington, Charles Howard	Davenport, Iowa.
De Cou, Franklin	Yardville, N. J.
Dorsey, William Tagart	Baltimore, Md.
Eshleman, B. Franklin	Lancaster, Pa.
Jones, Richard Mott	Dirigo, Me.
Sharpless, Charles Williams	Philadelphia, Pa.
Swift, William L.	Hart's Village, N. Y.
Wood, Walter	Philadelphia, Pa.

## SOPHOMORE CLASS.

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NAMES.	RESIDENCE.	
Abbott, Charles Tucker	Salem,	N. J.
Coffin, Elijah	Richmond,	Ind.
Cook, Edward Hanson	North Vassalboro', Me.	
Cope, Alexis Thomas	Philadelphia,	Pa.
Cope, Henry	Philadelphia,	Pa.
Haines, Zebedee	Medford,	N. J.
Heulings, Isaac W.	Moorestown,	N. J.
Holme, Richard Henry	Salem,	N. J.
Pinkham, Gilbert Latey	Salem,	Ohio.
Starr, Louis	Philadelphia,	Pa.
Satterthwaite, Benjamin		
Cadwallader	Oxford Valley,	Pa.
Thompson, David Allen	Salem,	N. J.
Tomlinson, Samuel Finley	Bloomington,	N. C.



## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Congdon, Johns Hopkins	Providence,	R. I.
Haines, Lindley	Philadelphia,	Pa.
Longstreth, Benjamin Taylor	Philadelphia,	Pa.
Pearson, George	Mercer,	Pa.
Taylor, William Shipley	Cincinnati,	Ohio.
Walton, William Kite	Philadelphia,	Pa.
Wistar, Bartholomew	Philadelphia,	Pa.
Wood, Charles	Mt. Kisco,	N. Y.

**SUMMARY.**

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Seniors, . . . . .	2
Juniors, . . . . .	14
Sophomores, . . . . .	13
Freshmen, . . . . .	8
	—
Total, . . . . .	37

## Calendar.

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Winter Term, 1865-66, began . . .	9th mo. 13.
Winter Term, 1865-66, ends . . .	1st mo. 31.
Summer Term, 1866, begins . . .	2d mo. 21.
Summer Term, 1866, ends . . .	7th mo. 11.
Biennial Examinations, 1866, begin .	5th mo. 28.
Oration before Loganian Society, 1866	1st mo. 30.
Junior Exhibition, 1866 . . . . .	1st mo. 31.
Address before Alumni, 1865 . . .	10th mo. 14.
Public Meeting of Loganian Society, 1866,	7th mo. 10.
Commencement, 1866, . . . . .	7th mo. 11.
Examinations for Admission, 1866, {	2d mo. 20.
	9th mo. 11.
Winter Term, 1866-67, begins . . .	9th mo. 12.

## Requisites for Admission.

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Candidates for admission to the Freshman Class are examined in the following books, (for any of which, however, *real* equivalents will be accepted):—

### CLASSICAL DEPARTMENT.

Andrews and Stoddard's, or Harkness's Latin Grammar.

Cæsar's Commentaries.

Virgil's Eclogues.

Cicero's Orations against Catiline,  
and the first twenty exercises in Arnold's Latin Prose Composition.

Sophocles's, Crosby's, or Hadley's Greek Grammar.

Felton's or Jacob's Greek Reader,  
and the first fifteen exercises in Arnold's Greek Prose Composition, (to be written with the accents.)

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic.

Alsop's First Lessons in Algebra,  
and the first two books of Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar.

Mitchell's Ancient and Modern Geography,  
and Worcester's Elements of History.

The candidates must be well prepared, also, in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, CHARLES YARNALL, No. 109 North Tenth Street, Philadelphia. Candidates will present themselves at the College, for examination by the Faculty, the morning preceding the opening of the term.

Students may be admitted to ADVANCED STANDING when they can pass a satisfactory examination in all the previous studies of the course.

## Course of Study.

### FRESHMAN CLASS.

#### MATHEMATICS.

Geometry, . . . .	<i>Euclid.</i>
Algebra, . . . .	<i>Alsop.</i>
Plane Trigonometry, . . . .	<i>Gummere.</i>
Surveying, . . . .	<i>Gummere.</i>

#### GREEK AND LATIN.

The Anabasis of Xenophon, . . . .	<i>Crosby.</i>
Herodotus, . . . .	<i>Johnson.</i>
Greek Syntax, . . . .	<i>Crosby or Hadley.</i>
Greek Prose Composition continued, . . . .	<i>Arnold.</i>
Virgil, . . . .	<i>Schmitz or Frieze.</i>
Cicero, . . . .	<i>Folsom or Johnson.</i>
Latin Syntax and Prosody.	
Latin Prose Composition continued, . . . .	<i>Arnold.</i>
Classical Geography and Antiquities, . . . .	<i>Kiepert and Smith.</i>

#### ENGLISH.

Compositions.	
Universal History, . . . .	<i>Weber.</i>
Chemistry, . . . .	<i>Stoeckhardt.</i>
Geology commenced, . . . .	<i>Dana.</i>
Physiology, . . . .	<i>Hooker.</i>

## SOPHOMORE CLASS.

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### MATHEMATICS.

Surveying, continued, . . . . .	<i>Gummere.</i>
Spherical Trigonometry, Conic Sections, and Spherical Projections, . . . . .	<i>Lewis.</i>
Physics, . . . . .	<i>Loomis.</i>
Astronomy, . . . . .	<i>Herschel.</i>

### GREEK AND LATIN.

The Iliad of Homer, . . . . .	<i>Felton or Owen.</i>
Plato's Apology and Crito, . . . . .	<i>Tyler.</i>
Greek Composition.	
Livy, . . . . .	<i>Lincoln.</i>
The Odes of Horace.	
Latin Composition.	

### ENGLISH.

Geology continued, . . . . .	<i>Dana.</i>
Physical Geography, . . . . .	<i>Guyot.</i>
Organic Chemistry, . . . . .	<i>Johnston.</i>
Evidences of Christianity, . . . . .	<i>Paley.</i>
Comparative Zoology and Botany, . . . . .	<i>By Lectures.</i>
Themes.	



## JUNIOR CLASS.

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### MATHEMATICS.

Astronomy, continued, . . . . .	<i>Herschel.</i>
Analytical Geometry, . . . . .	<i>Davies.</i>
Differential and Integral Calculus, . . . . .	<i>Davies.</i>

### GREEK AND LATIN.

The Prometheus Bound of Æschylus.	
Demosthenes or Isocrates.	
Thucydides, . . . . .	<i>Owen.</i>
Greek Composition.	
Horace, . . . . .	<i>Lincoln.</i>
The Germania and Agricola of Tacitus,	<i>Tyler.</i>
The Captivi of Plautus.	
Latin Exercises and Extemporalia.	
Greek Testament, . . . . .	<i>Tischendorf.</i>

### ENGLISH.

Philological Study of the English Lan- guage, . . . . .	<i>March's Method.</i>
Rhetoric, . . . . .	<i>Whately.</i>
Logic { the Aristotelian system, . . . . .	<i>Whately.</i>
the Hamiltonian system, . . . . .	<i>By Lectures.</i>
Political Economy, . . . . .	<i>Wayland.</i>
The Law of Nations and American Law,	<i>Kent.</i>
Comparative Zoology and Botany, . . . . .	<i>By Lectures.</i>
Themes.	

## SENIOR CLASS.

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### MATHEMATICS.

Analytical Mechanics.

Optics, . . . . . *Snell's Olmsted.*

Practical Astronomy, *Loomis, with practice in the  
Observatory.*

### GREEK AND LATIN.

Thucydides, . . . . . *Owen.*

The Antigone of Sophocles, . . . *Woolsey.*

Greek Composition.

Cicero's Tusculan Disputations, and  
Somnium Scipionis, . . . . . *Chase.*

The Letters of Pliny the Younger.

Cicero de Officiis.

Latin Themes and Extemporalia.

Greek Testament, . . . . . *Tischendorf.*

Modern Greek, . . . . . *By Lectures.*

### ENGLISH.

Ethics . . . . . *Dymond.*

Analogy of Natural and Revealed Re-  
ligion, . . . . . *Butler.*

Gurney's Observations.

History of Modern Civilization, . . *Guizot.*

Lectures on Modern History, . . . *Arnold.*

Psychology, . . . . . *Haven.*

Histology and Development, . . . *By Lectures.*

Forensics.

---

Instruction is given to the Senior and Junior  
Classes in FRENCH and GERMAN.

### Lectures.

THE Special Courses of Lectures to the whole College, for the Winter of 1865-66, are as follows:—

*The History of Astronomy,* PRESIDENT GUMMERE.

*The English Poets of the Nineteenth Century,* . . . . PROFESSOR CHASE.

*Palæography, with special reference to the Manuscripts of the New Testament,* . . PROFESSOR CHASE.

### Examinations.

IN determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of each Summer Term there is a private examination, in writing, of the Sophomore and of the Senior Classes: of the former, upon the studies of the first two years of the course, preparatory to advancement to the Junior Class; and of the latter, upon those of the last two years, for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing,

for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the Junior Class, or receive the diploma of Bachelor of Arts.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

---

### Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Managers

and Faculty. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. The fee for the diploma is Five Dollars.

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### Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eyepieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations. The Observatory is lighted and the instruments illuminated with gas.

### Library and Apparatus.

THE LIBRARY of the College contains 3,488 volumes ; that of the Loganian Society 1,600, making the whole number of books in the two Libraries 5,088.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College has recently received, from generous Friends in England, the valuable gift of a copy of the splendid edition of the Codex Sinaiticus, published by the Emperor of Russia.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suites illustrating the Geology of New York and South Carolina, prepared for the College by the late Prof. Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished LABORATORY, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor of Chemistry.

### Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of about 1600 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large and well-furnished GYMNASIUM, also, is under its direction.

In the last year a handsome revolving stereoscope, holding one hundred pictures, purchased by a subscription among the active members of the Society, was placed in the Library; a fine oil-painting ~~of~~ a copy of the portrait of JAMES LOGAN, has been bought for the Society by the generous contributions of old members, and a considerable addition is now making to the Library from the same source.

THE ATHENÆUM and EVERETT are literary societies of the students.

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### Alumni Prize Essays.

Prizes are offered by the Alumni Association for English Essays, on alternate years, as follows:

A Prize of *one hundred dollars*, called the Alumni Prize, for the best Essay by any member of the Association or under-graduate of the College.



And a Prize of *fifty dollars*, called the Under-Graduates' Prize, for the best Essay by any member of the Senior or Junior Class of the College.

For the academical year 1865-66 the Alumni Prize is offered.

The Essays must be written upon good letter-paper, of the ordinary quarto size, with a margin of not less than one inch at the top and bottom and on each side, and the leaves securely stitched together. No Essay shall exceed in length twenty-five printed pages of the North American Review.

The subjects of the Essays shall be optional with the writers.

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### Situation of the College.

The College has a remarkably pleasant and healthy location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. The buildings are situated on a lawn of fifty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, Edith Collins.

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### Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EX-

HIBITION is on the last day of the first term. There are two terms ; the first Term, beginning nine weeks after Commencement, and continuing twenty weeks—and the second Term of twenty weeks, beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations—one of nine weeks in the Summer—and one of three weeks in the Winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that “The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society.”

The price of Board and Tuition is \$350 per annum, payable as follows :—\$175 at the beginning of each Term.

### Graduates.

1836.

Thomas F. Cock, M. D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith,	Philadelphia,	Pa.
B. Wyatt Wistar,	Philadelphia,	Pa.

1838.

James V. Emlen, M. D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M.D., A.M.,	Philadelphia,	Pa.
Nereus Mendenhall, M. D.,	Guilford Co.,	N. C.
Richard Randolph, Jr., M. D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
John R. Winslow, M. D.,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	N. Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M. D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M. D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	N. Carolina,	N. C.
William D. Stroud, M. D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

\* Obiit.

1845.

Edmund Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

1849.

Albert K. Smiley, A. M.,	Vassalboro',	Me.
Alfred H. Smiley, A. M.,	Vassalboro',	Me.

1851.

Joseph L. Bailey,	Berks Co.,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A. M.,	Weare,	N. H.
Zaccheus Test, M. D., A. M.,	Richmond,	Ind.
James C. Thomas, M. D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

1852.

Dougan Clark, M. D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whitall,	Philadelphia,	Pa.

1853.

William B. Morgan, A. M.,	Raysville,	Ind.
William H. Pancoast, M. D.,	Philadelphia,	Pa.

1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

\* Obiit.

## 1855.

*Samuel Bettle,	Philadelphia,	Pa.
John R. Hubbard, A. M.,	New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,	Philadelphia,	Pa.
Joel Cadbury, Jr.,	Philadelphia,	Pa.
Jonathan J. Comfort, M. D.,	Tecumseh,	Mich.
James M. Walton,	Philadelphia,	Pa.
Edward R. Wood, A. M.,	Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A. M.,	Thornbury,	Pa.
†Cyrus Mendenhall,	Plainfield,	Ind.
Stephen Wood,	Bedford,	N. Y.

## 1858.

Thomas H. Burgess,	Harveysburg,	Ohio.
Thomas Clark,	Carthage,	Ind.
Daniel W. Hunt,	Annapolis,	Ind.
Samuel T. Satterthwaite,	Chesterfield,	N. J.
William G. Tyler,	Salem,	N. J.
Thomas Wistar, A.M., M.D.,	Philadelphia,	Pa.
Ellis H. Yarnall,	Philadelphia,	Pa.

## 1859.

‡Richard W. Chase,	Burlington,	N. J.
James R. Magee,	Philadelphia,	Pa.
§Richard C. Paxson,	San Francisco,	Cal.
Edward Rhoads, M. D.,	Philadelphia,	Pa.
Edward C. Sampson,	Manchester,	Me.

\* Obiit 1859. † Obiit 1858. ‡ Obiit 1862. § Obiit 1864.

George Sampson,	Manchester,	Me.
Abram Sharples, M. D.,	Ivy Mills,	Pa.
Benjamin H. Smith,	Upper Darby,	Pa.

1860.

*Lindley M. Clark,	Carthage,	Ind.
William B. Corbit, M. D.,	Odessa,	Del.
William M. Corlies,	Philadelphia,	Pa.
Cyrus Lindley,	Monrovia,	Ind.
Theodore H. Morris,	Philadelphia,	Pa.
Frederick W. Morris,	Philadelphia,	Pa.
Richard Pancoast,	Philadelphia,	Pa.
John W. Pinkham,	N. Vassalboro',	Me.
Francis Richardson,	Philadelphia,	Pa.
Clement L. Smith, A. M.,	Upper Darby,	Pa.
James Tyson, M. D., A. M.,	Reading,	Pa.
Silas A. Underhill, LL. B.,	Brooklyn,	N. Y.

1861.

Edward Bettle,	Philadelphia,	Pa.
Henry Bettle,	Philadelphia,	Pa.
Charles Bettle,	Philadelphia,	Pa.
William B. Broomall,	Media,	Pa.
Charles H. Jones,	Tamaqua,	Pa.
Thomas W. Lamb,	Newby Bridge,	N. C.
William N. Potts,	Philadelphia,	Pa.
Jehu H. Stuart, A. M.,	Westminster,	N. C.
John C. Thomas,	Baltimore,	Md.

1862.

Henry T. Coates,	Philadelphia,	Pa.
†Samuel A. Hadley,	Osceola,	Iowa.

\* Obiit 1861.

† Obiit 1864.



George B. Mellor,	Philadelphia,	Pa.
Horace Williams, M. D.,	Newport,	R. I.
F. Augustus Wood,	New York,	N. Y.

1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
Richard T. Jones,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham,	Manchester,	Me.

1864.

Franklin Angell,	South Corinth,	N. Y.
William Ashbridge,	W. Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
E. Pope Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

1865.

John R. Bringhurst,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	W. Whiteland,	Pa.
David H. Nichols,	E. Vassalboro',	Me.

3\*

Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.

Whole number of Graduates, 142.

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### Honorary Degrees.

1858.

Hugh D. Vail, A. M.,	Plainfield,	N. J.
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1859.

*Joseph W. Aldrich, A. M.,	Philadelphia,	Pa.
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1860.

John G. Whittier, A. M.,	Amesbury,	Mass.
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1864.

Edward D. Cope, A. M.,	Caln,	Pa.
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\* Obiit 1865.

## REMARKS

UPON THE

*Courses of Study and the Discipline.*

## NATURAL SCIENCE.

In this Department the student is brought, as far as possible, into direct communication with the objects studied; so that nature becomes her own interpreter; her great volume supplying abundant types and analogies to illustrate the teachings of the class-book.

The facilities for this kind of instruction already in possession of the College, are highly creditable, and are annually becoming more ample; the Mineralogical Cabinet, for example, contains 2700 specimens, and the Geological Cabinet about 2500. These collections, together with illustrations by diagrams, models, and maps, and occasional excursions in the neighboring country, enable the Professor to occupy the time allotted to these studies, in a manner at the same time profitable and pleasant to the student, and satisfactory to himself.

The course in Chemistry embraces recitations in Inorganic Chemistry, occupying the greater part of one term, and accompanied with daily exercise in a Laboratory fitted up for this purpose, and well furnished with material and apparatus. Here students are required to conduct with their own hands, under the direction and supervision of the Professor, experiments illustrative of the day's lesson; thus fa-

miliarizing them, by actual practice, with the principles and laws of the science, as well as securing dexterity in manipulation. The study of the Physics of Chemistry, and of Organic Chemistry, occupies a considerable portion of another term, and is accompanied with experiments.

### COMPARATIVE ZOOLOGY AND BOTANY.

The course of Organic Science embraces a series of lectures by Professor Cope, on these subjects, illustrated by specimens, models, and diagrams. Notes taken on these lectures by the students are criticised, or examination upon the subject of them is held. The series is arranged in the following succession:—

The relations of individual beings as species—as inferior or superior organisms, etc.

The situation of individuals on the earth as regards climate, food, topographical position, etc.

Sketch of anatomy in general, followed by a detailed series on human anatomy.

On resemblances and differences, homologies, etc.

The peculiar characteristics of the primary types or branches of the animal kingdom.

The vertebrata in general, and in its primary divisions.

The peculiarities and successive modifications of systems of organs in these primary groups: first, the osseous, then the circulatory, the nervous, the respiratory, etc.

The successive appearance of these groups in time.

The divisions of the primary groups—the families,

genera, etc.; their peculiarities and relations, as living or extinct: their distribution on the earth.

The Articulata, Mollusca, Radiata, and Protozoa, to receive a similar explanation.

A classification of tissues, and a physiological course on their functions, and those of the organs they compose.

Embryology, metamorphoses, and parthenogenesis.

Finally, a short series on Anthropology; the human races, living and extinct.

The characteristics of the primary divisions of plants.

The more detailed anatomy and homologies of the vegetable kingdom.

The botanical series is similar to the zoological, embracing, like it, the histology, physiology, and palæontology of the subject.

As far as possible, the students are exercised in examinations of specimens or models, and determinations from them.

## HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the black-board the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature—the history of a people and their geographi-

cal position—he is greatly assisted in acquiring, and especially in retaining, a knowledge of both.

#### PHILOSOPHY AND BELLES-LETTRES.

The recitations in Psychology, Logic, Rhetoric, and the history of the English language, are conducted by Professor Chase. The effort is made, in presenting the different subjects, to stimulate thought, and train the mind to exactness and vigor. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

#### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

#### GREEK AND LATIN CLASSICS.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as

well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Stuart's Athens, Canina's Rome, Kiepert's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

### MATHEMATICS, PHYSICS, & ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well furnished Observatory, of which the members of the Senior class are required



to avail themselves so far as to become practically familiar with the management of the principal instruments.

#### DRAWING.

Instruction in Perspective and Mechanical Drawing will be given by a competent teacher.

#### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament, except during a part of one term, in which Gurney's Observations are studied. Paley's Evidences and Butler's Analogy form a part of the regular course of study.

#### DISCIPLINE.

In the discipline of the College, while the officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feelings and Christian principle, are the means most relied upon.







A

CATALOGUE

OF THE

Officers and Students

OF

HAVERFORD COLLEGE,

FOR THE

ACADEMICAL YEAR

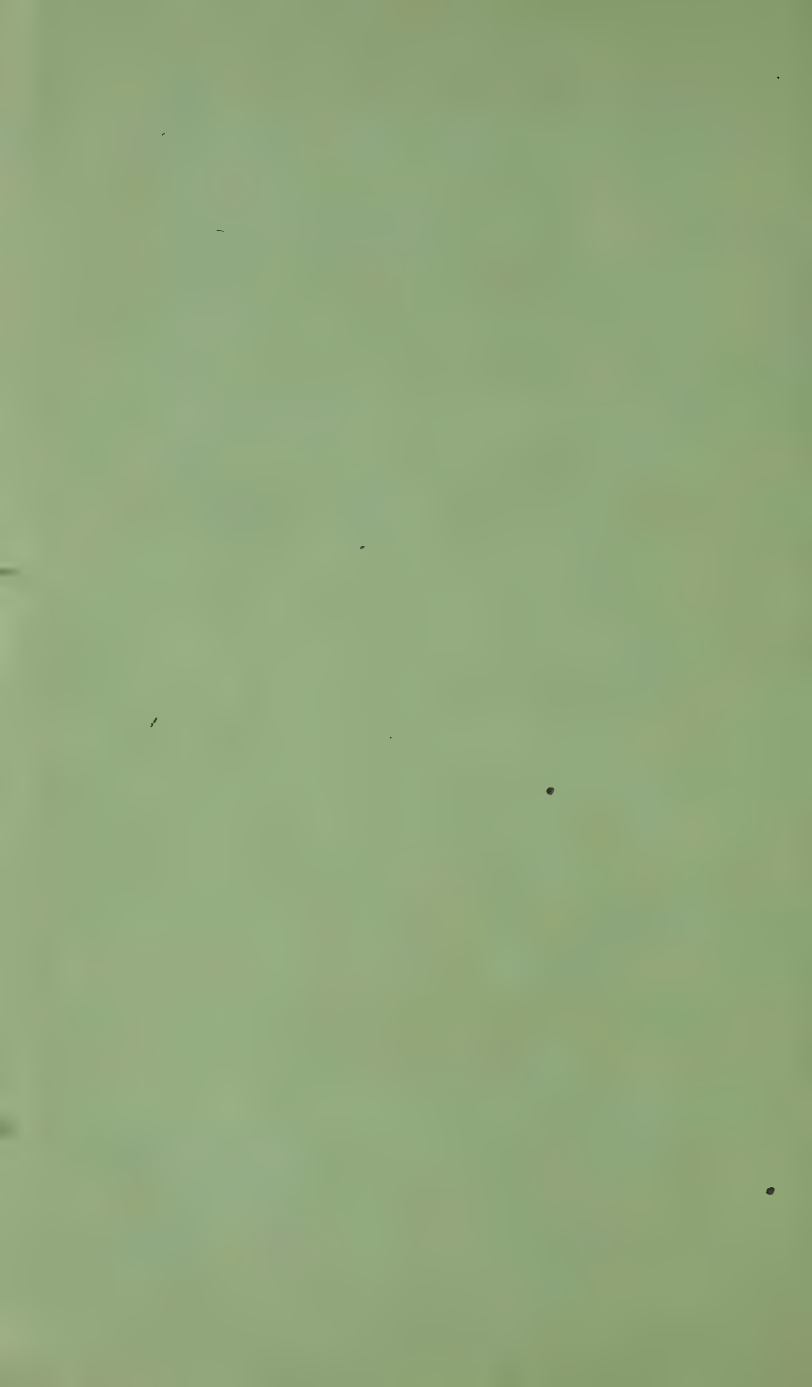
1866-67.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1866.



A

CATALOGUE

OF THE

Officers and Students

OF

H A V E R F O R D C O L L E G E,

FOR THE

A C A D E M I C A L Y E A R

1866-67.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1866.

# Corporation.

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*Secretary,*

PHILIP C. GARRETT.

*Treasurer,*

DAVID SCULL, JR.

## MANAGERS:

CHARLES YARNALL,	JAMES WHITALL,
JOHN FARNUM,	HUGH D. VAIL, A. M.,
SAMUEL HILLES,	JAS. CAREY THOMAS, M. D.,
GEORGE HOWLAND, A. M.,	BENJAMIN V. MARSH,
JEREMIAH HACKER,	PHILIP C. GARRETT,
JOHN M. WHITALL,	WILLIAM C. LONGSTRETH,
ANTHONY M. KIMBER,	THOMAS P. COPE,
WISTAR MORRIS,	SAMUEL ALLINSON,
T. WISTAR BROWN,	JAMES E. RHOADS, M. D.,
JOSEPH W. TAYLOR, M. D.,	WILLIAM EVANS, JR.,
HARRISON ALDERSON,	RICHARD CADBURY,
WILLIAM S. HILLES,	DAVID SCULL, JR.,
HENRY HARTSHORNE, M. D.,	GEORGE S. GARRETT.

*Secretary of the Board,*

JAMES WHITALL.

## Committee on Instruction.

CHARLES YARNALL,	HUGH D. VAIL,
JEREMIAH HACKER,	BENJAMIN V. MARSH,
JNO. M. WHITALL,	JOSEPH W. TAYLOR, M. D.,
HARRISON ALDERSON,	ANTHONY M. KIMBER,
WILLIAM S. HILLES,	THOMAS P. COPE,
JAMES WHITALL,	JAMES E. RHOADS, M. D.,
	WILLIAM EVANS, JR.

## Committee on Finance and Economy.

ANTHONY M. KIMBER,	JAMES WHITALL,
T. WISTAR BROWN,	RICHARD CADBURY.

## Committee on Farm.

HUGH D. VAIL,	WILLIAM C. LONGSTRETH,
	GEORGE S. GARRETT.

## Committee on Houses and Grounds.

JOSEPH W. TAYLOR, M. D.,	HUGH D. VAIL,
THOMAS P. COPE,	DAVID SCULL, JR.

## Committee on Library and Apparatus.

CHARLES YARNALL,	HENRY HARTSHORNE, M. D.,
WILLIAM S. HILLES,	BENJAMIN V. MARSH,
HUGH D. VAIL,	PHILIP C. GARRETT,
	JAMES E. RHOADS, M. D.

## Committee on Admissions.

JOHN M. WHITALL,	JAMES C. THOMAS, M. D.,
GEORGE HOWLAND,	THOMAS P. COPE,
	JAMES WHITALL.

## Committee on Investments.

BENJAMIN V. MARSH,	T. WISTAR BROWN,
	JOHN M. WHITALL.

## Faculty.

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SAMUEL J. GUMMERE, A. M.,

PRESIDENT.

THOMAS CHASE, A. M.,

PROFESSOR OF CLASSICAL AND ENGLISH LITERATURE.

SAMUEL J. GUMMERE, A. M.,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

EDWARD D. COPE, A. M.,

PROFESSOR OF NATURAL SCIENCE, CHEMISTRY, ETC.

JOHN H. DILLINGHAM, A. M.,

SUPERINTENDENT, AND ADJUNCT-PROFESSOR OF GREEK AND LATIN.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Ashbridge, John	West Whiteland,	Pa.
Ashbridge, George	West Whiteland,	Pa.
Clark, William Penn	Monrovia,	Ind.
Collins, Samuel Craft	Morrisville,	Pa.
Crenshaw, Nathaniel Bacon	Richmond,	Va.
Darlington, Charles Howard	Chicago,	Ill.
De Con, Franklin	Yardville,	N. J.
Dorsey, William Tagart	Baltimore,	Md.

NAMES.	RESIDENCE.	
Eshleman, B. Franklin	Lancaster,	Pa.
Jones, Richard Mott	Dirigo,	Me.
Sharpless, Charles Williams	Philadelphia,	Pa.
Wood, Walter	Philadelphia,	Pa.

## JUNIOR CLASS.

NAMES.	RESIDENCE.
Cook, Edward Hanson	North Vassalborough, Me.
Cope, Alexis Thomas	Philadelphia, Pa.
Holme, Richard Henry	Salem, N. J.
Pinkham, Gilbert Latey	Muscatine, Iowa.
Satterthwaite, Benjamin Cad- wallader	Oxford Valley, Pa.
Starr, Louis	Philadelphia, Pa.
Tomlinson, Samuel Finley	Bush Hill, N. C.
Wills, Joseph Henry	Mt. Holly, N. J.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Congdon, Johns Hopkins	Providence,	R. I.
Cope, Henry	Philadelphia,	Pa.
Estes, Ludovic	Westfield,	Ind.
King, Pendleton	Oak Ridge,	N. C.
Longstreth, Benjamin Taylor	Philadelphia,	Pa.
Pearson, George	Mercer,	Pa.
Taylor, Edward Ballinger	Cinnaminson,	N. J.
Taylor, William Shipley	Burlington,	N. J.
Walton, William Kite	Philadelphia,	Pa.
Whitlock, James Gilbert	Richmond,	Va.
Wood, Walter	New Bedford,	Mass.
Wood, Henry	New Bedford,	Mass.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Brown, J. Stuart	Philadelphia,	Pa.
Carey, Thomas Kimber	Baltimore,	Md.
Comfort, Howard	Germantown,	Pa.
Delaplain, Louis Springer	Wheeling,	W. Va.
Griscom, William W.	Bristol,	Pa.
Levick, Samuel J., Jr.	Richland,	Pa.
Longstreth, Thomas Kimber	Philadelphia,	Pa.
Pratt, Charles Edward	Rochester,	N. H.
Rose, David Franklin	Chester,	Pa.
Steele, John Dutton	Coatesville,	Pa.
Wistar, Bartholomew	Philadelphia,	Pa.
Wood, Charles	Mt. Kisco,	N. Y.
Wood, Stuart	Philadelphia,	Pa.

## SUMMARY.

Seniors . . . . .	12
Juniors . . . . .	8
Sophomores . . . . .	12
Freshmen . . . . .	13
	—
Total . . . . .	45

## Calendar.

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Winter Term, 1866-67, began . . . . .	9th Mo. 12.
Address before Alumni, 1866 . . . . .	10th Mo. 27.
Oration before Loganian Society, 1867 . . . . .	1st Mo. 29.
Junior Exhibition, 1867 . . . . .	1st Mo. 30.
Winter Term, 1866-67, ends . . . . .	1st Mo. 30.

### VACATION OF THREE WEEKS.

Summer Term, 1867, begins . . . . .	2d Mo. 20.
Private Review, 1867, begins . . . . .	6th Mo. 10.
Annual Examinations, 1867, begin . . . . .	7th Mo. 1.
Public Meeting of the Loganian Society, 1867 . . . . .	7th Mo. 9.
Commencement, 1867 . . . . .	7th Mo. 10.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1867 . . . . .	{ 2d Mo. 19. { 9th Mo. 10.
Winter Term, 1867-68, begins . . . . .	9th Mo. 11

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted):—

### CLASSICAL DEPARTMENT.

Harkness's or Andrews and Stoddard's Latin Grammar.

Cæsar's Commentaries.

Virgil's Eclogues.

Cicero's Orations against Catiline,

and the first twenty exercises in Arnold's Latin Prose Composition.

Hadley's, Crosby's, or Sophocles's Greek Grammar.

Felton's or Jacob's Greek Reader,

and the first fifteen exercises in Arnold's Greek Prose Composition (to be written with the accents).

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,

Alsop's First Lessons in Algebra,

and the first two books in Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar,

Mitchell's Ancient and Modern Geography,

and Worcester's Elements of History.



The candidates must be well prepared also in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, JAMES WHITALL, No. 410 Race Street, Philadelphia. Candidates will present themselves at the College, for examination by the Faculty, the morning previous to the opening of the term.

Students may be admitted to ADVANCED STANDING, when they can pass a satisfactory examination in all the previous studies of the course.

## Course of Study.

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### FRESHMAN CLASS.

#### MATHEMATICS.

Geometry . . . . .	<i>Euclid.</i>
Algebra . . . . .	<i>Alsop.</i>
Plane Trigonometry . . . . .	<i>Gummere.</i>
Surveying . . . . .	<i>Gummere.</i>

#### GREEK AND LATIN.

The Anabasis of Xenophon . . . . .	<i>Crosby.</i>
Herodotus . . . . .	<i>Johnson.</i>
Greek Syntax . . . . .	<i>Hadley.</i>
Greek Prose Composition continued . . . . .	<i>Arnold.</i>
Virgil . . . . .	<i>Schmitz or Frieze.</i>
Cicero . . . . .	<i>Folsom or Johnson.</i>
Latin Syntax and Prosody.	
Latin Prose Composition continued . . . . .	<i>Arnold.</i>
Classical Geography and Antiquities . . . . .	<i>Kiepert and Smith.</i>

#### NATURAL SCIENCE.

Chemistry (with instruction in the laboratory) . . . . .	<i>Stoeckhardt.</i>
Geology commenced . . . . .	<i>Dana.</i>
Physiology . . . . .	<i>Hooker.</i>

#### ENGLISH.

Universal History . . . . .	<i>Weber.</i>
Rhetoric . . . . .	<i>Boyd.</i>
Compositions.	

## SOPHOMORE CLASS.

## MATHEMATICS.

Surveying continued . . . . .	<i>Gummere.</i>
Spherical Trigonometry, Conic Sections, and Spherical Projections . . . . .	<i>Lewis.</i>
Physics . . . . .	<i>Loomis.</i>
Astronomy . . . . .	<i>Herschel.</i>

## LANGUAGES.

The Iliad of Homer . . . . .	<i>Felton or Owen.</i>
Plato's Apology and Crito . . . . .	<i>Tyler.</i>
Greek Composition.	
Livy . . . . .	<i>Lincoln.</i>
The Odes of Horace . . . . .	<i>Zumpt.</i>
Latin Composition.	
Anglo-Saxon.	

## NATURAL SCIENCE.

Geology continued . . . . .	<i>Dana.</i>
Physical Geography . . . . .	<i>Guyot.</i>
Organic Chemistry . . . . .	<i>Johnston.</i>
Comparative Zoology and Botany . . . . .	<i>By Lectures.</i>

## ENGLISH.

Evidences of Christianity . . . . .	<i>Paley.</i>
Themes.	

## JUNIOR CLASS.

### MATHEMATICS.

Astronomy continued . . . . .	<i>Herschel.</i>
Analytical Geometry . . . . .	<i>Davies.</i>
Differential and Integral Calculus . . . . .	<i>Davies.</i>

### LANGUAGES.

The Prometheus Bound of Æschylus . . . . .	<i>Woolsey.</i>
Demosthenes or Plutarch.	
Greek Composition.	
Horace, Satires and Epistles.	
The Germania and Agricola of Tacitus . . . . .	<i>Tyler.</i>
The Captivi of Plautus . . . . .	<i>Brix.</i>
Latin Exercises and Extemporalia.	
Greek Testament . . . . .	<i>Tischendorf.</i>
French Grammar . . . . .	<i>Knapp.</i>
Fenelon's <i>Télémaque</i> .	

### NATURAL SCIENCE.

Biology . . . . .	<i>Clark.</i>
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### ENGLISH.

Philological Study of the English Language.	
Rhetoric . . . . .	<i>Whately.</i>
Logic { the Aristotelian system . . . . .	<i>Whately.</i>
{ the Hamiltonian system . . . . .	<i>By Lectures.</i>
Political Economy . . . . .	<i>Wayland.</i>
The Law of Nations, and American Law . . . . .	<i>Kent.</i>
Themes.	

## SENIOR CLASS.

## MATHEMATICS.

Analytical Mechanics.

Optics . . . . . *Snell's Olmsted.*Practical Astronomy . . . *Loomis, with practice in the  
Observatory.*

## LANGUAGES.

Thucydides . . . . . *Owen.*The Antigone of Sophocles . . . *Woolsey.*

Greek Composition.

Cicero's Tusculan Disputations, and Som-  
nium Scipionis . . . . . *Chase.*

Cicero's or Pliny's Letters.

Latin Themes and Extemporalia.

Greek Testament . . . . . *Tischendorf.*Modern Greek . . . . . *By Lectures.*German . . . *Woodbury's Grammar and Reader.*

## ENGLISH.

Ethics . . . . . *Dymond.*Analogy of Natural and Revealed Reli-  
gion . . . . . *Butler.*

Gurney's Observations.

History of Modern Civilization . . . *Guizot.*Lectures on Modern History . . . *Arnold.*Psychology . . . . . *Haven.*

Forensics.

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Instruction will also be given (to those who desire it) in  
ITALIAN, SPANISH, and HEBREW.

## Lectures.

THE Special Courses of Lectures to the whole College, for the winter of 1866-67, are as follows:—

<i>The Discoveries of Newton</i>	.	PRESIDENT GUMMERE.
<i>Foreign Travel</i>	. . .	PROFESSOR CHASE.
<i>The Canon of Scripture</i>	. . .	PROFESSOR DILLINGHAM.

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## Examinations.

IN determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts; except that Freshmen may be advanced to the Sophomore Class on receiving a mark of at least five in the examination upon each book, and a general average of six in each department.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Managers and Faculty. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. All theses should be presented as early as the fifteenth of the Sixth month. The fee for the diploma is Ten Dollars.

## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations. The Observatory is lighted and the instruments illuminated with gas.

## Library and Apparatus.

THE LIBRARY of the College contains 3,875 volumes, that of the Loganian Society 1,697, making the whole number of books in the two Libraries 5,572.

By liberal contributions of Friends, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College has recently received, from generous Friends



in England, the valuable gift of a copy of the splendid edition of the Codex Sinaiticus, published by the Emperor of Russia.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suites illustrating the Geology of New York and South Carolina, prepared for the College by the late Prof. Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished LABORATORY, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor of Chemistry.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of about 1,697 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large and well-furnished GYMNASIUM, also, is under its direction.

THE ATHENÆUM and EVERETT are literary societies of the students.

## Alumni Prize Essays.

PRIZES are offered by the Alumni Association for English Essays, on alternate years, as follows :—

A prize of *one hundred dollars*, called the Alumni Prize, for the best Essay by any member of the Association or undergraduate of the College.

And a prize of *fifty dollars*, called the Undergraduates' Prize, for the best Essay by any member of the Senior or Junior Class of the College.

For the academical year 1866-67 the Undergraduates' Prize is offered.

The Essays must be written upon good letter-paper, of the ordinary quarto size, with a margin of not less than one inch at the top and bottom and on each side, and the leaves securely stitched together. No Essay shall exceed in length twenty-five printed pages of the "North American Review."

The subjects of the Essays shall be optional with the writers.

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## Situation of the College.

THE College has a remarkably pleasant and healthy location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. The buildings are situated on a lawn of fifty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms; the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second Term of twenty weeks beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$350 per annum, payable as follows: \$175 at the beginning of each Term.

## Graduates.

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1836.

Thomas F. Cock, M. D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith,	Philadelphia,	Pa.
B. Wyatt Wistar,	Philadelphia,	Pa.

1838.

James V. Emlen, M. D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M. D., A. M.,	Philadelphia,	Pa.
Nereus Mendenhall, M. D.,	Guilford County,	N. C.
Richard Randolph, Jr., M. D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
*John R. Winslow, M. D.,	Hertford,	N. C.

## 1841.

†Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M. D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas R. Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M. D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M. D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

\* Obiit 1866.

† Obiit.

## 1845.

Edmund A. Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A. M.,	Vassalboro',	Me.
Alfred H. Smiley, A. M.,	Vassalboro',	Me.

## 1851.

Joseph L. Bailey,	Berks County,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A. M.,	Weare,	N. H.
Zaccheus Test, M. D., A. M.,	Richmond,	Ind.
James C. Thomas, M. D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M. D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whitall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A. M.,	Raysville,	Ind.
William H. Pancoast, M. D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

\* Obiit.

## 1855.

*Samuel Bettle,	Philadelphia,	Pa.
John R. Hubbard, A. M.,	New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,	Philadelphia,	Pa.
Joel Cadbury, Jr.,	Philadelphia,	Pa.
Jonathan J. Comfort, M. D.,	Tecumseh,	Mich.
James M. Walton,	Philadelphia,	Pa.
Edward R. Wood, A. M.,	Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A. M.,	Thornbury,	Pa.
†Cyrus Mendenhall,	Plainfield,	Ind.
Stephen Wood,	Bedford,	N. Y.

## 1858.

Thomas H. Burgess,	Harveysburg,	Ohio.
Thomas Clark,	Carthage,	Ind.
Daniel W. Hunt,	Annapolis,	Ind.
†Samuel T. Satterthwaite,	Chesterfield,	N. J.
William G. Tyler,	Salem,	N. J.
Thomas Wistar, A. M., M. D.,	Philadelphia,	Pa.
Ellis H. Yarnall,	Philadelphia,	Pa.

## 1859.

§Richard W. Chase,	Burlington,	N. J.
James R. Magee,	Philadelphia,	Pa.
Richard C. Paxson,	San Francisco,	Cal.
Edward Rhoads, M. D.,	Philadelphia,	Pa.
Edward C. Sampson,	Manchester,	Me.
George Sampson,	Manchester,	Me.
Abram Sharples, M. D.,	Ivy Mills,	Pa.
Benjamin H. Smith,	Upper Darby,	Pa.

\* Obiit 1859.

† Obiit 1858.

‡ Obiit 1865.

§ Obiit 1862.

|| Obiit 1864.

## 1860.

*Lindley M. Clark,	Carthage,	Ind.
William B. Corbit, M. D.,	Odessa,	Del.
William M. Corlies,	Philadelphia,	Pa.
Cyrus Lindley,	Monrovia,	Ind.
Theodore H. Morris,	Philadelphia,	Pa.
Frederick W. Morris,	Philadelphia,	Pa.
Richard Pancoast,	Philadelphia,	Pa.
John W. Pinkham, M. D.,	North Vassalboro',	Me.
Francis Richardson,	Philadelphia,	Pa.
Clement L. Smith, A. M.,	Upper Darby,	Pa.
James Tyson, M. D., A. M.,	Reading,	Pa.
Silas A. Underhill, LL. B.,	Brooklyn,	N. Y.

## 1861.

Edward Bettle,	Philadelphia,	Pa.
Henry Bettle,	Philadelphia,	Pa.
Charles Bettle,	Philadelphia,	Pa.
William B. Broomall,	Media,	Pa.
Charles H. Jones,	Tamaqua,	Pa.
Thomas W. Lamb, A. M.,	New Bridge,	N. C.
William N. Potts,	Philadelphia,	Pa.
Jehu H. Stuart, A. M.,	Westminster,	N. C.
John C. Thomas,	Baltimore,	Md.

## 1862.

Henry T. Coates,	Philadelphia,	Pa.
† Samuel A. Hadley,	Osceola,	Iowa.
George B. Mellor,	Philadelphia,	Pa.
Horace Williams, M. D.,	Newport,	R. I.
F. Augustus Wood,	New York,	N. Y.

\* Obiit 1861.

† Obiit 1864.



## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr., A. M.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
Richard T. Jones,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham, M.D., A.M.,	Manchester,	Me.

## 1864.

Franklin Angell,	South Corinth,	N. Y.
William Ashbridge,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
E. Pope Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

## 1865.

John R. Bringham,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	West Whiteland,	Pa.
Arthur Haviland,	Brooklyn,	N. Y.
*David H. Nichols,	East Vassalboro',	Me.
Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Robert B. Taber,	New Bedford,	Mass.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.

\* Obiit 1865.

1866.

A. Marshall Elliott,	Jamestown,	N. C.
Benjamin E. Valentine,	Salem,	Mass.

Whole number of Graduates, 146.

## Honorary Degrees.

1858.

Hugh D. Vail, A. M.,	Plainfield,	N. J.
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1859.

*Joseph W. Aldrich, A. M.,	Philadelphia,	Pa.
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1860.

John G. Whittier, A. M.,	Amesbury,	Mass.
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1864.

Edward D. Cope, A. M.,	Caln,	Pa.
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\* Obiit 1865.

## REMARKS

UPON THE

*Courses of Study and the Discipline.*

## NATURAL SCIENCE.

In this department the student is brought, as far as possible, into direct communication with the objects studied; so that nature becomes her own interpreter, her great volume supplying abundant types and analogies to illustrate the teachings of the class-books.

The facilities for this kind of instruction in possession of the College are already large, and are annually becoming more ample; the Mineralogical Cabinet, for example, contains 2,700 specimens, and the Geological Cabinet about 2,500. These collections, together with illustrations by diagrams, models, and maps, and occasional excursions in the neighboring country, enable the Professor to employ the time allotted to these studies in a manner at the same time profitable and pleasant to the student and satisfactory to himself.

The course in Chemistry embraces recitations in Inorganic Chemistry, occupying the greater part of one term, and accompanied with daily exercise in a Laboratory fitted up for this purpose, and well furnished with material and apparatus. Here students are required to conduct with their own hands, under the direction and supervision of the Professor, experiments illustrative of the day's lesson; thus familiarizing them, by actual practice, with the principles and laws of the science, as well as securing dexterity in manipulation. The study of the Physics of Chemistry, and of Organic Chemistry, occupies

a considerable portion of another term, and is accompanied with experiments.

## COMPARATIVE ZOOLOGY AND BOTANY.

The course of Organic Science embraces, in addition to the text-books, a series of lectures by Professor Cope on these subjects, illustrated by specimens, models, and diagrams. Notes taken on these lectures by the students are criticized, or examination upon the subject of them is held. The series is arranged in the following succession:—

The relations of individual beings as species, as inferior or superior organisms, etc.

The situation of individuals on the earth as regards climate, food, topographical position, etc.

Sketch of anatomy in general, followed by a detailed series on human anatomy.

On resemblances and differences, homologies, etc.

The peculiar characteristics of the primary types or branches of the animal kingdom.

The vertebrata in general, and in its primary divisions.

The peculiarities and successive modifications of systems of organs in these primary groups; first the osseous, then the circulatory, the nervous, the respiratory, etc.

The divisions of the primary groups—the families, genera, etc.; their peculiarities and relations, as living or extinct; their distribution on the earth.

The Articulata, Mollusca, Radiata, and Protozoa to receive a similar explanation.

A classification of tissues, and a physiological course on their functions, and those of the organs they compose.

Embryology and metamorphoses.

Finally, a short series on Anthropology; the human races, living and extinct.

The characteristics of the primary divisions of plants.

The more detailed anatomy and homologies of the vegetable kingdom.

The botanical series is similar to the zoological, embracing, like it, the histology, physiology, and palæontology of the subject.

As far as possible, the students are exercised in examinations of specimens or models, and determinations from them.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both.

### PHILOSOPHY AND BELLES-LETTRES.

The recitations in Psychology, Logic, Rhetoric, and the history of the English language are conducted by Professor Chase. The effort is made, in presenting the different subjects, to stimulate thought, and train the mind to exactness and vigor. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

## GREEK AND LATIN CLASSICS.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are pre-

sented in the well-furnished Observatory, of which the members of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

### DRAWING.

Instruction in Perspective and Mechanical Drawing will be given by a competent teacher.

### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament, except during a part of one term, in which Gurney's Observations are studied. Paley's Evidences, Butler's Analogy, and Dymond's Ethics form a part of the regular course of study.

### DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feelings and Christian principle, are the means most relied upon.







A

CATALOGUE

OF THE

Officers and Students

OF

H A V E R F O R D C O L L E G E,

FOR THE

ACADEMICAL YEAR

1867-68.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1867.



A

CATALOGUE

OF THE

*Officers and Students*

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PHILADELPHIA:

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1867.

# Corporation.

*Secretary.*

PHILIP C. GARRETT.

*Treasurer.*

DAVID SCULL, JR.

## MANAGERS.

CHARLES YARNALL,  
JOHN FARNUM,  
SAMUEL HILLES,  
GEORGE HOWLAND,  
JOHN M. WHITALL,  
ANTHONY M. KIMBER,  
WISTAR MORRIS,  
T. WISTAR BROWN,  
JOSEPH W. TAYLOR, M. D.,  
WILLIAM S. HILLES,  
JAMES WHITALL,  
HUGH D. VAIL,

JAS. CAREY THOMAS, M. D.,  
BENJAMIN V. MARSH,  
PHILIP C. GARRETT,  
WILLIAM C. LONGSTRETH,  
THOMAS P. COPE,  
SAMUEL ALLINSON,  
JAMES E. RHOADS, M. D.,  
WILLIAM EVANS,  
RICHARD CADBURY,  
DAVID SCULL, JR.,  
GEORGE S. GARRETT,  
JOEL CADBURY, JR.

*Secretary of the Board,*

JAMES WHITALL.

## Committee on Instruction.

CHARLES YARNALL,	JOSEPH W. TAYLOR, M. D.,
JNO. M. WHITALL,	ANTHONY M. KIMBER,
WILLIAM S. HILLES,	THOMAS P. COPE,
JAMES WHITALL,	JAMES E. RHOADS, M. D.,
HUGH D. VAIL,	WILLIAM EVANS,
BENJAMIN V. MARSH,	PHILIP C. GARRETT.

## Committee on Finance and Economy.

ANTHONY M. KIMBER,	RICHARD CADBURY,
DAVID SCULL, JR.,	JOEL CADBURY, JR.

## Committee on Farm.

HUGH D. VAIL,	WILLIAM C. LONGSTRETH,
	GEORGE S. GARRETT.

## Committee on Houses and Grounds.

JOSEPH W. TAYLOR, M. D.,	HUGH D. VAIL,
THOMAS P. COPE,	DAVID SCULL, JR.

## Committee on Library and Apparatus.

HUGH D. VAIL,	BENJAMIN V. MARSH,
CHARLES YARNALL,	PHILIP C. GARRETT,
WILLIAM S. HILLES,	JAMES E. RHOADS, M. D.

## Committee on Admissions.

JOHN M. WHITALL,	JAMES C. THOMAS, M. D.,
GEORGE HOWLAND,	THOMAS P. COPE,
	JAMES WHITALL.

## Committee on Investments.

BENJAMIN V. MARSH,	T. WISTAR BROWN,
	JOHN M. WHITALL.

## Faculty.

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SAMUEL J. GUMMERE, A. M.,

PRESIDENT.

THOMAS CHASE, A. M.,

PROFESSOR OF CLASSICAL AND ENGLISH LITERATURE.

SAMUEL J. GUMMERE, A. M.,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

JOHN H. DILLINGHAM, A. M.,

SUPERINTENDENT, AND ASSISTANT PROFESSOR OF GREEK AND LATIN.

HENRY HARTSHORNE, M. D., A. M.,

PROFESSOR OF ORGANIC SCIENCE, AND PHILOSOPHY.

ALBERT R. LEEDS, A. M.,

PROFESSOR OF CHEMISTRY.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.
Cook, Edward Hanson	North Vassalboro', Maine.
Cope, Alexis Thomas	Philadelphia, Pa.
Satterthwaite, Benjamin Cad- wallader	Oxford Valley, Pa.
Starr, Louis	Philadelphia, Pa.
Tomlinson, Samuel Finley	Bush Hill, N. C.
Wills, Joseph Henry	Mt. Holly, N. J.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Congdon, Johns Hopkins	Providence,	R. I.
Cope, Henry	Philadelphia,	Pa.
Estes, Ludovic	Westfield,	Ind.
Evaul, Henry	Palmyra,	N. J.
Kaighn, William Bartram	Moorestown,	N. J.
King, Pendleton	Oak Ridge,	N. C.
Pearson, George	Mercer,	Pa.
Randolph, William Henry	Media,	Pa.
Taylor, Edward B.	Cinnaminson,	N. J.
Taylor, William S.	Burlington,	N. J.
Whitlock, James Gilbert	Richmond,	Va.
Wood, Walter	New Bedford,	Mass.
Wood, Henry	New Bedford,	Mass.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Brown, J. Stuart	Philadelphia,	Pa.
Carey, Thomas Kimber	Baltimore,	Md.
Carey, John Ellicott	Baltimore,	Md.
Coale, Alford Gable	Baltimore,	Md.
Comfort, Howard	Germantown,	Pa.
Griscom, William W.	Bristol,	Pa.
Levick, Samuel J., Jr.	Richland,	Pa.
Longstreth, Thomas Kimber	Philadelphia,	Pa.
Owen, Oliver Goldsmith	Indianola,	Iowa.
Pratt, Charles Edward	Rochester,	N. H.
Rose, David	Chester,	Pa.
Steele, John Dutton	Coatesville,	Pa.
Wistar, Bartholomew	Philadelphia,	Pa.
Wood, Charles	Mt. Kisco,	N. Y.
Wood, Stuart	Philadelphia,	Pa.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Brown, Henry Graham	Philadelphia,	Pa.
Haines, William Henry	Philadelphia,	Pa.
Hartshorne, Joseph	Philadelphia,	Pa.
Hilles, Thomas Allen	Wilmington,	Del.
McDowell, Henry	Baltimore,	Md.
Painter, Howard	West Chester,	Pa.
Reeves, Ellis Beetle	Phoenixville,	Pa.
Roberts, Alfred Reginald	Philadelphia,	Pa.
Taylor, Charles S.	Burlington,	N. J.
Thomas, Charles Yarnall	Baltimore,	Md.
Winslow, Randolph	Baltimore,	Md.

## SUMMARY.

Seniors . . . . .	6
Juniors . . . . .	13
Sophomores . . . . .	14
Freshmen . . . . .	12
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Total . . . . .	45

## Calendar.

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Winter Term, 1867-68, began . . . .	9th Mo. 11.
Address before Alumni, 1867 . . . .	11th Mo. 2.
Oration before Loganian Society, 1868 . . . .	1st Mo. 28.
Junior Exhibition, 1868 . . . .	1st Mo. 29.
Winter Term, 1867-68, ends . . . .	1st Mo. 29.

### VACATION OF THREE WEEKS.

Summer Term, 1868, begins . . . .	2d Mo. 19.
Private Review, 1868, begins . . . .	6th Mo. 8.
Annual Examinations, 1868, begin . . . .	6th Mo. 29.
Public Meeting of Loganian Society, 1868 . . . .	7th Mo. 7.
Commencement, 1868 . . . .	7th Mo. 8.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1868 . . . .	{ 2d Mo. 18. { 9th Mo. 8.
Winter Term, 1868-69, begins . . . .	9th Mo. 9.

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.

Harkness's or Andrews and Stoddard's Latin Grammar.

Cæsar's Commentaries (Stuart's).

Virgil's Eclogues, or first book of the Æneid (Chase's).

Cicero's Orations against Catiline,

and the first twenty exercises in Arnold's or Harkness's Latin Prose Composition.

Hadley's, Crosby's, or Sophocles's Greek Grammar.

Felton's or Jacob's Greek Reader,

and the first fifteen exercises in Arnold's Greek Prose Composition (to be written with the accents).

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,

Alsop's First Lessons in Algebra,

and the first two books in Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar,

Mitchell's Ancient and Modern Geography,

and Worcester's Elements of History.

The candidates must be well prepared also in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, JAMES WHITALL, No. 410 Race Street, Philadelphia. Candidates will present themselves at the College, for examination by the Faculty, the morning previous to the opening of the term.

Students may be admitted to ADVANCED STANDING, when they can pass a satisfactory examination in all the previous studies of the course.



## Course of Study.

### FRESHMAN CLASS.

#### MATHEMATICS.

Geometry . . . . .	<i>Euclid.</i>
Algebra . . . . .	<i>Alsop.</i>
Plane Trigonometry . . . . .	<i>Gummere.</i>
Surveying . . . . .	<i>Gummere.</i>

#### GREEK AND LATIN.

The Anabasis of Xenophon . . . . .	<i>Crosby.</i>
Herodotus . . . . .	<i>Johnson.</i>
Greek Syntax . . . . .	<i>Hadley.</i>
Greek Prose Composition continued . . . . .	
Virgil . . . . .	<i>Chase.</i>
Cicero . . . . .	<i>Folsom or Johnson.</i>
Latin Syntax and Prosody.	
Latin Prose Composition continued . . . . .	
Classical Geography and Antiquities . . . . .	<i>Kiepert and Smith.</i>

#### ORGANIC SCIENCE.

Inorganic Chemistry (with instruction in the laboratory) . . . . .	<i>Morton and Leeds.</i>
Qualitative Analysis . . . . .	<i>Wills' Tables.</i>
Zoology . . . . .	<i>Hooker.</i>
Physical Geography . . . . .	<i>Guyot.</i>

#### ENGLISH.

Universal History . . . . .	<i>Weber.</i>
Rhetoric . . . . .	<i>Boyd.</i>
Compositions.	

## SOPHOMORE CLASS.

## MATHEMATICS.

Surveying continued . . . . .	<i>Gummere.</i>
Spherical Trigonometry, Conic Sections, and Spherical Projections . . . . .	<i>Lewis.</i>
Physics . . . . .	<i>Loomis.</i>
Astronomy . . . . .	<i>Herschel.</i>

## LANGUAGES.

The Iliad of Homer . . . . .	<i>Felton or Owen.</i>
Plato's Apology and Crito . . . . .	<i>Tyler.</i>
Greek Composition.	
Livy . . . . .	<i>Lincoln.</i>
The Odes of Horace . . . . .	<i>Zumpt.</i>
Latin Composition.	
Anglo-Saxon . . . . .	<i>Barnes.</i>

## ORGANIC SCIENCE.

Geology . . . . .	<i>Dana.</i>
Physical Geography . . . . .	<i>Guyot.</i>
Organic Chemistry . . . . .	<i>Morton and Leeds.</i>
Late Discoveries in Chemistry . . . . .	<i>Lectures.</i>

## ENGLISH.

Evidences of Christianity . . . . .	<i>Paley.</i>
Themes.	

## JUNIOR CLASS.

## MATHEMATICS.

Astronomy continued . . . . .	<i>Herschel.</i>
Analytical Geometry . . . . .	<i>Davies.</i>
Differential and Integral Calculus . . . . .	<i>Davies.</i>

## LANGUAGES.

The Prometheus Bound of Æschylus . . . . .	<i>Woolsey.</i>
Demosthenes or Plutarch.	
Greek Composition.	
Horace, Satires and Epistles.	
The Germania and Agricola of Tacitus . . . . .	<i>Tyler.</i>
The Captivi of Plautus . . . . .	<i>Brix.</i>
Latin Exercises and Extemporalia.	
Greek Testament . . . . .	<i>Tischendorf.</i>
French Grammar . . . . .	<i>Knapp.</i>
Fenelon's <i>Télémaque</i> .	
Science of Language . . . . .	<i>Whitney.</i>

## ORGANIC SCIENCE.

Anatomy and Physiology . . . . .	{ <i>Hooker and Lec- tures.</i>
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## ENGLISH.

Ethics . . . . .	<i>Dymond.</i>
Rhetoric . . . . .	<i>Whately.</i>
Logic. . . . .	<i>Whately.</i>
Political Economy . . . . .	<i>Wayland.</i>
The Law of Nations, and American Law . . . . .	<i>Kent.</i>
Philological Study of the English Language.	
Themes.	

## SENIOR CLASS.

## MATHEMATICS.

Analytical Mechanics.

Optics . . . . . *Snell's Olmsted.*Practical Astronomy . . . . . *Loomis, with practice in the  
Observatory.*

## LANGUAGES.

Thucydides . . . . . *Owen.*The Antigone of Sophocles . . . . . *Woolsey.*

Greek Composition.

Cicero's Tusculan Disputations, and  
Somnium Scipionis . . . . . *Chase.*

Cicero's and Pliny's Letters.

Latin Themes and Extemporalia.

Greek Testament . . . . . *Tischendorf.*Modern Greek . . . . . *By Lectures.*German . . . . . *Woodbury's Grammar and Reader.*

Comparative Philology.

## ORGANIC SCIENCE.

Hygiene . . . . . *Lectures.*

## ENGLISH.

Analogy of Natural and Revealed Reli-  
gion . . . . . *Butler.*

Gurney's Observations.

History of Modern Civilization . . . . . *Guizot.*Lectures on Modern History . . . . . *Arnold.*Psychology . . . . . *Haven and Lectures.*

Forensics.

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Instruction will also be given (to those who desire it) in  
ITALIAN, SPANISH, and HEBREW.

## Lectures.

THE Special Courses of Lectures to the whole College, for the winter of 1867-8, are as follows:—

<i>Famous Problems</i> . . . .	PRESIDENT GUMMERE.
<i>Italy and Greece</i> . . . .	PROFESSOR CHASE.
<i>The Canon of Scripture</i> . . . .	PROFESSOR DILLINGHAM.
<i>The Preservation of Health</i> . . . .	PROFESSOR HARTSHORNE.
<i>Magnesium Light, Colored and Polarized Light</i> } . . . .	PROFESSOR LEEDS.
<i>Magnetism, Galvanism, Induction</i> }	

## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts; except that Freshmen may be advanced to the Sophomore Class on receiving a mark of at least five in the examination upon each book, and a general average of six in each department.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

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## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Managers and Faculty. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. All theses should be presented as early as the fifteenth of the Sixth month. The fee for the diploma is Ten Dollars.

## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations. The Observatory is lighted and the instruments illuminated with gas.

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## Library and Apparatus.

THE LIBRARY of the College contains 4524 volumes; that of the Loganian Society about 1723; making the whole number of books in the two Libraries 6247. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College has recently received, from generous Friends in England, the valuable gift of a copy of the splendid edition of the *CODEx SINAITICUS*, published by the Emperor of Russia. Woide's rare and valuable fac-simile edition of the



important CODEX ALEXANDRINUS has been presented to the Library within the past year—the gift of J. Bevan Braithwaite, of London. To these has been added Tischendorf's recent edition of the CODEX VATICANUS. The Library has thus the rare advantage of containing copies of the three great original sources of the New Testament text.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished LABORATORY, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor of Chemistry.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 1723 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large and well-furnished GYMNASIUM, also, is under its direction.

THE ATHENÆUM and EVERETT are literary societies of the students.



## Situation of the College.

The College has a remarkably pleasant and healthful location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. The buildings are situated on a lawn of fifty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

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## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms; the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second term of twenty weeks beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$375 00 per annum, payable as follows: \$187 50 at the beginning of each Term.

Washing is charged at the rate of 75 cents per dozen.

## Graduates.

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1836.

Thomas F. Cock, M.D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith,	Philadelphia,	Pa.
B. Wyatt Wistar,	Philadelphia,	Pa.

1838.

James V. Emlen, M.D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M.D., A.M.,	Philadelphia,	Pa.
Nereus Mendenhall, M.D.,	Guilford County,	N. C.
Richard Randolph, Jr., M.D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
*John R. Winslow, M.D., *1866,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M.D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas R. Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M.D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M.D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

## 1845.

Edmund A. Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A.M.,	Vassalboro',	Me.
Alfred H. Smiley, A.M.,	Vassalboro',	Me.

## 1851.

Joseph L. Bailey,	Berks County,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A.M.,	Weare,	N. H.
Zaccheus Test, M.D., A.M.,	Richmond,	Ind.
James C. Thomas, M.D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M.D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whitall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A.M.,	Raysville,	Ind.
William H. Pancoast, M.D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

## 1855.

*Samuel Bettle,	*1859,	Philadelphia,	Pa.
John R. Hubbard, A.M.,		New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,		Philadelphia,	Pa.
Joel Cadbury, Jr.,		Philadelphia,	Pa.
Jonathan J. Comfort, M.D.,		Tecumseh,	Mich.
James M. Walton,		Philadelphia,	Pa.
Edward R. Wood, A.M.,		Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A.M.,		Thornbury,	Pa.
*Cyrus Mendenhall,	*1858,	Plainfield,	Ind.
Stephen Wood,		Bedford,	N.-Y.

## 1858.

Thomas H. Burgess,		Harveysburg,	Ohio.
Thomas Clark,		Carthage,	Ind.
Daniel W. Hunt,		Annapolis,	Ind.
*Samuel T. Satterthwaite,	*1865,	Chesterfield,	N. J.
William G. Tyler,		Salem,	N. J.
Thomas Wistar, A.M., M.D.,		Philadelphia,	Pa.
Ellis H. Yarnall,		Philadelphia,	Pa.

## 1859.

*Richard W. Chase,	*1862,	Burlington,	N. J.
James R. Magee,		Philadelphia,	Pa.
*Richard C. Paxson,	*1864,	San Francisco,	Cal.
Edward Rhoads, M.D.,		Philadelphia,	Pa.
Edward C. Sampson,		Manchester,	Me.
George Sampson,		Manchester,	Me.
Abram Sharples, M.D.,		Ivy Mills,	Pa.
Benjamin H. Smith,		Upper Darby,	Pa.

## 1860.

*Lindley M. Clark,	*1861,	Carthage,	Ind.
William B. Corbit, M.D.,		Odessa,	Del.
William M. Corlies,		Philadelphia,	Pa.
Cyrus Lindley,		Monrovia,	Ind.
Theodore H. Morris,		Philadelphia,	Pa.
Frederick W. Morris,		Philadelphia,	Pa.
Richard Pancoast,		Philadelphia,	Pa.
John W. Pinkham, M.D.,		North Vassalboro',	Me.
Francis Richardson,		Philadelphia,	Pa.
Clement L. Smith, A.M.,		Upper Darby,	Pa.
James Tyson, M.D., A.M.,		Reading,	Pa.
Silas A. Underhill, LL.B.,		Brooklyn,	N. Y.

## 1861.

Edward Bettle,		Philadelphia,	Pa.
Henry Bettle,		Philadelphia,	Pa.
Charles Bettle,		Philadelphia,	Pa.
William B. Broomall,		Media,	Pa.
Charles H. Jones,		Tamaqua,	Pa.
Thomas W. Lamb, A.M.,		New Bridge,	N. C.
William N. Potts,		Philadelphia,	Pa.
Jehu H. Stuart, A.M.,		Westminster,	N. C.
John C. Thomas,		Baltimore,	Md.

## 1862.

Henry T. Coates,		Philadelphia,	Pa.
*Samuel A. Hadley, *1864,		Osceola,	Iowa.
George B. Mellor,		Philadelphia,	Pa.
Horace Williams, M.D.,		Newport,	R. I.
F. Augustus Wood,		New York,	N. Y.

## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr., A.M.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,*	Pa.
Richard T. Jones,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham, M.D., A.M.,	Manchester,	Me.

## 1864.

Franklin Angell,	South Corinth,	N. Y.
William Ashbridge, M.D.,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper, A.M.,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
E. Pope Sansom,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

## 1865.

John R. Bringhurst,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	West Whiteland,	Pa.
Arthur Haviland,	Brooklyn,	N. Y.
*David H. Nichols, *1865,	East Vassalboro',	Me.
Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Robert B. Taber,	New Bedford,	Mass.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.

1866.

Aaron M. Elliott,	Jamestown,	N. C.
Benjamin E. Valentine,	Salem,	Mass.

1867.

John Ashbridge,	West Whiteland,	Pa.
George Ashbridge,	West Whiteland,	Pa.
William P. Clark,	Monrovia,	Ind.
Samuel C. Collins,	Morrisville,	Pa.
Nathaniel B. Crenshaw,	Richmond,	Va.
Charles H. Darlington,	Chicago,	Ill.
William T. Dorsey,	Baltimore,	Md.
B. Franklin Eshleman,	Lancaster,	Pa.
Richard M. Jones,	Dirigo,	Maine.
Charles W. Sharpless,	Philadelphia,	Pa.
Walter Wood,	Philadelphia,	Pa.

Whole number of Graduates, 157.



## Honorary Degrees.

1858.

Hugh D. Vail, A.M.,	Plainfield,	N. J.
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1859.

*Joseph W. Aldrich, A.M., *1865,	Philadelphia,	Pa.
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1860.

John G. Whittier, A.M.,	Amesbury,	Mass.
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1864.

Edward D. Cope, A.M.,	Caln,	Pa.
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1867.

Joseph Moore, A.M.,	Bush Hill,	N. C.
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## REMARKS

UPON THE

*Courses of Study and the Discipline.*

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The Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

## ORGANIC SCIENCE.

The purposes of this department are to train the mind of the student in the methods of science, and to lay such foundations of knowledge as will enable each one to attain, with facility and interest, acquaintance with any of the natural sciences in detail by subsequent study. Effort will be made to follow a natural order of evolution in the sequence of subjects; beginning with inorganic and organic chemistry, physical geography, and zoology; and ascending through vegetable and animal (comparative) physiology, to the study of man. The structure and functions of the organs of the human body, including its relations to the mind, or psychology, and the relations of man to nature, will be fully considered. Lastly, instruction will be given in hygiene, or the science of health and its preservation, corporeal and mental.

The facilities for scientific instruction belonging to the college are already large, and are constantly becoming more extensive; the Geological Cabinet, for example, contains about 2500 specimens, and the Mineralogical Cabinet 2700. These collections, with illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. The most important Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

### RHETORIC AND ENGLISH LITERATURE.

The recitations in Rhetoric, and the History and Literature of the English Language, are conducted by Professor Chase. The effort is made, in presenting the different subjects, to stimulate thought, and train the mind to exactness and vigor. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

## MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

## GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## MODERN LANGUAGES.

French is regularly taught during the Junior year, and German during the Senior year. This course of study, introducing the student to French and German literature, enables him to pursue his reading in those languages with ease after leaving college—preparing him to gain very readily, when travelling abroad, their *conversational* use. Italian and Spanish will likewise be taught to those who desire to learn them. Suitable time will also be given to

the study of Anglo-Saxon, as being most useful for a proper acquaintance with our mother tongue generally, and especially for understanding the early English authors.

### MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the members of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

### DRAWING.

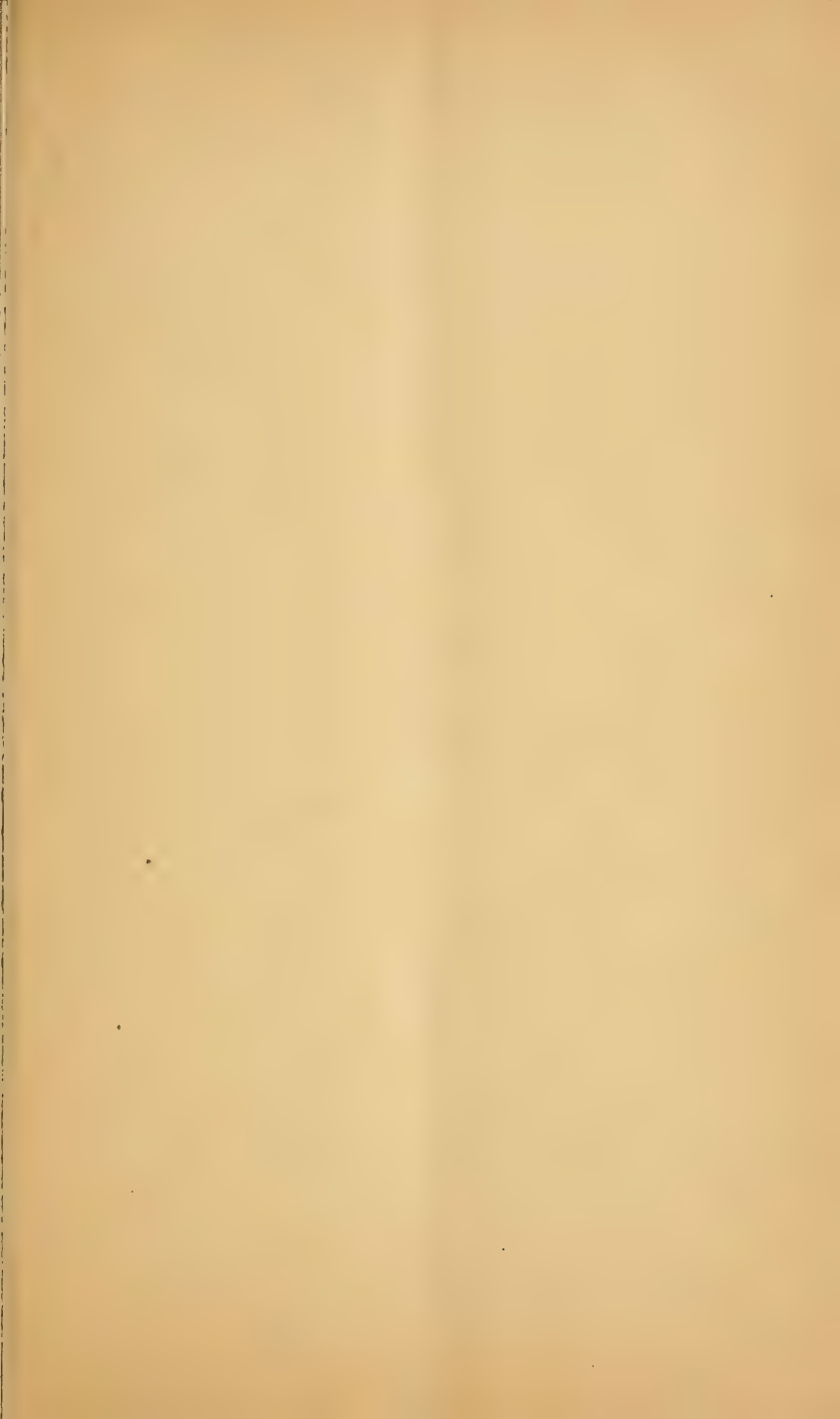
Instruction in Perspective and Mechanical Drawing will be given by a competent teacher.

## RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament, except during a part of one term, in which Gurney's Observations are studied. Paley's Evidences, Butler's Analogy, and Dymond's Ethics form part of the regular course of study.

## DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.











A  
CATALOGUE  
OF THE  
**Officers and Students**  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1868-69.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1868.



A

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1868.

# Corporation.

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*Secretary.*

PHILIP C. GARRETT.

*Treasurer.*

DAVID SCULL, JR.

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SAMUEL HILLES,	WILLIAM C. LONGSTRETH,
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ANTHONY M. KIMBER,	JAMES E. RHOADS, M. D.
WISTAR MORRIS,	WILLIAM EVANS,
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JAMES WHITALL,	JOEL CADBURY, JR.
HUGH D. VAIL,	THOMAS WISTAR, M. D.
JAS. CAREY THOMAS, M. D.	EDWARD RHOADS, M. D.
BENJAMIN V. MARSH,	JOHN E. CARTER.

*Secretary of the Board.*

JAMES WHITALL.

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JOHN M. WHITALL,	ANTHONY M. KIMBER,
JOHN FARNUM,	THOMAS P. COPE,
WILLIAM S. HILLES,	JAMES E. RHOADS, M. D.
JAMES WHITALL,	WILLIAM EVANS,
HUGH D. VAIL,	PHILIP C. GARRETT,
JOSEPH W. TAYLOR, M. D.	RICHARD CADBURY.

## Committee on Finance and Economy.

ANTHONY M. KIMBER,	RICHARD CADBURY,
DAVID SCULL, JR.	JOEL CADBURY, JR.

## Committee on Farm.

GEORGE S. GARRETT,	WILLIAM C. LONGSTRETH,
HUGH D. VAIL,	ANTHONY M. KIMBER.

## Committee on Houses and Grounds.

JOSEPH W. TAYLOR, M. D.	HUGH D. VAIL,
THOMAS P. COPE,	DAVID SCULL, JR.
JOHN E. CARTER.	

## Committee on Library and Apparatus.

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JOHN E. CARTER.	

## Committee on Admissions.

JAMES WHITALL,	THOMAS P. COPE,
GEORGE HOWLAND,	JAMES C. THOMAS, M. D.
DAVID SCULL, JR.	

## Committee on Investments.

BENJAMIN V. MARSH,	T. WISTAR BROWN,
JOHN M. WHITALL.	

## Faculty.

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SAMUEL J. GUMMERE, A. M.,

PRESIDENT.

THOMAS CHASE, A. M.,

PROFESSOR OF CLASSICAL AND ENGLISH LITERATURE.

SAMUEL J. GUMMERE, A. M.,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

JOHN H. DILLINGHAM, A. M.,

SUPERINTENDENT,

AND PROFESSOR OF MORAL AND POLITICAL SCIENCE.

HENRY HARTSHORNE, M. D., A. M.,

PROFESSOR OF ORGANIC SCIENCE, AND PHILOSOPHY.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Congdon, Johns Hopkins	Providence,	R. I.
Cope, Henry	Philadelphia,	Pa.
Estes, Ludovic	Westfield,	Ind.
Evaul, Henry	Palmyra,	N. J.
Kaighn, William Bartram	Moorestown,	N. J.
King, Pendleton	Oak Ridge,	N. C.
Randolph, William Henry	Philadelphia,	Pa.
Taylor, Edward B.	Cinnaminson,	N. J.
Taylor, William S.	Burlington,	N. J.
Whitlock, James Gilbert	Richmond,	Va.
Wood, Walter	New Bedford,	Mass.
Wood, Henry	New Bedford,	Mass.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Brown, J. Stuart	Philadelphia,	Pa.
Carey, John Ellicott	Baltimore,	Md.
Coale, Alford Gable	Baltimore,	Md.
Comfort, Howard	Germantown,	Pa.
Griscom, William Woodnutt	Philadelphia,	Pa.
Hilles, Thomas Allen	Wilmington,	Del.
Hubbard, William Harrison	Monrovia,	Ind.
Longstreth, Thomas Kimber	Philadelphia,	Pa.
Owen, Oliver Goldsmith	Indianola,	Iowa.
Pratt, Charles Edward	Rochester,	N. H.
Rose, David Franklin	Chester,	Pa.
Steele, John Dutton	Coatesville,	Pa.
Wistar, Bartholomew	Philadelphia,	Pa.
Wood, Charles	Mt. Kisco,	N. Y.
Wood, Stuart	Philadelphia,	Pa.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.
Brown, Henry Graham	Philadelphia, Pa.
Comfort, William	Germantown, Pa.
Evans, William Penn	London Grove, Pa.
Garrigues, John Sharpless	Haverford, Pa.
Haines, Reuben	Germantown, Pa.
Haines, William Henry	Philadelphia, Pa.
Hartshorne, William Davis	Brighton, Md.
Hartshorne, Joseph	Philadelphia, Pa.
Hoskins, Jesse Franklin	Summerfield, N. C.
Painter, Howard	West Chester, Pa.
Reeves, Ellis Biddle	Phœnixville, Pa.
Roberts, Alfred Reginald	Philadelphia, Pa.
Taylor, Charles S.	Burlington, N. J.
Thurston, Edward Day	New York, N. Y.
Winslow, Randolph	Baltimore, Md.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.
Ashbridge, Richard	West Whiteland, Pa.
Cadbury, Richard T.	Philadelphia, Pa.
Downing, Thomas Stalker	West Whiteland, Pa.
Erben, Walter	Philadelphia, Pa.
Haines, Caspar Wistar	Cheltenham, Pa.
Harlan, William Brick	West Chester, Pa.
Huston, William Perot	Philadelphia, Pa.

## SUMMARY.

Seniors . . . . .	12
Juniors . . . . .	15
Sophomores . . . . .	15
Freshmen . . . . .	7
	—
Total . . . . .	49

## Calendar.

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Winter Term, 1868-69, began . . . .	9th Mo. 9.
Address before Alumni, 1868 . . . .	10th Mo. 24.
Oration before Loganian Society, 1869 . . . .	1st Mo. 26.
Junior Exhibition, 1869 . . . . .	1st Mo. 27.
Winter Term, 1868-69, ends . . . . .	1st Mo. 27.

### VACATION OF ~~THREE~~ WEEKS.

Summer Term, 1869, begins . . . .	2d Mo. <del>17</del> 24.
Private Review, 1869, begins . . . .	6th Mo. 14.
Annual Examinations, 1869, begin . . . .	7th Mo. 5.
Public Meeting of Loganian Society, 1869 . . . .	7th Mo. 13.
Address to the Graduating Class, 1869 . . . .	7th Mo. 13.
Commencement, 1869 . . . . .	7th Mo. 14.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1869 . . . .	{ 2d Mo. 16.
	{ 9th Mo. 14.
Winter Term, 1869-70, begins . . . . .	9th Mo. 15.

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.

Harkness's, Andrews and Stoddard's, or Allen's Latin Grammar.

Cæsar's Commentaries (Stuart's).

Virgil's Eclogues, or first book of the Æneid (Chase's).

Cicero's Orations against Catiline (Stuart's),

and the first twenty exercises in Arnold's or Harkness's Latin Prose Composition.

Hadley's, Crosby's, or Sophocles's Greek Grammar.

Felton's, Jacob's, or Whiton's Greek Reader,

and the first fifteen exercises in Arnold's Greek Prose Composition (to be written with the accents).

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,

Alsop's First Lessons in Algebra,

and the first two books in Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar,

and Mitchell's Ancient and Modern Geography.

The candidates must be well prepared also in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, JAMES WHITALL, No. 410 Race Street, Philadelphia. Candidates will present themselves at the College, for examination by the Faculty, at 9 o'clock on the morning previous to the opening of the term.

Students may be admitted to ADVANCED STANDING, when they can pass a satisfactory examination in all the previous studies of the course.



## Course of Instruction.

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### FRESHMAN CLASS.

#### FIRST TERM.

1. *Scripture.* The Gospel according to John.
2. *Mathematics.* Euclid's Geometry.
3. *Greek.* Xenophon's Anabasis.—Hadley's Greek Grammar.—Exercises in Writing Greek.
4. *Latin.* Chase's Æneid of Virgil.—Harkness's Latin Grammar (Syntax and Prosody).—Exercises in writing Latin.
5. *Classical Geography and Antiquities.*
6. *English Literature.* Cleveland's Compendium.—Compositions.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Hooker's Natural History.
9. *History.* Weber's Universal History.
10. *Review.*

#### SECOND TERM.

1. *Scripture,* continued.
2. *Mathematics.* Alsop's Algebra.—Gummere's Plane Trigonometry.—Gummere's Surveying, begun.
3. *Greek.* Herodotus (Johnson's).—Greek Syntax (Hadley).—Exercises in Writing Greek.
4. *Latin.* Cicero's Orations (Stuart).—Latin Syntax.—Exercises in Writing Latin.
5. *English Literature.* Cleveland's Compendium, continued.—Readings.

6. *Botany.* Gray's.
7. *History.* Weber's Universal History, finished.
8. *Compositions.*
9. *Review.*
10. *Private Review* and *written Examination* on all the year's studies orally reviewed.

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## SOPHOMORE CLASS.

### FIRST TERM.

1. *Scripture.* Selections (English New Testament).
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.
3. *Greek.* The Iliad or Odyssey of Homer.—Exercises in Writing Greek.
4. *Latin.* Livy (Lincoln's Selections).—Exercises in writing Latin.
5. *Chemistry.* Morton and Leed's Chemistry, Organic and Inorganic.—Stöckhardt's Chemistry.
6. *Ethics.* Paley's Evidences of Christianity.—Lectures.—Dymond's Essays on Morality.
7. *Themes.*
8. *Review.*

### SECOND TERM.

1. *Scripture.* Selections, continued.
2. *Physics.* Loomis's Natural Philosophy.
3. *Descriptive Astronomy.* Herschel's Outlines.
4. *Greek.* Plato's Apology and Crito.—Exercises in writing Greek.

5. *Latin.* The Odes of Horace (Chase).—Exercises in writing Latin.
6. *English.* Anglo-Saxon.—History of the English Language.—Themes.
7. *Geology.* Dana's Text-book.
8. *Ethics.* Dymond's Essays on Morality, finished.
9. *Review.*
10. *Private Review* and *written Examination*, as at the end of previous year.

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## JUNIOR CLASS.

### FIRST TERM.

1. *Scripture.* Selections from the Greek Testament and English Bible committed to memory.—Critical Translation of Greek Testament, with Exegesis.
2. *Mathematics.* Davies's Analytical Geometry.
3. *Astronomy.* Descriptive Astronomy (Herschel), finished.
4. *Greek.* The Prometheus of Æschylus.—Exercises in writing Greek.
5. *Latin.* Satires and Epistles of Horace.—Exercises in writing Latin, and Extemporalia.
6. *French.* Knapp's Grammar.—Translations.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately.
9. *Forensics.*
10. *Political Science.* Wayland's Political Economy.—Kent's Commentaries on the Law of Nations.
11. *Elocution.* Exercises.—A Public Oration.
12. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, etc., as in First Term.
2. *Mathematics.* Differential and Integral Calculus (Davies).
3. *Greek.* Thucydides, begun.—Exercises in writing Greek.
4. *Latin.* The Germania and Agricola of Tacitus.—Exercises in writing Latin, and Extemporalia.
5. *English.* History of English Literature.—Readings.—Philological Study of the English Language.
6. *French.* Fenelon's Télémaque.—Histoire de Charles XII.
7. *Forensics.*
8. *Organic Science.* Human and Comparative Anatomy and Physiology (Lectures).
9. *Political Science.* Kent's Commentaries on American Law.
10. *Review.*
11. *Private Review and written Examination,* as at the end of previous years.

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 SENIOR CLASS.

## FIRST TERM.

1. *Scripture.* Greek Testament, with Exegesis.
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).
3. *Greek.* Thucydides, continued.—The Antigone of Sophocles, begun.—Exercises in writing Greek.
4. *Latin.* Cicero's Tusculan Disputations, and Somnium Scipionis (Chase).—Latin Compositions and Extemporalia.
5. *German.* Woodbury's Grammar and Reader.
6. *Philology.* Whitney's Science of Language.—English Literature.
7. *Psychology.* Haven's Mental Philosophy.—Lectures.

8. *Forensics.*
9. *History.* Guizot's History of Modern Civilization.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, continued.
2. *Mathematical and Practical Astronomy.* Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* The Antigone of Sophocles, finished.—Modern Greek (Lectures).
4. *Latin.* The Captivi of Plautus.—Cicero's or Pliny's Letters.—Latin Compositions, and Extemporalia.
5. *German.* Translations.
6. *Hygiene.* Lectures on the Preservation of Health.
7. *Christian Doctrines.* Gurney's Observations.
8. *History.* Arnold's Lectures on Modern History.
9. *Elocution.*
10. *A Public Oration.*
11. *Review.*
12. *Private Review and written Examination,* as at the end of previous years.

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With the approbation of the Faculty, voluntary classes may be formed in HEBREW, ITALIAN, and SPANISH.

## Lectures.

THE Special Courses of Lectures to the whole College, for the winter of 1868-9, are as follows:—

<i>Hearing and Vision</i> . . .	PRESIDENT GUMMERE.
<i>English Literature</i> . . .	PROFESSOR CHASE.
<i>The Canon of Scripture</i> . . .	} PROFESSOR DILLINGHAM.
<i>The Relation of Morality</i> . . .	
<i>to Intelligence</i> . . . . .	
<i>The Groundwork of Science</i>	PROFESSOR HARTSHORNE.

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## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts; except that Freshmen may be advanced to the Sophomore Class on receiving a mark of at least five in the examination upon each book, and a general average of six in each department.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

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## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Managers and Faculty. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. All theses should be presented as early as the fifteenth of the Sixth month. The fee for the diploma is Ten Dollars.



## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{2}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

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## Library and Apparatus.

THE LIBRARY of the College contains 4738 volumes; that of the Logonian Society 1800; making the whole number of books in the two Libraries 6538. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College has recently received, from generous Friends in England, the valuable gift of a copy of the splendid edition of the *CODEx SINAITICUS*, published by the Emperor of Russia. Woidé's rare and valuable fac-simile edition of the important *CODEx ALEXANDRINUS* has recently been presented to the Library—the gift of J. Bevan Braithwaite, of London. To these has been added, by purchase, Tischendorf's



recent edition of the *CODEx VATICANUS*. The Library has thus the rare advantage of containing copies of the three great original sources of the New Testament text.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive *APPARATUS* is provided for the illustration of Natural Philosophy and Chemistry.

The large *MINERALOGICAL COLLECTION* of the late Dr. Troost occupies the cases in the Collection Room. The *GEOLOGICAL CABINET* comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished *LABORATORY*, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor of Chemistry.

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## Societies.

*THE LOGANIAN SOCIETY* was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "*THE COLLEGIAN*," monthly. It has in its possession a carefully selected Library of 1800 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large *GYMNASIUM*, also, is under its direction. A commodious *CARPENTER'S SHOP* which belongs to the Society, and of which a large number of the students avail themselves, is well furnished with tools and the proper conveniences for practice in the useful art of carpentry.

*THE ATHENÆUM* and *EVERETT* are literary societies of the students.

## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. The buildings are situated on a lawn of fifty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

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## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms: the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second term beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$375 00 per annum, payable as follows: \$187 50 at the beginning of each Term.

Washing is charged at the rate of 75 cents per dozen.

## Graduates.

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1836.

Thomas F. Cock, M.D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith,	Philadelphia,	Pa.
B. Wyatt Wistar,	Philadelphia,	Pa.

1838.

James V. Emlen, M.D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M.D., A. M.,	Philadelphia,	Pa.
Nereus Mendenhall, M.D.,	Guilford County,	N. C.
Richard Randolph, Jr., M.D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
*John R. Winslow, M.D., *1866,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M.D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M.D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M.D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

## 1845.

Edmund A. Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A.M.,	Vassalboro',	Me.
Alfred H. Smiley, A.M.,	Vassalboro',	Me.

## 1851.

Joseph L. Bailey,	Berks County,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A.M.,	Weare,	N. H.
Zaccheus Test, M.D., A.M.,	Richmond,	Ind.
James C. Thomas, M.D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M.D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whittall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A.M.,	Raysville,	Ind.
William H. Pancoast, M.D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

## 1855.

*Samuel Bettle,	*1859,	Philadelphia,	Pa.
John R. Hubbard, A.M.,		New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,		Philadelphia,	Pa.
Joel Cadbury, Jr.,		Philadelphia,	Pa.
Jonathan J. Comfort, M.D.,		Tecumseh,	Mich.
James M. Walton,		Philadelphia,	Pa.
Edward R. Wood, A.M.,		Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A.M.,		Thornbury,	Pa.
*Cyrus Mendenhall,	*1858,	Plainfield,	Ind.
Stephen Wood,		Bedford,	N. Y.

## 1858.

Thomas H. Burgess,		Harveysburg,	Ohio.
Thomas Clark,		Carthage,	Ind.
Daniel W. Hunt,		Annapolis,	Ind.
*Samuel T. Satterthwaite,	*1865,	Chesterfield,	N. J.
William G. Tyler,		Salem,	N. J.
Thomas Wistar, A.M., M.D.,		Philadelphia,	Pa.
Ellis H. Yarnall,		Philadelphia,	Pa.

## 1859.

*Richard W. Chase,	*1862,	Burlington,	N. J.
James R. Magee,		Philadelphia,	Pa.
*Richard C. Paxson,	*1864,	San Francisco,	Cal.
Edward Rhoads, M.D.,		Philadelphia,	Pa.
Edward C. Sampson,		Manchester,	Me.
George Sampson,		Manchester,	Me.
Abram Sharples, M.D.,		Ivy Mills,	Pa.
Benjamin H. Smith,		Upper Darby,	Pa.

## 1860.

*Lindley M. Clark,	*1861,	Carthage,	Ind.
William B. Corbit, M.D.,		Odessa,	Del.
William M. Corlies,		Philadelphia,	Pa.
Cyrus Lindley,		Monrovia,	Ind.
Theodore H. Morris,		Philadelphia,	Pa.
Frederick W. Morris,		Philadelphia,	Pa.
Richard Pancoast,		Philadelphia,	Pa.
John W. Pinkham, M.D.,		North Vassalboro',	Me.
Francis Richardson,		Philadelphia,	Pa.
Clement L. Smith, A.M.,		Upper Darby,	Pa.
James Tyson, M.D., A.M.,		Reading,	Pa.
Silas A. Underhill, LL.B.,		Brooklyn,	N. Y.

## 1861.

Edward Bettle,		Philadelphia,	Pa.
Henry Bettle,		Philadelphia,	Pa.
Charles Bettle,		Philadelphia,	Pa.
William B. Broomall,		Media,	Pa.
Charles H. Jones,		Tamaqua,	Pa.
Thomas W. Lamb, A.M.,		New Bridge,	N. C.
William N. Potts,		Philadelphia,	Pa.
Jehu H. Stuart, A.M.,		Westminster,	N. C.
John C. Thomas,		Baltimore,	Md.

## 1862.

Henry T. Coates,		Philadelphia,	Pa.
*Samuel A. Hadley, *1864,		Osceola,	Iowa.
George B. Mellor,		Philadelphia,	Pa.
Horace Williams, M.D.,		Newport,	R. I.
F. Augustus Wood,		New York,	N. Y.

## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr., A.M.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
Richard T. Jones,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham, M.D., A.M.,	Manchester,	Me.

## 1864.

Franklin Angell,	South Corinth,	N. Y.
William Ashbridge, M.D.,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper, A.M.,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
E. Pope Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

## 1865.

John R. Bringhurst,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	West Whiteland,	Pa.
Arthur Haviland,	Brooklyn,	N. Y.
*David H. Nichols, *1865,	East Vassalboro',	Me.
Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Robert B. Taber,	New Bedford,	Mass.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.



## 1866.

Aaron M. Elliott,	Jamestown,	N. C.
Benjamin E. Valentine, LL. B.,	Salem,	Mass.

## 1867.

John Ashbridge,	West Whiteland,	Pa.
George Ashbridge,	West Whiteland,	Pa.
William P. Clark,	Monrovia,	Ind.
Samuel C. Collins,	Morrisville,	Pa.
Nathaniel B. Crenshaw,	Richmond,	Va.
Charles H. Darlington,	Chicago,	Ill.
William T. Dorsey,	Baltimore,	Md.
B. Franklin Eshleman,	Lancaster,	Pa.
Richard M. Jones,	Dirigo,	Maine.
Charles W. Sharpless,	Philadelphia,	Pa.
Walter Wood,	Philadelphia,	Pa.

## 1868.

Edward H. Cook,	North Vassalboro',	Maine.
Alexis T. Cope,	Philadelphia,	Pa.
Benjamin C. Satterthwaite,	Oxford Valley,	Pa.
Louis Starr,	Philadelphia,	Pa.
S. Finley Tomlinson,	Bush Hill,	N. C.
Joseph H. Wills,	Mount Holly,	N. J.

Whole number of Graduates, 163.

## Honorary Degrees.

1858.

Hugh D. Vail, A.M., Plainfield, N. J.

1859.

\*Joseph W. Aldrich, A.M., \*1865, Philadelphia, Pa.

1860.

John G. Whittier, A.M., Amesbury, Mass.

1864.

Edward D. Cope, A.M., Caln, Pa.

1867.

Joseph Moore, A.M., Bush Hill, N. C.

## REMARKS

UPON THE

*Courses of Study and the Discipline.*

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

## ORGANIC SCIENCE.

The purposes of this department are to train the mind of the student in the methods of science, and to lay such foundations of knowledge as will enable each one to attain, with facility and interest, acquaintance with any of the natural sciences in detail by subsequent study. Effort will be made to follow a natural order of evolution in the sequence of subjects; beginning with Inorganic and Organic Chemistry, Physical Geography, Botany, and Zoology; and ascending through Vegetable and Animal (Comparative) Physiology, to the study of man. The structure and functions of the organs of the human body, including its relations to the mind, and the relations of man to nature, will be fully considered. Lastly, instruction will be given in Mental Philosophy and in Hygiene, or the science of health and its preservation, corporeal and mental.

The facilities for scientific instruction belonging to the college are already large, and are constantly becoming more extensive; the Geological Cabinet, for example, contains about 2500 specimens, and the Mineralogical Cabinet 2700. These collections, with illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.

### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. The most important Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

### RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to

exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the English Language and Literature will be made a prominent feature. The history and structure of our tongue are carefully investigated, and the student is familiarized, as far as possible, with the great works of the best authors. Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with our mother tongue generally, and especially for understanding the early English authors.

#### GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## MODERN LANGUAGES.

French is regularly taught during the Junior year, and German during the Senior year. This course of study, introducing the student to French and German literature, enables him to pursue his reading in those languages with ease after leaving college—preparing him to gain very readily, when travelling abroad, their *conversational* use. Provision is also made for teaching voluntary classes in Italian and Spanish.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the mem-

bers of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

### RELIGIOUS INSTRUCTION.

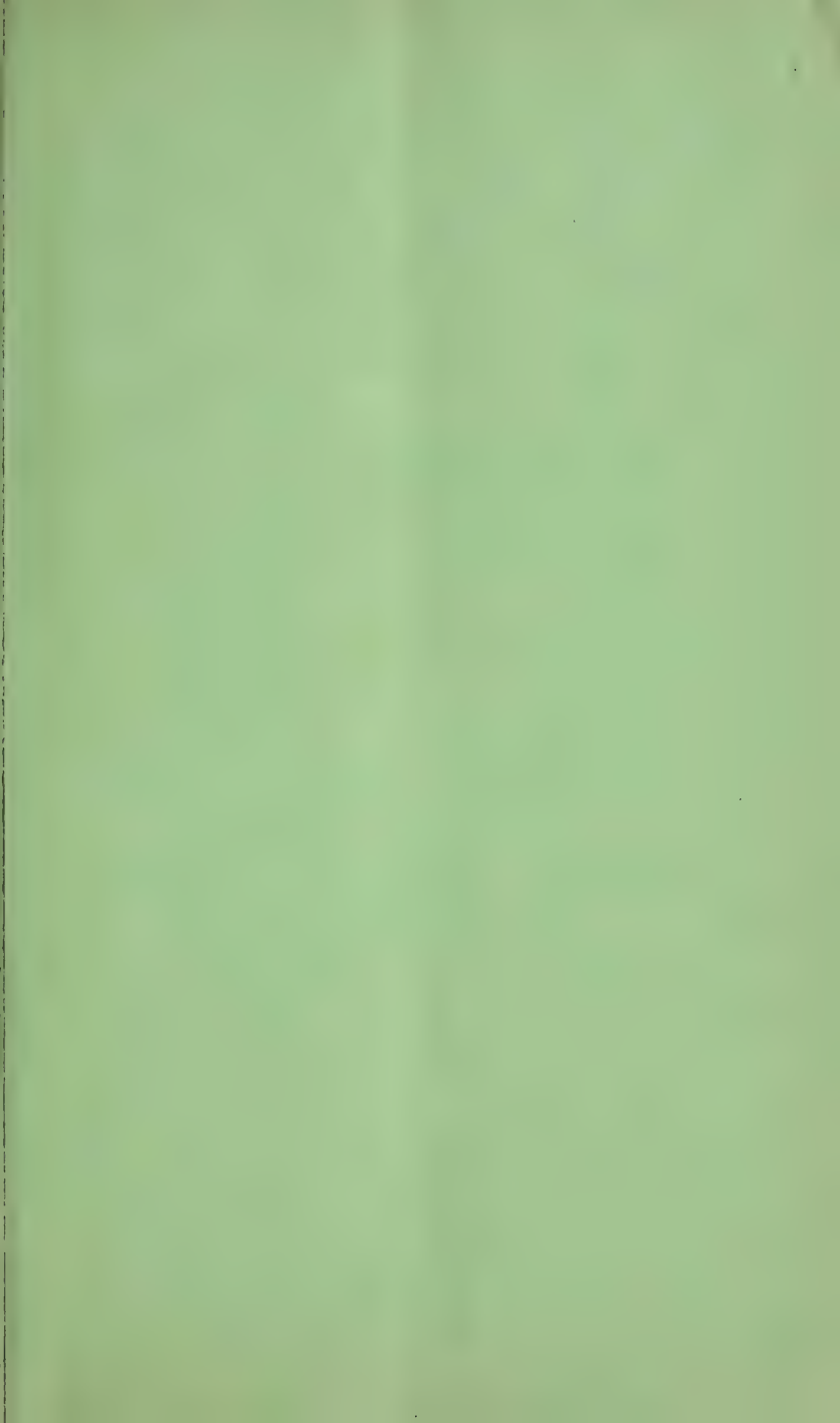
In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, Gurney's Observations, form part of the regular course of study.

### DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.









A  
CATALOGUE  
OF THE  
**Officers and Students**  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1869-70.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1870.



A

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COLLINS, PRINTER, 705 JAYNE STREET.

1870.

# Corporation.

---

*Secretary.*

PHILIP C. GARRETT.

*Treasurer.*

DAVID SCULL, JR.

## MANAGERS.

JOHN FARNUM,	THOMAS P. COPE,
SAMUEL HILLES,	✧ SAMUEL ALLINSON,
✧ ANTHONY M. KIMBER,	✧ JAMES E. RHOADS, M. D.
WISTAR MORRIS,	✧ WILLIAM EVANS,
T. WISTAR BROWN,	RICHARD CADBURY,
JOSEPH W. TAYLOR, M. D.	DAVID SCULL, JR.
WILLIAM S. HILLES,	JOEL CADBURY, JR.
JAMES WHITALL,	THOMAS WISTAR, M. D.
✧ HUGH D. VAIL,	✧ EDWARD RHOADS, M. D.
JAS. CAREY THOMAS, M. D.	JOHN E. CARTER,
BENJAMIN V. MARSH,	JOHN S. HAINES,
PHILIP C. GARRETT,	WILLIAM H. NICHOLSON,
WILLIAM C. LONGSTRETH,	RICHARD WOOD.

*Secretary of the Board.*

JAMES WHITALL.

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Office, 109 North Tenth Street, Philadelphia.

## Committee on Instruction.

JOHN FARNUM,	THOMAS P. COPE,
WILLIAM S. HILLES,	JAMES E. RHOADS, M. D.
JAMES WHITALL,	WILLIAM EVANS,
HUGH D. VAIL,	PHILIP C. GARRETT,
JOSEPH W. TAYLOR, M. D.	RICHARD CADBURY,
ANTHONY M. KIMBER,	JOHN E. CARTER.

## Committee on Finance and Economy.

ANTHONY M. KIMBER,	RICHARD CADBURY,
DAVID SCULL, JR.	JOEL CADBURY, JR.

## Committee on Farm.

HUGH D. VAIL,	ANTHONY M. KIMBER,
WILLIAM C. LONGSTRETH,	JOHN S. HAINES,
WILLIAM H. NICHOLSON.	

## Committee on Houses and Grounds.

JOSEPH W. TAYLOR, M. D.	HUGH D. VAIL,
THOMAS P. COPE,	DAVID SCULL, JR.
JOHN S. HAINES.	

## Committee on Library and Apparatus.

PHILIP C. GARRETT,	WILLIAM EVANS,
HUGH D. VAIL,	RICHARD CADBURY,
BENJAMIN V. MARSH,	JOHN E. CARTER,
JAMES E. RHOADS, M. D.	THOMAS WISTAR, M. D.
RICHARD WOOD.	

## Committee on Admissions.

JAMES WHITALL,	JAMES C. THOMAS, M. D.
THOMAS P. COPE,	DAVID SCULL, JR.
RICHARD CADBURY.	

## Committee on Investments.

BENJAMIN V. MARSH,	T. WISTAR BROWN,
WILLIAM C. LONGSTRETH.	

## Faculty.

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SAMUEL J. GUMMERE, A. M.,

PRESIDENT.

THOMAS CHASE, A. M.,

PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL J. GUMMERE, A. M.,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

JOHN H. DILLINGHAM, A. M.,

SUPERINTENDENT,

AND PROFESSOR OF MORAL AND POLITICAL SCIENCE.

HENRY HARTSHORNE, M. D., A. M.,

PROFESSOR OF ORGANIC SCIENCE, AND PHILOSOPHY.

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HENRY WOOD, A. B.,

ASSISTANT SUPERINTENDENT.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.
Brown, J. Stuart	Philadelphia, Pa.
Carey, John Ellicott	Baltimore, Md.
Coale, Alford Gable	Baltimore, Md.
Comfort, Howard	Germantown, Pa.
Hilles, Thomas Allen	Wilmington, Del.
Hubbard, William Harrison	Monrovia, Ind.
Longstreth, Thomas Kimber	Philadelphia, Pa.
Owen, Oliver Goldsmith	Indianola, Iowa.
Pratt, Charles Edward	Rochester, N. H.
Rose, David Franklin	Chester, Pa.
Steele, John Dutton	Coatesville, Pa.
Wood, Charles	Mt. Kisco, N. Y.
Wood, Stuart	Philadelphia, Pa.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Brown, Henry Graham	Philadelphia,	Pa.
Evans, William Penn	Paoli,	Pa.
Garrigues, John Sharpless	Haverford,	Pa.
Haines, Reuben	Germantown,	Pa.
Haines, William Henry	Philadelphia,	Pa.
Hartshorne, Joseph	Philadelphia,	Pa.
Hoskins, Jesse Franklin	Summerfield,	N. C.
Moore, Walter Thomas	Salem,	Ohio.
Reeves, Ellis Biddle	Phœnixville,	Pa.
Roberts, Alfred Reginald	Philadelphia,	Pa.
Taylor, Charles S.	Burlington,	N. J.
Tomlinson, Allen J.	Bush Hill,	N. C.
Thurston, Edward Day	New York,	N. Y.
Winslow, Randolph	Baltimore,	Md.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.
Ashbridge, Richard	West Whiteland, Pa.
Cadbury, Richard T.	Philadelphia, Pa.
Carey, James, Jr.	Baltimore, Md.
Chase, William Barker	Philadelphia, Pa.
Downing, Thomas Stalker	West Whiteland, Pa.
Erben, Walter	Philadelphia, Pa.
Estes, Thomas Rowland	Westfield, Ind.
Gibbons, William Henry	Coatesville, Pa.
Gummere, Francis Barton	Haverford, Pa.
Haines, Caspar Wistar	Cheltenham, Pa.
Howland, Charles Samuel	Wilmington, Del.
Huston, William Perot	Philadelphia, Pa.
Huston, Abram Francis	Coatesville, Pa.
Kimber, Marmaduke Cope	Germantown, Pa.
Longstreth, William Morris	Philadelphia, Pa.
Morris, Isaac Tyson	Philadelphia, Pa.
Sharpless, Samuel Frank	Philadelphia, Pa.
Thomas, Richard Henry	Baltimore, Md.
Wistar, Edward Morris	Germantown, Pa.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Clark, Charles Granville	Richmond,	Ind.
Cope, Thomas Pim	Germantown,	Pa.
Fox, Joseph M.	Philadelphia,	Pa.
Haines, Henry Cope	Germantown,	Pa.
Peitsmeyer, Edward	Minden,	Prussia.
Sampson, Alden, Jr.	New York,	N. Y.

## SUMMARY.

Seniors . . . . .	13
Juniors . . . . .	14
Sophomores . . . . .	19
Freshmen . . . . .	6
	—
Total . . . . .	52

## Calendar.

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Winter Term, 1869-70, began . . .	9th Mo. 15.
Address before Alumni, 1869 . . .	10th Mo. 23.
Oration before Loganian Society, 1870 . . .	2d Mo. 1.
Junior Exhibition, 1870 . . .	2d Mo. 2.
Winter Term, 1869-70, ends . . .	2d Mo. 2.

### VACATION OF THREE WEEKS.

Summer Term, 1870, begins . . .	2d Mo. 23.
Private Review, 1870, begins . . .	6th Mo. 13.
Annual Examinations, 1870, begin . . .	7th Mo. 4.
Public Meeting of Loganian Society, 1870 . . .	7th Mo. 12.
Address to the Graduating Class, 1870 . . .	7th Mo. 12.
Commencement, 1870 . . .	7th Mo. 13.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1870 . . .	{ 2d Mo. 22. { 9th Mo. 13.
Winter Term, 1870-71, begins . . .	9th Mo. 14.

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.\*

Harkness's, Andrews and Stoddard's, or Allen's Latin Grammar,

Cæsar's Commentaries (Stuart's),

Virgil's Eclogues, or first book of the Æneid (Chase's),

Cicero's Orations against Catiline (Stuart's),

and the first twenty exercises in Harkness's or Arnold's Latin Prose Composition.

Hadley's, Crosby's, Morris's, or Sophocles's Greek Grammar,

Felton's, Jacob's, or Whiton's Greek Reader,

and the first fifteen exercises in Arnold's Greek Prose Composition (to be written with the accents).

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,

Alsop's First Lessons in Algebra,

and the first two books in Davies's Legendre.

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\* The following pronunciation is recommended: In Latin, *ā* as in *father*, *ǎ* the same sound shorter, *ē* like *a* in *fate*, *ĕ* as in *set*, *ī* as in *machine*, *ĭ* as in *sit*, *ō* as in *hole*, *ō* as in *nor*, *u* as in Italian *i. e.*, *ū* as in *rude* (or as *oo* in *moon*), *ŭ* as in *put*, *j* like *y* in *year*, *c* and *g* like Greek *κ* and *γ*, *t* always pure or unspirated.

In Greek, observing the written *accents*, and giving *ā* the sound of *a* in *father*, *ǎ* the same sound short, *ᾰ* that of *a* in *fate*, *ᾱ* that of *e* in *set*, *ῑ* that of *i* in *machine*, *ῖ* that of *i* in *sit*, *ω* that of *o* in *hole*, *ο* that of *o* in *nor*, *υ* that of *u* in French, with the proper distinction as long or short, *ου* that of *oo* in *moon*, *ου* that of *ou* in *house*.

## ENGLISH DEPARTMENT.

Brown's English Grammar,  
Mitchell's Ancient and Modern Geography,  
The History of the United States,  
and the historical and geographical notices found in the re-  
quired Greek and Latin Text-books.

The candidates must be well prepared also in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, JAMES WHITALL, No. 410 Race Street, Philadelphia. Candidates will present themselves at the College, for examination by the Faculty, *at 9 o'clock on the morning previous to the opening of the term.*

Students may be admitted to **ADVANCED STANDING**, when they can pass a satisfactory examination in all the previous studies of the course.

It is the desire of the Faculty to discourage undue haste in sending boys to college young or superficially prepared in their studies, and in applying for their admission to advanced classes. The full benefit of a college course is not likely to be obtained, unless the student enters with his class at the *beginning* of the course, qualified not less in maturity of mind and good character than in mental acquirement and discipline, for exercises that are in advance of boyhood. Making up for subsequent examination what has been omitted before entrance into an advanced class is seldom satisfactory, as it takes attention and time from the studies of the year; and the rapid perusal of a text-book is a very imperfect substitute for the extended teaching of its subject in the class-room of the Professor, where much is often added to the matter of the recitations.



## Course of Instruction.

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### FRESHMAN CLASS.

#### FIRST TERM.

1. *Scripture.* The Gospel according to John.
2. *Mathematics.* Euclid's Geometry.
3. *Greek.* Xenophon's Anabasis.—Hadley's Greek Grammar.—Exercises in writing Greek.
4. *Latin.* Chase's *Æneid* of Virgil.—Harkness's Latin Grammar (Syntax and Prosody).—Exercises in writing Latin.
5. *Classical Geography and Antiquities.*
6. *English Literature.* Cleveland's Compendium.—Compositions.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Hooker's Natural History.
9. *History.* Weber's Universal History.
10. *Review.*

#### SECOND TERM.

1. *Scripture,* continued.
2. *Mathematics.* Alsop's Algebra.—Gummere's Plane Trigonometry.—Gummere's Surveying, begun.
3. *Greek.* Herodotus (Johnson's).—Greek Syntax (Hadley).—Exercises in writing Greek.
4. *Latin.* Cicero's Orations (Stuart).—Latin Syntax.—Exercises in writing Latin.
5. *English Literature.* Cleveland's Compendium, continued.—Readings.

6. *Botany.* Gray's.
  7. *History.* Weber's Universal History, finished.
  8. *Compositions.*
  9. *Review.*
  10. *Private Review* and *written Examination* on all the year's studies orally reviewed.
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## SOPHOMORE CLASS.

### FIRST TERM.

1. *Scripture.* Selections (English New Testament).
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.
3. *Greek.* The Iliad or Odyssey of Homer.—Exercises in writing Greek.
4. *Latin.* Livy (Lincoln's Selections).—Exercises in writing Latin.
5. *Chemistry.* Steele's Chemistry. — Fresenius's Qualitative Analysis.—Lectures.
6. *Ethics.* Paley's Evidences of Christianity.—Dymond's Essays on Morality.
7. *Themes.*
8. *Review.*

### SECOND TERM.

1. *Scripture.* Selections, continued.
2. *Physics.* Loomis's Natural Philosophy.
3. *Descriptive Astronomy.* Herschel's Outlines.
4. *Greek.* Plato's Apology and Crito.—Exercises in writing Greek.

5. *Latin.* The Odes of Horace (Chase).—Exercises in writing Latin.
  6. *English.* Anglo-Saxon (March).—History of the English Language.—Themes.
  7. *Geology.* Dana's Text-book.
  8. *Ethics.* Dymond's Essays on Morality, finished.
  9. *Review.*
  10. *Private Review and written Examination*, as at the end of previous year.
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## JUNIOR CLASS.

### FIRST TERM.

1. *Scripture.* Selections from the Greek Testament and English Bible committed to memory.—Critical Translation of Greek Testament, with Exegesis.
2. *Mathematics.* Davies's Analytical Geometry.
3. *Astronomy.* Descriptive Astronomy (Herschel), finished.
4. *Greek.* The Prometheus of Æschylus.—Exercises in writing Greek, and Extemporalia.
5. *Latin.* Satires and Epistles of Horace.—Exercises in writing Latin, and Extemporalia.
6. *French.* Knapp's Grammar.—Translations.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately.
9. *Forensics.*
10. *Political Science.* Wayland's Political Economy.—Kent's Commentaries on the Law of Nations.
11. *Elocution.* Exercises.—A Public Oration.
12. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, etc., as in First Term.
2. *Mathematics.* Differential and Integral Calculus (Davies).
3. *Greek.* Thucydides, begun.—Exercises in writing Greek.
4. *Latin.* The Germania and Agricola of Tacitus.—Exercises in writing Latin, and Extemporalia.
5. *English.* History of English Literature.—Readings.—Philological Study of the English Language.
6. *French.* Fenelon's Télémaque.—Histoire de Charles XII.
7. *Forensics.*
8. *Organic Science.* Human and Comparative Anatomy and Physiology (Lectures).—Hartshorne's Manual.
9. *Political Science.* Kent's Commentaries on American Law.
10. *Review.*
11. *Private Review and written Examination,* as at the end of previous years.

## SENIOR CLASS.

## FIRST TERM.

1. *Scripture.* Greek Testament, with Exegesis.
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).
3. *Greek.* Thucydides, continued.—The Antigone of Sophocles, begun.—Exercises in writing Greek.
4. *Latin.* Cicero's Tusculan Disputations, and Somnium Scipionis (Chase).—Latin Compositions and Extemporalia.
5. *German.* Whitney's Grammar and Reader.—Schiller.
6. *Philology.* Whitney's Science of Language.—English Literature.
7. *Hygiene.* Lectures on the Preservation of Health.

8. *Forensics.*
9. *History.* Guizot's History of Modern Civilization.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, continued.
2. *Mathematical and Practical Astronomy.* Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* The Antigone of Sophocles, finished.—Modern Greek (Lectures).
4. *Latin.* The Captivi of Plautus.—Cicero's or Pliny's Letters.—Latin Compositions.
5. *German.* Translations and Exercises.
6. *Psychology.* Haven's Mental Philosophy.—Lectures.
7. *Christian Doctrines.* Gurney's Observations.
8. *History.* Arnold's Lectures on Modern History.
9. *Elocution.*
10. *A Public Oration.*
11. *Review.*
12. *Private Review and written Examination,* as at the end of previous years.

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With the approbation of the Faculty, voluntary classes may be formed in HEBREW, ITALIAN, and SPANISH.

## Lectures.

THE Special Courses of Lectures to the whole College, for the winter of 1869-70, are as follows:—

<i>Electricity</i> . . . . .	}	PRESIDENT GUMMERE.
<i>The Properties of Numbers</i>		
<i>English Literature</i> . . .		PROFESSOR CHASE.
<i>Experimental Chemistry</i> .		PROFESSOR E. J. HOUSTON.

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## Examinations.

IN determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts; except that Freshmen may be advanced to the Sophomore Class on receiving a mark of at least five in the examination upon each book, and a general average of six in each department.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

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## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Managers and Faculty. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. All theses should be presented as early as *the first of the Sixth month*. The fee for the diploma is Ten Dollars.



## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

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## Library and Apparatus.

THE LIBRARY of the College contains 4936 volumes; that of the Loganian Society 1911; those of other societies 387; making the whole number of books in the Libraries 7239. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a valuable gift from generous Friends in England—a copy of the splendid edition of the *CODEx SINAITICUS*, published by the Emperor of Russia, and Woide's rare and valuable fac-simile edition of the important *CODEx ALEXANDRINUS*. To these have been added, by donation and purchase, Tischendorf's recent edition of the *CODEx VATICANUS*, and the magnificent Roman edition of



the same CODEX. The Library has thus the rare advantage of containing fac-simile copies of the three great original sources of the New Testament text.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished LABORATORY, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 1911 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction. A CARPENTER'S SHOP which belongs to the Society is furnished with the proper conveniences for practice.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 387 volumes.

## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. The buildings are situated on a lawn of fifty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

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## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms: the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second term beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$375 00 per annum, payable as follows: \$187 50 at the beginning of each Term.

Washing is charged at the rate of 75 cents per dozen.

## Graduates.

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1836.

Thomas F. Cock, M.D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith, A. M.,	Philadelphia,	Pa.
*B. Wyatt Wistar, *1869,	Philadelphia,	Pa.

1838.

James V. Emlen, M.D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M.D., A.M.,	Philadelphia,	Pa.
Nereus Mendenhall, M.D.,	Guilford County,	N. C.
Richard Randolph, Jr., M.D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
*John R. Winslow, M.D., *1866,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M.D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M.D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M.D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

## 1845.

Edmund A. Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A.M.,	Vassalboro',	Me.
Alfred H. Smiley, A.M.,	Vassalboro',	Me.

## 1851.

Joseph L. Bailey,	Berks County,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A.M.,	Weare,	N. H.
Zaccheus Test, M.D., A.M.,	Richmond,	Ind.
James C. Thomas, M.D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M.D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whitall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A.M.,	Raysville,	Ind.
William H. Pancoast, M.D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

## 1855.

*Samuel Bettle,	*1859,	Philadelphia,	Pa.
John R. Hubbard, A.M.,		New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,		Philadelphia,	Pa.
Joel Cadbury, Jr.,		Philadelphia,	Pa.
Jonathan J. Comfort, M.D.,		Tecumseh,	Mich.
James M. Walton,		Philadelphia,	Pa.
Edward R. Wood, A.M.,		Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A.M.,		Thornbury,	Pa.
*Cyrus Mendenhall,	*1858,	Plainfield,	Ind.
Stephen Wood,		Bedford,	N. Y.

## 1858.

Thomas H. Burgess,		Harveysburg,	Ohio.
Thomas Clark,		Carthage,	Ind.
Daniel W. Hunt,		Annapolis,	Ind.
*Samuel T. Satterthwaite,	*1865,	Chesterfield,	N. J.
William G. Tyler,		Salem,	N. J.
Thomas Wistar, A.M., M.D.,		Philadelphia,	Pa.
Ellis H. Yarnall,		Philadelphia,	Pa.

## 1859.

*Richard W. Chase,	*1862,	Burlington,	N. J.
James R. Magee,		Philadelphia,	Pa.
*Richard C. Paxson,	*1864,	San Francisco,	Cal.
Edward Rhoads, M.D.,		Philadelphia,	Pa.
Edward C. Sampson,		Manchester,	Me.
George Sampson,		Manchester,	Me.
Abram Sharples, M.D.,		Ivy Mills,	Pa.
Benjamin H. Smith,		Upper Darby,	Pa.

## 1860.

*Lindley M. Clark,	*1861,	Carthage,	Ind.
William B. Corbit, M.D.,		Odessa,	Del.
William M. Corlies,		Philadelphia,	Pa.
Cyrus Lindley,		Monrovia,	Ind.
Theodore H. Morris,		Philadelphia,	Pa.
Frederick W. Morris,		Philadelphia,	Pa.
Richard Pancoast,		Philadelphia,	Pa.
John W. Pinkham, M.D.,		North Vassalboro',	Me.
Francis Richardson,		Philadelphia,	Pa.
Clement L. Smith, A.M.,		Upper Darby,	Pa.
James Tyson, M.D., A.M.,		Reading,	Pa.
Silas A. Underhill, LL.B.,		Brooklyn,	N. Y.

## 1861.

Edward Bettle,		Philadelphia,	Pa.
Henry Bettle,		Philadelphia,	Pa.
Charles Bettle,		Philadelphia,	Pa.
William B. Broomall,		Media,	Pa.
Charles H. Jones,		Tamaqua,	Pa.
Thomas W. Lamb, A.M.,		Belvidere,	N. C.
William N. Potts,		Philadelphia,	Pa.
Jehu H. Stuart, A.M.,		Westminster,	N. C.
John C. Thomas,		Baltimore,	Md.

## 1862.

Henry T. Coates,		Philadelphia,	Pa.
*Samuel A. Hadley, *1864,		Osceola,	Iowa.
George B. Mellor,		Philadelphia,	Pa.
Horace Williams, M.D.,		Newport,	R. I.
Isaac F. Wood,		New York,	N. Y.



## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr., A.M.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
*Richard T. Jones, *1869,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham, M.D., A.M.,	Manchester,	Me.

## 1864.

Franklin Angell, A. M.,	South Corinth,	N. Y.
William Ashbridge, M.D.,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper, A.M.,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth, M.D., A.M.,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
E. Pope Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

## 1865.

John R. Bringhurst,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	West Whiteland,	Pa.
Arthur Haviland,	Brooklyn,	N. Y.
*David H. Nichols, *1865,	East Vassalboro',	Me.
Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Robert B. Taber, A. M.,	New Bedford,	Mass.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.



## 1866.

Aaron M. Elliott,	Jamestown,	N. C.
Benjamin E. Valentine, LL. B.,	Salem,	Mass.

## 1867.

John Ashbridge,	West Whiteland,	Pa.
George Ashbridge,	West Whiteland,	Pa.
William P. Clark,	Monrovia,	Ind.
Samuel C. Collins,	Morrisville,	Pa.
Nathaniel B. Crenshaw,	Richmond,	Va.
Charles H. Darlington,	Chicago,	Ill.
William T. Dorsey,	Baltimore,	Md.
B. Franklin Eshleman,	Lancaster,	Pa.
Richard M. Jones,	Dirigo,	Maine.
Charles W. Sharpless,	Philadelphia,	Pa.
Walter Wood,	Philadelphia,	Pa.

## 1868.

Alexis T. Cope,	Philadelphia,	Pa.
Benjamin C. Satterthwaite,	Oxford Valley,	Pa.
Louis Starr,	Philadelphia,	Pa.
S. Finley Tomlinson,	Bush Hill,	N. C.
Joseph H. Wills,	Mount Holly,	N. J.

## 1869.

Johns H. Congdon,	Providence,	R. I.
Henry Cope,	Germantown,	Pa.
Ludovic Estes,	Westfield,	Ind.
Henry Evaul,	Palmyra,	N. J.
William B. Kaighn,	Moorestown,	N. J.
Pendleton King,	Oak Ridge,	N. C.
William H. Randolph,	Philadelphia,	Pa.

Edward B. Taylor,	Cinnaminson,	N. J.
William S. Taylor,	Burlington,	N. J.
James G. Whitlock,	Richmond,	Va.
Walter Wood,	New Bedford,	Mass.
Henry Wood,	New Bedford,	Mass.

Whole number of Graduates, 175.

## Honorary Degrees.

1858.

Hugh D. Vail, A.M., Plainfield, N. J.

1859.

\*Joseph W. Aldrich, A.M., \*1865, Philadelphia, Pa.

1860.

John G. Whittier, A.M., Amesbury, Mass.

1864.

Edward D. Cope, A.M., Caln, Pa.

1867.

Joseph Moore, A.M., Richmond, Ind.

## REMARKS

UPON THE

*Courses of Study and the Discipline.*

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

## ORGANIC SCIENCE.

The purposes of this department are to train the mind of the student in the methods of science, and to lay such foundations of knowledge as will enable each one to attain, with facility and interest, acquaintance with any of the natural sciences in detail by subsequent study. Effort will be made to follow a natural order of evolution in the sequence of subjects; beginning with Physical Geography, Botany, Zoology, and Inorganic and Organic Chemistry; and ascending through Vegetable and Animal (Comparative) Physiology, to the study of Man. The structure and functions of the organs of the human body, including its relations to the mind, and the relations of man to nature, will be fully considered. Lastly, instruction will be given in Mental Philosophy, and in Hygiene, or the science of health and its preservation, corporeal and mental.

The facilities for scientific instruction belonging to the college are already large, and are constantly becoming more extensive; the Geological Cabinet, for example, contains about 2500 specimens, and the Mineralogical Cabinet 2700. These collections, with illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.

### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. The most important Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

### RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to

exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the English Language and Literature will be made a prominent feature. The history and structure of our tongue are carefully investigated, and the student is familiarized, as far as possible, with the great works of the best authors. Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with our mother tongue generally, and especially for understanding the early English authors.

### GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## MODERN LANGUAGES.

French is regularly taught during the Junior year, and German during the Senior year. This course of study, introducing the student to French and German literature, enables him to pursue his reading in those languages with ease after leaving college—preparing him to gain very readily, when travelling abroad, their *conversational* use. Provision is also made for teaching voluntary classes in Italian and Spanish.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the mem-

bers of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, and Gurney's Observations, form part of the regular course of study.

### DISCIPLINE.

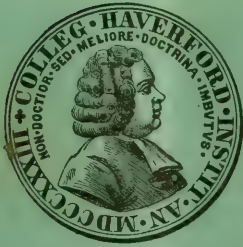
In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.







A  
CATALOGUE  
OF THE  
**Officers and Students**  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1870-71.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET  
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*Treasurer.*

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JAMES WHITALL.

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Office, 109 North Tenth Street, Philadelphia.

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PRESIDENT.

THOMAS CHASE, A. M.,

PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL J. GUMMERE, A. M.,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

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SUPERINTENDENT.

PROFESSOR OF MORAL AND POLITICAL SCIENCE.

HENRY HARTSHORNE, M. D., A. M.,

PROFESSOR OF ORGANIC SCIENCE, AND PHILOSOPHY.

OLIVER G. OWEN, A. B.,

ASSISTANT SUPERINTENDENT,

AND TUTOR IN ANCIENT LANGUAGES AND ETHICS.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Brown, Henry Graham	Philadelphia,	Pa.
Evans, William Penn	Paoli,	Pa.
Garrigues, John Sharpless	Haverford,	Pa.
Haines, Reuben	Germantown,	Pa.
Haines, William Henry	Philadelphia,	Pa.
Hartshorne, Joseph	Philadelphia,	Pa.
Hoskins, Jesse Franklin	Summerfield,	N. C.
Moore, Walter Thomas	Salem,	Ohio.
Reeves, Ellis Biddle	Phœnixville,	Pa.
Roberts, Alfred Reginald	Philadelphia,	Pa.
Taylor, Charles S.	Burlington,	N. J.
Thurston, Edward Day	New York,	N. Y.
Winslow, Randolph	Baltimore,	Md.

## JUNIOR CLASS.

NAMES.	RESIDENCE.
Ashbridge, Richard	West Whiteland, Pa.
Cadbury, Richard T.	Philadelphia, Pa.
Carey, James, Jr.	Baltimore, Md.
Chase, William Barker	Philadelphia, Pa.
Downing, Thomas Stalker, Jr.	West Whiteland, Pa.
Erben, Walter	Philadelphia, Pa.
Estes, Thomas Rowland	Westfield, Ind.
Forsythe, John Evans	Oak Hill, Pa.
Gibbons, William H.	Coatesville, Pa.
Gummere, Francis Barton	Haverford, Pa.
Haines, Caspar Wistar	Cheltenham, Pa.
Howland, Charles S.	Wilmington, Del.
Huston, William Perot	Philadelphia, Pa.
Huston, Abram Francis	Coatesville, Pa.
Kimber, Marmaduke Cope	Germantown, Pa.
Longstreth, William Morris	Philadelphia, Pa.
Morris, Isaac Tyson	Philadelphia, Pa.
Sharpless, Samuel Frank	Philadelphia, Pa.
Thomas, Richard Henry	Baltimore, Md.
Wistar, Edward Morris	Germantown, Pa.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Clark, Charles Granville	Richmond,	Ind.
Comfort, James Cooper, Jr.	Germantown,	Pa.
Cope, Thomas Pim, Jr.	Germantown,	Pa.
Emlen, George Williams	Germantown,	Pa.
Fox, Joseph M.	Philadelphia,	Pa.
Haines, Henry Cope	Germantown,	Pa.
Lowry, Benjamin Howard	Philadelphia,	Pa.
Peitsmeyer, Edward	Minden,	Prussia.
Sampson, Alden, Jr.	New York,	N. Y.
Warner, George Malin	Germantown,	Pa.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Allinson, Edward Pease	Burlington,	N. J.
Bangs, William	Germantown,	Pa.
Deacon, Frederick Howard	Burlington,	N. J.
Emlen, James	Germantown,	Pa.
Hartshorne, Charles Robinson	Brighton,	Md.
Hilles, Samuel Eli	Wilmington,	Del.
Smith, Franklin Whitall	Philadelphia,	Pa.
Stabler, Charles Miller	Alexandria,	Va.

## SUMMARY.

Seniors . . . . .	13
Juniors . . . . .	20
Sophomores . . . . .	10
Freshmen . . . . .	8
	—
Total . . . . .	51

## Calendar.

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Winter Term, 1870-71, began . . . . .	9th Mo. 14.
Address before Alumni, 1870 . . . . .	10th Mo. 28.
Oration before Loganian Society, 1871 . . . . .	1st Mo. 31.
Junior Exhibition, 1871 . . . . .	2d Mo. 1.
Winter Term, 1870-71, ends . . . . .	2d Mo. 1.

### VACATION OF THREE WEEKS.

Summer Term, 1871, begins . . . . .	2d Mo. 22.
Private Review, 1871, begins . . . . .	6th Mo. 12.
Annual Examinations, 1871, begin . . . . .	7th Mo. 3.
Public Meeting of Loganian Society, 1871 . . . . .	7th Mo. 11.
Address to the Graduating Class, 1871 . . . . .	7th Mo. 11.
Commencement, 1871 . . . . .	7th Mo. 12.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1871 . . . . .	{ 2d Mo. 21. { 9th Mo. 12.
Winter Term, 1871-72, begins . . . . .	9th Mo. 13.

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.

Harkness's, Andrews and Stoddard's, Bullions and Morris's, or Allen's Latin Grammar,

Cæsar's Commentaries (Stuart's),

The first book of Virgil's Æneid (Chase's),

Cicero's Orations against Catiline (Stuart's),

and the first twenty exercises in Harkness's or Allen's Latin Prose Composition.

Hadley's, Crosby's, Morris's, Sophocles's, or Goodwin's Greek Grammar,

Felton's, Jacob's, or Whiton's Greek Reader,

and the first fifteen exercises in Arnold's or Morris's Greek Prose Composition (to be written with the accents).

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,

Alsop's First Lessons in Algebra,

and the first two books in Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar,

Mitchell's Ancient and Modern Geography,


The History of the United States,

and the historical and geographical notices found in the required Greek and Latin Text-books.

The candidates must be well prepared also in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the Secretary of the Board of Managers, JAMES WHITALL, No. 410 Race Street, Philadelphia. Candidates will present themselves at the College, for examination by the Faculty, *at 9 o'clock on the morning previous to the opening of the term.*

Students may be admitted to ADVANCED STANDING, when they can pass a satisfactory examination in *all* the previous studies of the course; being first, however, examined in the studies requisite for admission to the Freshman class, and if found suitably prepared therein, may then be examined for admission to the next higher class, and so on.

 It is the desire of the Faculty to discourage undue haste in sending boys to college young or superficially prepared in their studies, and in applying for their admission to advanced classes. The full benefit of a college course is not likely to be obtained, unless the student enters with his class at the *beginning* of the course, qualified not less in maturity of mind and good character than in mental acquirement and discipline, for exercises that are in advance of boyhood. Making up for subsequent examination what has been omitted before entrance into an advanced class is seldom satisfactory, as it takes attention and time from the studies of the year; and the rapid perusal of a text-book is a very imperfect substitute for the extended teaching of its subject in the class-room of the Professor, where much is often added to the matter of the recitations.



## Course of Instruction.

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### FRESHMAN CLASS.

#### FIRST TERM.

1. *Scripture.* The Gospel according to John.
2. *Mathematics.* Euclid's Geometry.
3. *Greek.* Xenophon's Anabasis.—Review of Greek Grammar.—Exercises in writing Greek.
4. *Latin.* Chase's Æneid of Virgil.—Review of Latin Grammar (Syntax and Prosody).—Exercises in writing Latin.
5. *Classical Geography and Antiquities.*
6. *English Literature.* Cleveland's Compendium.—Compositions—Hart's Rhetoric.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Hooker's Natural History.
9. *History.* Weber's Universal History.
10. *Review.*

#### SECOND TERM.

1. *Scripture,* continued.
2. *Mathematics.* Alsop's Algebra.—Gummere's Plane Trigonometry.—Gummere's Surveying, begun.
3. *Greek.* Herodotus (Johnson's).—Greek Syntax (Hadley).—Exercises in writing Greek.
4. *Latin.* Cicero's Orations (Stuart).—Latin Syntax.—Exercises in writing Latin (Allen's Composition.)
5. *English Literature.* Cleveland's Compendium, continued.—Readings—Compositions.

6. *Botany.* Wood's.
  7. *History.* Weber's Universal History, finished.
  8. *Review.*
  9. *Private Review* and *written Examination* on all the year's studies orally reviewed.
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## SOPHOMORE CLASS.

### FIRST TERM.

1. *Scripture.* English New Testament.
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.
3. *Greek.* The Iliad or Odyssey of Homer.—Exercises in writing Greek.
4. *Latin.* Livy (Lincoln's Selections).—Exercises in writing Latin—(Allen).
5. *Chemistry.* Steele's Chemistry.—Bloxam's Laboratory Teaching.—Lectures.
6. *Ethics.* Paley's Evidences of Christianity.—Dymond's Essays on Morality.
7. *Modern History.*
8. *English.* Anglo-Saxon (March).
9. *Themes.*
10. *Review.*

### SECOND TERM.

1. *Scripture.* New Testament continued.
2. *Physics.* Loomis's Natural Philosophy.
3. *Descriptive Astronomy.* Herschel's Outlines.
4. *Greek.* Plato's Apology and Crito.—Exercises in writing Greek.

5. *Latin.* The Odes of Horace (Chase).—Exercises in writing Latin.
6. *English.* Anglo-Saxon (March).—History of the English Language.—Themes.
7. *Geology.* Dana's Text-book.
8. *Mental Philosophy.* Haven.
9. *Modern History.*
10. *Review.*
11. *Private Review and written Examination,* as at the end of previous year.

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## JUNIOR CLASS.

### FIRST TERM.

1. *Scripture.* Selections from the Greek Testament and English Bible committed to memory.—Critical Translation of Greek Testament.
2. *Mathematics.* Davies's Analytical Geometry.
3. *Astronomy.* Descriptive Astronomy (Herschel), finished.
4. *Greek.* The Prometheus of Æschylus.—Exercises in writing Greek, and Extemporalia.
5. *Latin.* Satires and Epistles of Horace.—Exercises in writing Latin, and Extemporalia.
6. *French.* Knapp's Grammar.—Translations.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately.
9. *Forensics.*
10. *Political Science.* Wayland's Political Economy.—Kent's Commentaries on the Law of Nations.
11. *Elocution.* Rehearsals for Exhibition.
12. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, etc., as in First Term.
2. *Mathematics.* Differential and Integral Calculus (Davies).
3. *Greek.* Thucydides, begun.—Exercises in writing Greek.
4. *Latin.* The Germania and Agricola of Tacitus.—Exercises in writing Latin, and Extemporalia.
5. *English.* History of English Literature.—Readings.—Philological Study of the English Language.
6. *French.* Fenelon's *Télémaque*.—*Histoire de Charles XII.*
7. *Forensics.*
8. *Organic Science.* Human and General Anatomy and Physiology (Lectures).—Hartshorne's Manual.
9. *Political Science.* Kent's Commentaries on American Law.—Hallam's Constitutional History.
10. *Review.*
11. *Private Review and written Examination,* as at the end of previous years.

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 SENIOR CLASS.

## FIRST TERM.

1. *Scripture.* Greek Testament.
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).
3. *Greek.* Thucydides, continued.—The Antigone of Sophocles, begun.—Exercises in writing Greek.
4. *Latin.* Cicero's Tusculan Disputations, and *Somnium Scipionis* (Chase).—Latin Compositions and Extemporalia.
5. *German.* Whitney's Grammar and Reader.—Schiller.
6. *Philology.* Whitney's Science of Language.—English Literature.
7. *Hygiene.* Lectures on the Preservation of Health.

8. *Forensics.*
9. *History.* Hallam continued.—Guizot's History of Modern Civilization.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, continued.
2. *Mathematical and Practical Astronomy.* Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* The Antigone of Sophocles, finished.—Modern Greek (Lectures).
4. *Latin.* The Captivi of Plautus.—Cicero's or Pliny's Letters.—Latin Compositions.
5. *German.* Translations and Exercises.
6. *Psychology.* Porter's Human Intellect.—Lectures.
7. *Christian Doctrines.* Gurney's Observations.
8. *History.* Arnold's Lectures on Modern History.
9. *Elocution.*
10. *A Public Oration.*
11. *Review.*
12. *Private Review and written Examination,* as at the end of previous years.



With the approbation of the Faculty, voluntary classes may be formed in HEBREW, ITALIAN, and SPANISH.

## Lectures.

THE Special Courses of Lectures to the whole College, for the winter of 1870-71, are as follows:—

<i>Optics</i> . . . . .	PRESIDENT GUMMERE.
<i>The Meanings of Mythology</i> . . . . .	PROFESSOR CHASE.
<i>Physical History of Man</i> . . . . .	PROFESSOR HARTSHORNE.
<i>Christian Ethics</i> . . . . .	PROFESSOR DILLINGHAM.

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## Examinations.

IN determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts; except that Freshmen may be advanced to the Sophomore Class on receiving a mark of at least five in the examination upon each book, and a general average of six in each department.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

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## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Faculty and Managers. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability to attest substantial desert on the part of the applicant. The theses shall be prepared expressly for this purpose, and shall be the exclusive property of the Corporation. They must be presented at least *two months* before the annual Commencement. The fee for the diploma is Ten Dollars.



## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

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## Library and Apparatus.

THE LIBRARY of the College contains 5128 volumes; that of the Loganian Society 1960; those of other societies 769; making the whole number of books in the Libraries 7857. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a valuable gift from generous Friends in England—a copy of the splendid edition of the *CODEX SINAITICUS*, published by the Emperor of Russia, and Woidé's rare and valuable fac-simile edition of the important *CODEX ALEXANDRINUS*. To these have been added, by donation and purchase, Tischendorf's recent edition of the *CODEX VATICANUS*, and the magnificent Roman edition of



the same CODEX. The Library has thus the rare advantage of containing fac-simile copies of the three great original sources of the New Testament text.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a commodious and well-furnished LABORATORY, in which the students are familiarized with Chemical Manipulations, under the supervision of the Professor.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 1960 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction. A CARPENTER'S SHOP which belongs to the Society is furnished with the proper conveniences for practice.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 769 volumes.

## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, on the Pennsylvania Railroad, nine miles west of Philadelphia. Address West Haverford P. O., Pa. The buildings are situated on a lawn of sixty acres, tastefully laid out, and, in the number and variety of its trees and shrubbery, unsurpassed by any lawn in the State. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

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## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms: the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second term beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who desire their children to be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$425 00 per annum, payable as follows: \$212 50 at the beginning of each Term.

Washing is charged at the rate of 75 cents per dozen.

## Graduates.

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1836.

Thomas F. Cock, M.D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
Joseph L. Pennock,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith, A. M.,	Philadelphia,	Pa.
*B. Wyatt Wistar, *1869,	Philadelphia,	Pa.

1838.

James V. Emlen, M.D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M.D., A.M.,	Philadelphia,	Pa.
Nereus Mendenhall, M.D.,	Guilford County,	N. C.
Richard Randolph, Jr., M.D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell, *	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
Henry H. G. Sharpless,	Philadelphia,	Pa.
*John R. Winslow, M.D., *1866,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
James P. Perot,	Philadelphia,	Pa.
Elias A. White,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M.D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M.D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M.D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.

## 1845.

Edmund A. Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A.M.,	Vassalboro',	Me.
Alfred H. Smiley, A.M.,	Vassalboro',	Me.

## 1851.

Joseph L. Bailey,	Berks County,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A.M.,	Weare,	N. H.
Zaccheus Test, M.D., A.M.,	Richmond,	Ind.
James C. Thomas, M.D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M.D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whitall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A.M.,	Raysville,	Ind.
William H. Pancoast, M.D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.

## 1855.

*Samuel Bettle,	*1859,	Philadelphia,	Pa.
John R. Hubbard, A.M.,		New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,		Philadelphia,	Pa.
Joel Cadbury, Jr.,		Philadelphia,	Pa.
Jonathan J. Comfort, M.D.,		Tecumseh,	Mich.
James M. Walton,		Philadelphia,	Pa.
Edward R. Wood, A.M.,		Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A.M.,		Thornbury,	Pa.
*Cyrus Mendenhall,	*1858,	Plainfield,	Ind.
Stephen Wood,		Bedford,	N. Y.

## 1858.

Thomas H. Burgess,		Harveysburg,	Ohio.
Thomas Clark,		Carthage,	Ind.
Daniel W. Hunt,		Annapolis,	Ind.
*Samuel T. Satterthwaite,	*1865,	Chesterfield,	N. J.
William G. Tyler,		Salem,	N. J.
Thomas Wistar, A.M., M.D.,		Philadelphia,	Pa.
Ellis H. Yarnall,		Philadelphia,	Pa.

## 1859.

*Richard W. Chase,	*1862,	Burlington,	N. J.
James R. Magee,		Philadelphia,	Pa.
*Richard C. Paxson,	*1864,	San Francisco,	Cal.
Edward Rhoads, M.D.,		Philadelphia,	Pa.
Edward C. Sampson,		Manchester,	Me.
George Sampson,		Manchester,	Me.
Abram Sharples, M.D.,		Ivy Mills,	Pa.
Benjamin H. Smith,		Upper Darby,	Pa.

## 1860.

*Lindley M. Clark,	*1861,	Carthage,	Ind.
William B. Corbit, M.D.,		Odessa,	Del.
William M. Corlies,		Philadelphia,	Pa.
Cyrus Lindley,		Monrovia,	Ind.
Theodore H. Morris,		Philadelphia,	Pa.
Frederick W. Morris,		Philadelphia,	Pa.
Richard Pancoast,		Philadelphia,	Pa.
John W. Pinkham, M.D.,		North Vassalboro',	Me.
Francis Richardson,		Philadelphia,	Pa.
Clement L. Smith, A.M.,		Upper Darby,	Pa.
James Tyson, M.D., A.M.,		Reading,	Pa.
Silas A. Underhill, LL.B.,		Brooklyn,	N. Y.

## 1861.

Edward Bettle,		Philadelphia,	Pa.
Henry Bettle,		Philadelphia,	Pa.
Charles Bettle,		Philadelphia,	Pa.
William B. Broomall,		Media,	Pa.
Charles H. Jones,		Tamaqua,	Pa.
Thomas W. Lamb, A.M.,		Belvidere,	N. C.
William N. Potts,		Philadelphia,	Pa.
Jehu H. Stuart, A.M.,		Westminster,	N. C.
John C. Thomas,		Baltimore,	Md.

## 1862.

Henry T. Coates,		Philadelphia,	Pa.
*Samuel A. Hadley,	*1864,	Osceola,	Iowa.
George B. Mellor,		Philadelphia,	Pa.
Horace Williams, M.D.,		Newport,	R. I.
Isaac F. Wood,		New York,	N. Y.



## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr., A.M.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
*Richard T. Jones, *1869,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham, M.D., A.M.,	Manchester,	Me.

## 1864.

Franklin Angell, A. M.,	South Corinth,	N. Y.
William Ashbridge, M.D.,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper, A.M.,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth, M.D., A.M.,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
Elijah P. Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

## 1865.

John R. Bringhurst,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	West Whiteland,	Pa.
Arthur Haviland,	Brooklyn,	N. Y.
*David H. Nichols, *1865,	East Vassalboro',	Me.
Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Robert B. Taber, A. M.,	New Bedford,	Mass.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.



## 1866.

Aaron M. Elliott,	Jamestown,	N. C.
Benjamin E. Valentine, LL. B.,	Salem,	Mass.

## 1867.

John Ashbridge,	West Whiteland,	Pa.
George Ashbridge, A.M.,	West Whiteland,	Pa.
William P. Clark, A.M.,	Monrovia,	Ind.
Samuel C. Collins, A.M.,	Morrisville,	Pa.
Nathaniel B. Crenshaw,	Richmond,	Va.
Charles H. Darlington, A.M.,	Chicago,	Ill.
*Wm. T. Dorsey, M.D., *1870,	Baltimore,	Md.
B. Franklin Eshleman,	Lancaster,	Pa.
Richard M. Jones,	Dirigo,	Maine.
Charles W. Sharpless,	Philadelphia,	Pa.
Walter Wood,	Philadelphia,	Pa.

## 1868.

Edward H. Cook,	Vassalboro,	Maine.
Alexis T. Cope,	Philadelphia,	Pa.
Benjamin C. Satterthwaite,	Oxford Valley,	Pa.
Louis Starr,	Philadelphia,	Pa.
S. Finley Tomlinson,	Bush Hill,	N. C.
Joseph H. Wills,	Mount Holly,	N. J.

## 1869.

Johns H. Congdon,	Providence,	R. I.
Henry Cope,	Germantown,	Pa.
Ludovic Estes,	Westfield,	Ind.
Henry Evaul,	Palmyra,	N. J.
William B. Kaighn,	Moorestown,	N. J.
Pendleton King,	Oak Ridge,	N. C.
William H. Randolph,	Philadelphia,	Pa.

Edward B. Taylor,	Cinnaminson,	N. J.
William S. Taylor,	Burlington,	N. J.
James G. Whitlock,	Richmond,	Va.
Walter Wood,	New Bedford,	Mass.
Henry Wood,	New Bedford,	Mass.

## 1870.

J. Stuart Brown,	Philadelphia,	Pa.
John E. Carey,	Baltimore,	Md.
Alford G. Coale,	Baltimore,	Md.
Howard Comfort,	Germantown,	Pa.
T. Allen Hilles,	Wilmington,	Del.
William Harrison Hubbard,	Monrovia,	Ind.
Thomas K. Longstreth,	Philadelphia,	Pa.
Oliver G. Owen,	Indianola,	Iowa.
Charles E. Pratt,	Rochester,	N. H.
David F. Rose,	Chester,	Pa.
John D. Steele,	Coatesville,	Pa.
Charles Wood,	Mt. Kisco,	N. Y.
Stuart Wood,	Philadelphia,	Pa.

Whole number of Graduates, 188.

## Honorary Degrees.

1858.

Hugh D. Vail, A.M., Plainfield, N. J.

1859.

\*Joseph W. Aldrich, A.M., \*1865, Philadelphia, Pa.

1860.

John G. Whittier, A.M., Amesbury, Mass.

1864.

Edward D. Cope, A.M., Caln, Pa.

1867.

Joseph Moore, A.M., Richmond, Ind.

## REMARKS

UPON THE

*Courses of Study and the Discipline.*

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

## ORGANIC SCIENCE.

The purposes of this department are to train the mind of the student in the methods of science, and to lay such foundations of knowledge as will enable each one to attain, with facility and interest, acquaintance with any of the natural sciences in detail by subsequent study. Effort will be made to follow a natural order of evolution in the sequence of subjects; beginning with Physical Geography, Botany, Zoology, and Inorganic and Organic Chemistry; and ascending through Vegetable and Animal (Comparative) Physiology, to the study of Man. The structure and functions of the organs of the human body, including its relations to the mind, and the relations of man to nature, will be fully considered. Lastly, instruction will be given in Mental Philosophy, and in Hygiene, or the science of health and its preservation, corporeal and mental.

The facilities for scientific instruction belonging to the college are already large, and are constantly becoming more extensive; the Geological Cabinet, for example, contains about 2500 specimens, and the Mineralogical Cabinet 2700. These collections, with illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.

### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. The most important Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

### RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to

exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the English Language and Literature will be made a prominent feature. The history and structure of our tongue are carefully investigated, and the student is familiarized, as far as possible, with the great works of the best authors. Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with our mother tongue generally, and especially for understanding the early English authors.

### GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's and Guyot's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## MODERN LANGUAGES.

French is regularly taught during the Junior year, and German during the Senior year. This course of study, introducing the student to French and German literature, enables him to pursue his reading in those languages with ease after leaving college—preparing him to gain more readily, by subsequent study and practice, their *conversational* use. Provision is also made for teaching voluntary classes in Italian and Spanish.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the mem-



bers of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

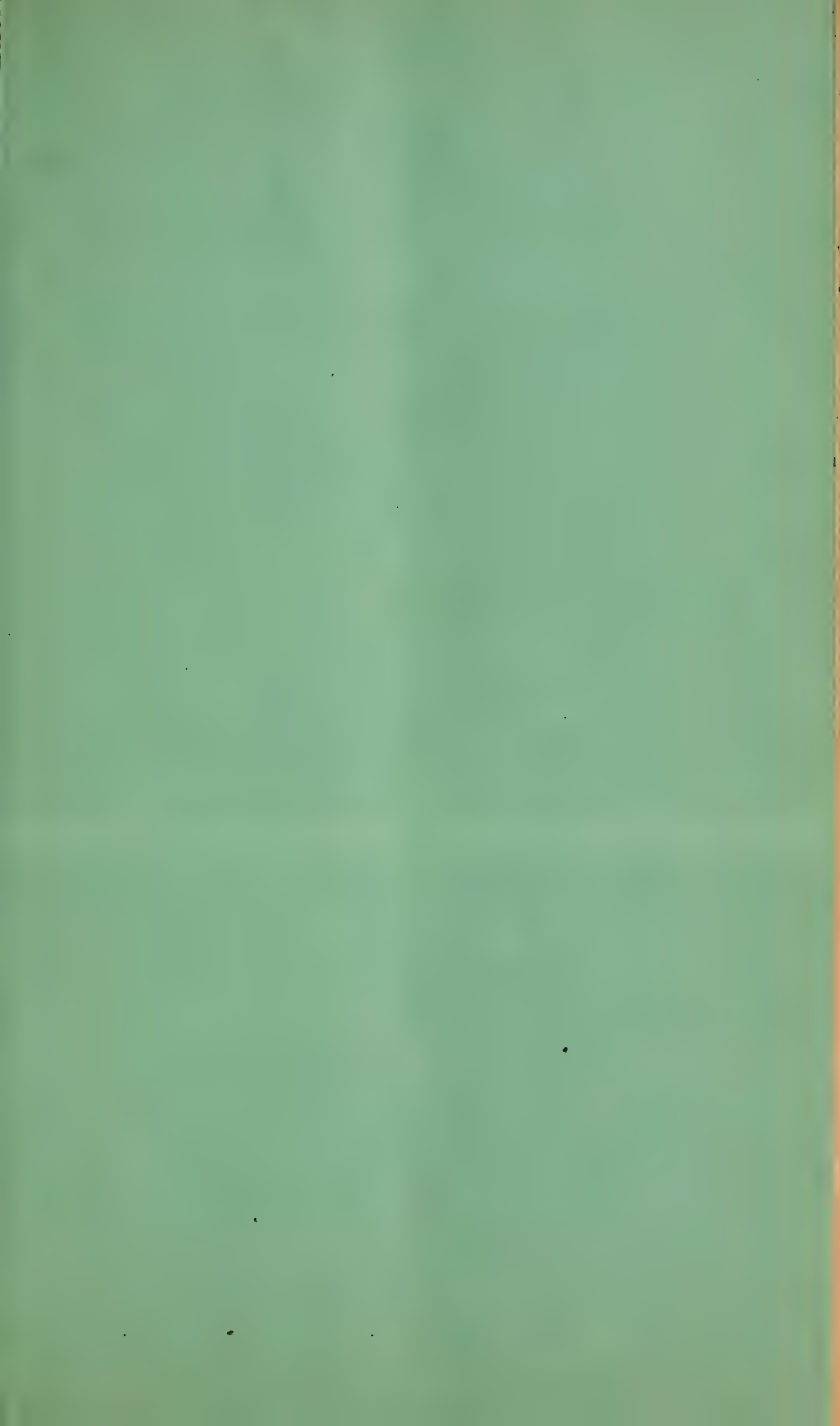
### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the full meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, and Gurney's Observations, form part of the regular course of study.

### DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.







A

CATALOGUE

OF THE

Officers and Students

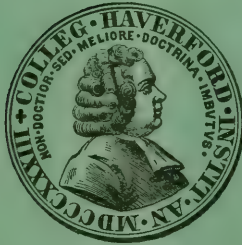
OF

HVERFORD COLLEGE,

FOR THE

ACADEMICAL YEAR

1871-72.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1872.



A

CATALOGUE

OF THE

Officers and Students

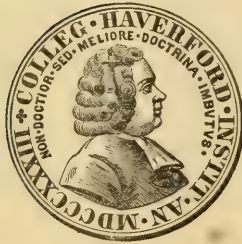
OF

H A V E R F O R D C O L L E G E ,

FOR THE

ACADEMICAL YEAR

1871-72.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1872.

# Corporation.

---

*Secretary.*

PHILIP C. GARRETT.

*Treasurer.*

DAVID SCULL, JR.

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T. WISTAR BROWN,	JOEL CADBURY,
JOSEPH W. TAYLOR, M.D.,	RICHARD WOOD,
JAMES WHITALL,	ROBERT B. HAINES,
HUGH D. VAIL, A.M.,	FRANCIS T. KING,
JAS. CAREY THOMAS, M.D.,	WILLIAM R. THURSTON,
BENJAMIN V. MARSH,	GEORGE HOWLAND, JR., A.M.,
PHILIP C. GARRETT,	WILLIAM F. MOTT,
WILLIAM C. LONGSTRETH,	CHARLES R. HARTSHORNE,
SAMUEL ALLINSON,	WILLIAM G. RHOADS.

*Secretary of the Board.*

JAMES WHITALL.

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Office, 109 North Tenth Street, Philadelphia.

## Executive Committee.

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JAMES WHITALL,  
JAMES CAREY THOMAS, M.D.,  
HUGH D. VAIL, A.M.,  
RICHARD CADBURY.

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## Faculty.

---

SAMUEL J. GUMMERE, A.M., *President.*  
THOMAS CHASE, A.M.,  
JOHN H. DILLINGHAM, A.M.

## Officers of Instruction.

---

SAMUEL J. GUMMERE, A.M.,

PRESIDENT.

THOMAS CHASE, A.M.,

PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL J. GUMMERE, A.M.,

PROFESSOR OF MATHEMATICS, PHYSICS, AND ASTRONOMY.

JOHN H. DILLINGHAM, A.M.,

SUPERINTENDENT.

PROFESSOR OF MORAL AND POLITICAL SCIENCE.

HENRY HARTSHORNE, M.D., A.M.,

PROFESSOR OF PHYSIOLOGY AND HYGIENE.

PLINY E. CHASE, A.M.,

PROFESSOR OF PHYSICAL SCIENCE.

EDWARD D. COPE, A.M.,

LECTURER ON ZOOLOGY.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.
Ashbridge, Richard	West Whiteland, Pa.
Cadbury, Richard T.	Philadelphia, Pa.
Carey, James, Jr.	Baltimore, Md.
Chase, William Barker	Philadelphia, Pa.
Downing, Thomas S., Jr.	West Whiteland, Pa.
Erben, Walter	Philadelphia, Pa.
Estes, Thomas Rowland	Westfield, Ind.
Forsythe, John Evans	Oak Hill, Pa.
Gibbons, William H.	Coatesville, Pa.
Gummere, Francis Barton	Haverford, Pa.
Haines, Caspar Wistar	Cheltenham, Pa.
Howland, Charles S.	Wilmington, Del.
Huston, Abram Francis	Coatesville, Pa.
Kimber, Marmaduke Cope	Germantown, Pa.
Longstreth, William Morris	Philadelphia, Pa.
Thomas, Richard Henry	Baltimore, Md.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Comfort, James Cooper, Jr.	Germantown,	Pa.
Cope, Thomas Pim, Jr.	Germantown,	Pa.
Emlen, George Williams	Germantown,	Pa.
Fox, Joseph M.	Philadelphia,	Pa.
Haines, Henry Cope	Germantown,	Pa.
Lowry, Benjamin Howard	Philadelphia,	Pa.
Peitsmeyer, Edward	Minden,	Prussia.
Sampson, Alden, Jr.	New York,	N. Y.
Warner, George Malin	Germantown,	Pa.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Allinson, Edward Pease	Burlington,	N. J.
Bangs, William	Germantown,	Pa.
Bullock, John Griscom	Wilmington,	Del.
Emlen, James	Germantown,	Pa.
Hartshorne, Charles Robinson	Brighton,	Md.
Hilles, Samuel E.	Wilmington,	Del.
Jones, John Barclay	Germantown,	Pa.
Kirkbride, Mahlon, Jr.	Morrisville,	Pa.
Longstreth, Henry	Philadelphia,	Pa.
Price, Theophilus Pharo	Tuckerton,	N. J.
Thompson, James B.	Philadelphia,	Pa.
Trotter, Joseph	Philadelphia,	Pa.
Warrington, Curtis Hoopes	West Chester,	Pa.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.
Bispham, Edward Koons	Philadelphia, Pa.
Hunt, William, Jr.	Philadelphia, Pa.
Huston, Charles Lukens	Coatesville, Pa.
Kimber, Thomas William	Germantown, Pa.
Pharo, Walter Willits	Tuckerton, N. J.
Richards, Ellis Archer	Germantown, Pa.
Roberts, Percival, Jr.	Philadelphia, Pa.
Tebbetts, Charles Edwin	Muscatine, Iowa.
White, Miles, Jr.	Baltimore, Md.

## SUMMARY.

Seniors . . . . .	16
Juniors . . . . .	9
Sophomores . . . . .	13
Freshmen . . . . .	9
Total . . . . .	<hr/> 47

## Calendar.

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Winter Term, 1871-72, began . . .	9th Mo. 13.
Address before Alumni, 1871 . . .	10th Mo. 21.
Oration before Loganian Society, 1872 . . .	1st Mo. 30.
Junior Exhibition, 1872 . . . . .	1st Mo. 31.
Winter Term, 1871-72, ends . . . . .	1st Mo. 31.

### VACATION OF THREE WEEKS.

Summer Term, 1872, begins . . . . .	2d Mo. 21.
Private Review, 1872, begins . . . . .	6th Mo. 10.
Annual Examinations, 1872, begin . . . . .	7th Mo. 1.
Public Meeting of Loganian Society, 1872 . . . . .	7th Mo. 9.
Address to the Graduating Class, 1872 . . . . .	7th Mo. 9.
Commencement, 1872 . . . . .	7th Mo. 10.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1872 . . . . .	{ 2d Mo. 20. { 9th Mo. 10.
Winter Term, 1872-73, begins . . . . .	9th Mo. 11.

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.\*

Latin Grammar, including Prosody,  
 Cæsar's Commentaries (Stuart's),  
 The first book of Virgil's Æneid (Chase's),  
 Cicero's Orations against Catiline (Stuart's),  
 and twenty exercises in any standard text-book on Latin  
 Prose Composition,  
 Greek Grammar,

\* The following pronunciation is recommended in preparatory schools. In Latin (as a near approximation to the ancient method), *ā* as in *father*, *ă* the same sound shorter (or as the first *a* in *papa*), *ē* like *a* in *fote*, *ĕ* as in *set*, *ī* as in *machine*, *ĭ* as in *sit*, *ō* as in *tone*, *ō* as in *domestic*, *u* as in Italian, *i. e.*, *ū* as in *rule* (or as *oo* in *moon*), *ŭ* as in *put*, *y* like the French *u*, *ae* like the vowel sound in *sigh*, *au* like *ow* in *how*, *oe* like *oi* in *spoil*, *ei* as in *eight*, *eu* like *ĕh-oo* rapidly spoken, *ui* like the English *we*, *j* (i consonans) like *y* in *year*, *v* (u consonans) like *w*, *c* and *g* like Greek *κ* and *γ*, *t* always pure or un-aspirated, *s* as in *sin*, and *never* like *z*.

In Greek, observing the written *accents*, and giving *ā* the sound of *a* in *father*, *ă* the same sound short, *η* that of *a* in *fate*, *ε* that of *e* in *set*, *ī* that of *i* in *machine*, *ĭ* that of *i* in *sit*, *ω* that of *o* in *hole*, *ο* that of *o* in *nor*, *υ* that of *u* in French (with the proper distinction as long or short), *αυ* that of *oo* in *moon*, *αυ* that of *ou* in *house*. If the teacher prefer, the probable ancient pronunciation of the diphthongs, as stated by Professor Sophocles, may be given.

It is more important that students should be well trained in Latin *quantities* and *accents*, than in any particular method of pronunciation. A consistent use of the English method is better than a half-way application of the ancient.

Greek Reader, or First Book of the Anabasis, and fifteen exercises in Greek Prose Composition (to be written with the accents).

☞ *Sufficient KNOWLEDGE of Greek and Latin to pursue the College studies intelligently and with profit, is of importance, rather than the particular BOOKS or authors used in obtaining it.*

### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,  
 Alsop's First Lessons in Algebra,  
 and the first two books in Davies's Legendre.

### ENGLISH DEPARTMENT.

Brown's English Grammar,  
 Mitchell's Ancient and Modern Geography,  
 The History of the United States,  
 and the historical and geographical notices found in the required Greek and Latin Text-books.

The candidates must be well prepared also in reading, writing, *spelling*, and other elementary knowledge. For pronunciation and orthography, Worcester and Smart are held as the standard authorities.

APPLICATIONS FOR ADMISSION must be made to the President, SAMUEL J. GUMMERE, Haverford College P. O., Montgomery Co., Pa. Candidates will present themselves at the College, for examination by the Faculty, at 9 o'clock on the morning previous to the opening of the term.

Students may be admitted to ADVANCED STANDING, when they can pass a satisfactory examination in *all* the previous studies of the course; being first, however, examined in the studies requisite for admission to the Freshman class, and if found suitably prepared therein, then examined for admission to the next higher class, and so on.



It is the desire of the Faculty to discourage undue haste in sending boys to college young or superficially prepared in their studies, and in applying for their admission to advanced classes. The full benefit of a college course is not likely to be obtained, unless the student enters with his class at the *beginning* of the course, qualified not less in maturity of mind and good character than in mental acquirement and discipline, for exercises that are in advance of boyhood. Making up for subsequent examination what has been omitted before entrance into an advanced class is seldom satisfactory, as it takes attention and time from the studies of the year; and the rapid perusal of a text-book is a very imperfect substitute for the extended teaching of its subject in the class-room of the Professor, where much is often added to the matter of the recitations.

## Course of Instruction.

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### FRESHMAN CLASS.

#### FIRST TERM.

1. *Scripture.* The Gospel according to John.
2. *Mathematics.* Euclid's Geometry.
3. *Greek.* Xenophon's Anabasis.—Review of Greek Grammar.—Exercises in writing Greek.
4. *Latin.* Chase's Æneid of Virgil.—Review of Latin Grammar (Syntax and Prosody).—Exercises in writing Latin.
5. *Classical Geography and Antiquities.*
6. *English Literature.* Cleveland's Compendium.—Compositions.—Hart's Rhetoric.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Hooker's Natural History.
9. *History.* Weber's Universal History.
10. *Review.*

#### SECOND TERM.

1. *Scripture,* continued.
2. *Mathematics.* Alsop's Algebra.—Gummere's Plane Trigonometry.—Gummere's Surveying, begun.
3. *Greek.* Herodotus.—Greek Syntax (Hadley).—Exercises in writing Greek.
4. *Latin.* Cicero's Orations (Stuart).—Latin Syntax.—Exercises in writing Latin.
5. *English Literature.* Cleveland's Compendium, continued.—Readings.—Compositions.

6. *Botany.* Wood's.
  7. *History.* Weber's Universal History, finished.
  8. *Review.*
  9. *Private Review* and *written Examination* on all the year's studies orally reviewed.
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## SOPHOMORE CLASS.

### FIRST TERM.

1. *Scripture.* English New, Testament.
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.
3. *Greek.* The Iliad or Odyssey of Homer.—Exercises in writing Greek.
4. *Latin.* Livy.—Exercises in writing Latin.
5. *Chemistry.* Eliot and Storer's Chemistry.—Bloxam's Laboratory Teaching.—Lectures.
6. *Ethics.* Paley's Evidences of Christianity.—Lectures.—Dymond's Essays on Morality.
7. *Modern History.*
8. *English.* Anglo-Saxon (March).
9. *Themes.*
10. *Review.*

### SECOND TERM.

1. *Scripture.* New Testament, continued.
2. *Physics.* Loomis's Natural Philosophy.
3. *Descriptive Astronomy.* Herschel's Outlines.
4. *Greek.* Plato's Apology and Crito.—Exercises in writing Greek.

5. *Latin.* The Odes of Horace (Chase).—Exercises in writing Latin.
6. *English.* Anglo-Saxon (March).—History of the English Language.—Themes.
7. *Geology.* Dana's Text-book.
8. *Mental Philosophy.* Haven.
9. *Modern History.*
10. *Review.*
11. *Private Review and written Examination,* as at the end of previous year.

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## JUNIOR CLASS.

### FIRST TERM.

1. *Scripture.* Selections from the Greek Testament and English Bible committed to memory.—Critical Translation of Greek Testament.
2. *Mathematics.* Davies's Analytical Geometry.
3. *Astronomy.* Descriptive Astronomy (Herschel), finished.
4. *Greek.* The Prometheus of Æschylus.—Exercises in writing Greek.
5. *Latin.* Satires and Epistles of Horace.—Exercises in writing Latin.
6. *French.* Knapp's Grammar.—Translations.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately and Hamilton.
9. *Forensics.*
10. *Political Science.* Wayland's Political Economy.—Kent's Commentaries on the Law of Nations.
11. *Elocution.* Rehearsals for Exhibition.
12. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament as in First Term.
2. *Mathematics.* Differential and Integral Calculus (Davies).
3. *Greek.* Thucydides, begun.—Exercises in writing Greek.
4. *Latin.* The Germania and Agricola of Tacitus.—Exercises in writing Latin, and Extemporalia.
5. *English.* History of English Literature.—Readings.—Philological Study of the English Language.
6. *French.* Fenelon's *Télémaque*.—*Histoire de Charles XII.*
7. *Forensics.*
8. *Organic Science.* Human and General Anatomy and Physiology (Lectures).—Hartshorne's Manual.
9. *Political Science.* Kent's Commentaries on American Law.—Hallam's Constitutional History.
10. *Review.*
11. *Private Review and written Examination,* as at the end of previous years.

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 SENIOR CLASS.

## FIRST TERM.

1. *Scripture.* Greek Testament continued (Tischendorf's edition).
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).
3. *Greek.* Thucydides, continued.—The Antigone of Sophocles, begun.—Exercises in writing Greek.
4. *Latin.* Cicero's Tusculan Disputations, and *Somnium Scipionis* (Chase).—Latin Compositions and Extemporalia.
5. *German.* Whitney's Grammar and Reader.—Schiller's Wilhelm Tell.
6. *Philology.* Whitney's Science of Language.—English Literature.

7. *Hygiene.* Lectures on the Preservation of Health.
8. *Forensics.*
9. *History.* Hallam continued.—Guizot's History of Modern Civilization.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *Review.*

## SECOND TERM.

1. *Scripture.* Greek Testament, continued (Tischendorf's edition).
2. *Mathematical and Practical Astronomy.* Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* The Antigone of Sophocles, finished.—Modern Greek (Lectures).—(2) Demosthenes on the Crown.
4. *Latin.* The Captivi of Plautus.—Cicero's or Pliny's Letters.—Latin Compositions.
5. *German.* Translations and Exercises.
6. *Psychology.* Porter's Human Intellect.—Lectures.
7. *Christian Doctrines.* Gurney's Observations.—Barclay.
8. *History.* Arnold's Lectures on Modern History.
9. *Elocution.*
10. *A Public Oration.*
11. *Review.*
12. *Private Review and written Examination,* as at the end of previous years.

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With the approbation of the Faculty, voluntary classes may be formed in HEBREW, ITALIAN, and SPANISH :

Also, in ANALYTICAL CHEMISTRY (Text-books, Elderhorst's Blowpipe Analysis; Fresenius's Qualitative and Quantitative Analysis).

## Lectures.

THE Special Courses of Lectures for the year 1871-72, are as follows:—

### TO THE WHOLE COLLEGE.

<i>Zoology</i> . . . . .	PROFESSOR COPE.
<i>Literature and Criticism</i> . .	PROFESSOR THOS. CHASE.
<i>Duty</i> . . . . .	PROFESSOR DILLINGHAM.
<i>Christian Doctrine</i> . . . . .	PROFESSOR HARTSHORNE.

### TO THE SENIOR CLASS.

<i>Commercial Arithmetic</i> . . .	PROFESSOR GUMMERE.
<i>The Preservation of Health</i> .	PROFESSOR HARTSHORNE.
<i>The Modern Greek Language</i> .	PROFESSOR THOS. CHASE.
<i>Hamilton's Metaphysics</i> . . .	PROFESSOR P. E. CHASE.

### TO THE JUNIOR CLASS.

<i>Anatomy and Physiology</i> . . .	PROFESSOR HARTSHORNE.
<i>Hamilton's System of Logic</i> .	PROFESSOR P. E. CHASE.

### TO THE SOPHOMORE CLASS.

<i>Evidences of Christianity</i> . .	PROFESSOR DILLINGHAM.
<i>Chemistry</i> . . . . .	PROFESSOR P. E. CHASE.

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## Examinations.

IN determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined



for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan :—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to four hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least five, on a scale of ten, in the examination upon each book, and a general average of six and two-thirds in each department, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts; except that Freshmen may be advanced to the Sophomore Class on receiving a mark of at least five in the examination upon each book, and a general average of six in each department.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

Special written examinations are occasionally held, as means of mental training.



## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Faculty and Managers. As it is designed to make this degree a real distinction, the thesis is expected to exhibit sufficient research, thought, scholarship, and ability, to attest substantial desert on the part of the applicant. The theses shall be prepared expressly for this purpose, and shall be the exclusive property of the Corporation. They must be presented at least *two months* before the annual Commencement. The fee for the diploma is Ten Dollars.

After the present year, each candidate for this degree, instead of preparing a Thesis, may be examined on any one of the following subjects which he may choose:—

- I. The Pauline Epistles in Greek.
- II. The whole of Thucydides.
- III. Seven Tragedies of Æschylus, Sophocles, or Euripides.
- IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.
- V. The whole of Tacitus.
- VI. Gervinus's History of the Nineteenth Century, in the original German.
- VII. Mill, Carey, and Bowen on Political Economy.
- VIII. The Nicomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.
- IX. The works of Faraday and Tyndall.
- X. Theoretical Astronomy.

## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

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## Library and Apparatus.

THE LIBRARY of the College contains 5743 volumes; that of the Loganian Society 2054; those of other societies 925; making the whole number of books in the Libraries 8722. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a valuable gift from generous Friends in England—a copy of the splendid edition of the *CODEx SINAITICUS*, published by the Emperor of Russia, and Woidé's rare and valuable fac-simile edition of the important *CODEx ALEXANDRINUS*. To these have been added, by do-

nation and purchase, Tischendorf's recent edition of the *CODEX VATICANUS*, and the magnificent Roman edition of the same *CODEX*. The Library has thus the rare advantage of containing copies, nearly in fac-simile, of the three great original sources of the New Testament text. The following are this year acknowledged among recent valuable donations:—

A fac-simile cast of the Rosetta Stone; The *Biblia Sacra Polyglotta*, published by Bagster; the Geneva Bible (first edition); Francis Fry's fac-simile of Tyndale's New Testament of 1525-6; the first edition of Barclay's Apology in Latin; and a volume of copies of unpublished letters of Barclay, Fox, and others.

It is arranged that the Library shall present to the students every possible convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive *APPARATUS* is provided for the illustration of Natural Philosophy and Chemistry.

The large *MINERALOGICAL COLLECTION* of the late Dr. Troost occupies the cases in the Collection Room. The *GEOLOGICAL CABINET* comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a well-furnished *LABORATORY*, in which students are familiarized with Chemical Manipulations, under the supervision of the Professor.

A valuable set of elastic models made by Auzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the entire human body, and of other interesting subjects in *ZOOLOGY*, *COMPARATIVE ANATOMY*, and *BOTANY*; also, a collec-

tion of plaster models of fossil species in Natural History, made by Professor Ward, of Rochester, have during the past year been added to the resources of instruction in the College, by the liberality of Richard Wood.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 2054 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction. A CARPENTER'S SHOP which belongs to the Society is furnished with the proper conveniences for practice.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 925 volumes.

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## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, near the Pennsylvania Railroad, nine miles west of Philadelphia. Address HAVERFORD COLLEGE P. O., Montgomery County, Pa. The buildings are situated on a lawn of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the second Fourth-day in the Seventh month of each year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms: the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second term beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who are willing that their children should be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$425 00 per annum, payable as follows: \$212 50 at the beginning of each Term.

Washing is charged at the rate of 75 cents per dozen.

## Graduates.

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1836.

Thomas F. Cock, M.D.,	New York,	N. Y.
Joseph Walton,	Philadelphia,	Pa.

1837.

William C. Longstreth,	Philadelphia,	Pa.
David C. Murray,	New York,	N. Y.
Lindley Murray,	New York,	N. Y.
Benjamin V. Marsh,	Rahway,	N. J.
*Joseph L. Pennock, *1870,	Philadelphia,	Pa.
Robert B. Parsons,	Flushing,	N. Y.
Charles L. Sharpless,	Philadelphia,	Pa.
Lloyd P. Smith, A.M.,	Philadelphia,	Pa.
*B. Wyatt Wistar, *1869,	Philadelphia,	Pa.

1838.

James V. Emlen, M.D.,	Philadelphia,	Pa.
John Elliott,	Philadelphia,	Pa.

1839.

Frederick Collins,	Philadelphia,	Pa.
Thomas P. Cope,	Philadelphia,	Pa.
Henry Hartshorne, M.D., A.M.,	Philadelphia,	Pa.
Nereus Mendenhall, M.D.,	Guilford County,	N. C.
Richard Randolph, Jr., M.D.,	Philadelphia,	Pa.
Charles Taber,	New Bedford,	Mass.

## 1840.

Joseph Howell,	Philadelphia,	Pa.
Anthony M. Kimber,	Philadelphia,	Pa.
*Henry H. G. Sharpless,	Philadelphia,	Pa.
*John R. Winslow, M.D., *1866,	Hertford,	N. C.

## 1841.

*Richard H. Lawrence,	New York,	N. Y.
*James P. Perot, *1872,	Philadelphia,	Pa.
*Elias A. White, *1865,	North Carolina,	N. C.

## 1842.

Robert Bowne,	New York,	N. Y.
Richard Cadbury,	Philadelphia,	Pa.
William S. Hilles,	Wilmington,	Del.
Thomas Kimber, Jr.,	Philadelphia,	Pa.
James J. Levick, M.D.,	Philadelphia,	Pa.
Edmund Rodman,	New Bedford,	Mass.
Thomas Rodman,	New Bedford,	Mass.
Benjamin R. Smith,	Haverford,	Pa.
Augustus Taber,	New Bedford,	Mass.
Caleb Winslow, M.D.,	Hertford,	N. C.

## 1843.

Robert B. Howland,	New Bedford,	Mass.
Francis White,	North Carolina,	N. C.
William D. Stroud, M.D.,	Philadelphia,	Pa.

## 1844.

Evan T. Ellis,	Philadelphia,	Pa.
Robert B. Haines,	Germantown,	Pa.
Isaac Hartshorne,	Philadelphia,	Pa.



## 1845.

Edmund A. Crenshaw,	Richmond,	Va.
*Robert Pearsall,	Philadelphia,	Pa.

## 1849.

Albert K. Smiley, A.M.,	Vassalboro',	Me.
Alfred H. Smiley, A.M.,	Vassalboro',	Me.

## 1851.

Joseph L. Bailey,	Berks County,	Pa.
Philip C. Garrett,	Philadelphia,	Pa.
Thomas J. Levick,	Philadelphia,	Pa.
Franklin E. Paige, A.M.,	Weare,	N. H.
Zaccheus Test, M.D., A.M.,	Richmond,	Ind.
James C. Thomas, M.D.,	Baltimore,	Md.
Richard Wood,	Philadelphia,	Pa.

## 1852.

Dougan Clark, M.D.,	New Garden,	N. C.
Lewis N. Hopkins,	Baltimore,	Md.
William L. Kinsman,	Salem,	Mass.
William E. Newhall,	Philadelphia,	Pa.
James Whitall,	Philadelphia,	Pa.

## 1853.

William B. Morgan, A.M.,	Raysville,	Ind.
William H. Pancoast, M.D.,	Philadelphia,	Pa.

## 1854.

Frederick Arthur, Jr.,	Nantucket,	Mass.
John W. Cadbury,	Philadelphia,	Pa.
John B. Garrett,	Philadelphia,	Pa.
David Scull, Jr.,	Philadelphia,	Pa.



## 1855.

*Samuel Bettle,	*1859,	Philadelphia,	Pa.
John R. Hubbard, A.M.,		New Garden,	N. C.

## 1856.

Bartholomew W. Beesley,		Philadelphia,	Pa.
Joel Cadbury, Jr.,		Philadelphia,	Pa.
Jonathan J. Comfort, M.D.,		Tecumseh,	Mich.
James M. Walton,		Philadelphia,	Pa.
Edward R. Wood, A.M.,		Philadelphia,	Pa.

## 1857.

Jesse S. Cheyney, A.M.,		Thornbury,	Pa.
*Cyrus Mendenhall,	*1858,	Plainfield,	Ind.
Stephen Wood,		Bedford,	N. Y.

## 1858.

Thomas H. Burgess,		Harveysburg,	Ohio.
Thomas Clark,		Carthage,	Ind.
Daniel W. Hunt,		Annapolis,	Ind.
*Samuel T. Satterthwaite,	*1865,	Chesterfield,	N. J.
William G. Tyler,		Salem,	N. J.
Thomas Wistar, A.M., M.D.,		Philadelphia,	Pa.
Ellis H. Yarnall,		Philadelphia,	Pa.

## 1859.

*Richard W. Chase,	*1862,	Burlington,	N. J.
James R. Magee,		Philadelphia,	Pa.
*Richard C. Paxson,	*1864,	San Francisco,	Cal.
Edward Rhoads, M.D.,		Philadelphia,	Pa.
Edward C. Sampson,		Manchester,	Me.
George Sampson,		Manchester,	Me.
Abram Sharples, M.D.,		Ivy Mills,	Pa.
Benjamin H. Smith,		Upper Darby,	Pa.

## 1860.

*Lindley M. Clark,	*1861,	Carthage,	Ind.
William B. Corbit, M.D.,		Odessa,	Del.
William M. Corlies,		Philadelphia,	Pa.
Cyrus Lindley,		Monrovia,	Ind.
Theodore H. Morris,		Philadelphia,	Pa.
Frederick W. Morris,		Philadelphia,	Pa.
Richard Pancoast,		Philadelphia,	Pa.
John W. Pinkham, M.D.,		North Vassalboro',	Me.
Francis Richardson,		Philadelphia,	Pa.
Clement L. Smith, A.M.,		Upper Darby,	Pa.
James Tyson, M.D., A.M.,		Reading,	Pa.
Silas A. Underhill, LL.B.,		Brooklyn,	N. Y.

## 1861.

Edward Bettle,		Philadelphia,	Pa.
Henry Bettle,		Philadelphia,	Pa.
Charles Bettle,		Philadelphia,	Pa.
William B. Broomall,		Media,	Pa.
Charles H. Jones,		Tamaqua,	Pa.
Thomas W. Lamb, A.M.,		Belvidere,	N. C.
William N. Potts,		Philadelphia,	Pa.
Jehu H. Stuart, A.M.,		Westminster,	N. C.
John C. Thomas,		Baltimore,	Md.

## 1862.

Henry T. Coates,		Philadelphia,	Pa.
*Samuel A. Hadley,	*1864,	Osceola,	Iowa.
George B. Mellor,		Philadelphia,	Pa.
Horace Williams, M.D.,		Newport,	R. I.
Isaac F. Wood,		New York,	N. Y.

## 1863.

Thomas J. Battey,	Burrillville,	R. I.
George M. Coates, Jr., A.M.,	Philadelphia,	Pa.
William M. Coates,	Philadelphia,	Pa.
*Richard T. Jones, *1869,	Philadelphia,	Pa.
William H. Morris,	Philadelphia,	Pa.
Joseph G. Pinkham, M.D., A.M.,	Manchester,	Me.

## 1864.

Franklin Angell, A.M.,	South Corinth,	N. Y.
William Ashbridge, M.D.,	West Whiteland,	Pa.
Edward H. Coates,	Philadelphia,	Pa.
Howard M. Cooper, A.M.,	Camden,	N. J.
Albin Garrett,	West Chester,	Pa.
Morris Longstreth, M.D., A.M.,	Germantown,	Pa.
Albert Pancoast,	Philadelphia,	Pa.
Charles Roberts,	Philadelphia,	Pa.
Elijah P. Sampson,	Manchester,	Me.
Edward L. Scull,	Philadelphia,	Pa.
Randolph Wood,	Philadelphia,	Pa.

## 1865.

John R. Bringhurst,	Wilmington,	Del.
Edward T. Brown,	Doylestown,	Pa.
James A. Chase,	Philadelphia,	Pa.
Joseph M. Downing,	West Whiteland,	Pa.
Arthur Haviland,	Brooklyn,	N. Y.
*David H. Nichols, *1865,	East Vassalboro',	Me.
Henry W. Sharpless,	Philadelphia,	Pa.
George Smith, Jr.,	Upper Darby,	Pa.
Robert B. Taber, A. M.,	New Bedford,	Mass.
Allen C. Thomas,	Baltimore,	Md.
Benjamin A. Vail,	Rahway,	N. J.
Caleb Cresson Wistar,	Philadelphia,	Pa.

## 1866.

Aaron M. Elliott,	Jamestown,	N. C.
Benjamin E. Valentine, LL. B.,	Salem,	Mass

## 1867.

John Ashbridge,	West Whiteland,	Pa.
George Ashbridge, A.M.,	West Whiteland,	Pa.
William P. Clark, A.M.,	Monrovia,	Ind.
Samuel C. Collins, A.M.,	Morrisville,	Pa.
Nathaniel B. Crenshaw,	Richmond,	Va.
Charles H. Darlington, A.M.,	Chicago,	Ill.
*Wm. T. Dorsey, M.D., *1870,	Baltimore,	Md.
B. Franklin Eshleman,	Lancaster,	Pa.
Richard M. Jones,	Dirigo,	Maine.
Charles W. Sharpless,	Philadelphia,	Pa.
Walter Wood,	Philadelphia,	Pa.

## 1868.

Edward H. Cook,	Vassalboro',	Maine.
Alexis T. Cope,	Philadelphia,	Pa.
Benjamin C. Satterthwaite,	Oxford Valley,	Pa.
Louis Starr,	Philadelphia,	Pa.
S. Finley Tomlinson,	Bush Hill,	N. C.
Joseph H. Wills, A.M.,	Mount Holly,	N. J.

## 1869.

Johns H. Congdon,	Providence,	R. I.
Henry Cope,	Germantown,	Pa.
Ludovic Estes,	Westfield,	Ind.
Henry Evaul,	Palmyra,	N. J.
William B. Kaighn,	Moorestown,	N. J.
Pendleton King,	Oak Ridge,	N. C.
William H. Randolph,	Philadelphia,	Pa.

Edward B. Taylor,	Cinnamiuson,	N. J.
William S. Taylor,	Burlington,	N. J.
James G. Whitlock,	Richmond,	Va.
Walter Wood,	New Bedford,	Mass.
Henry Wood,	New Bedford,	Mass.

## 1870.

J. Stuart Brown,	Philadelphia,	Pa.
John E. Carey,	Baltimore,	Md.
Alford G. Coale,	Baltimore,	Md.
Howard Comfort,	Germantown,	Pa.
T. Allen Hilles,	Wilmington,	Del.
William Harrison Hubbard,	Monrovia,	Ind.
Thomas K. Longstreth,	Philadelphia,	Pa.
Oliver G. Owen,	Indianola,	Iowa.
Charles E. Pratt,	Rochester,	N. H.
David F. Rose,	Chester,	Pa.
John D. Steele,	Coatesville,	Pa.
Charles Wood,	Mt. Kisco,	N. Y.
Stuart Wood,	Philadelphia,	Pa.

## 1871.

Henry G. Brown,	Philadelphia,	Pa.
William P. Evans,	Paoli,	Pa.
John S. Garrigues,	Haverford,	Pa.
Reuben Haines,	Germantown,	Pa.
William H. Haines,	Philadelphia,	Pa.
Joseph Hartshorne,	Philadelphia,	Pa.
Jesse F. Hoskins,	Summerfield,	N. C.
Walter T. Moore,	Philadelphia,	Pa.
Ellis B. Reeves,	Phoenixville,	Pa.
Alfred R. Roberts,	Philadelphia,	Pa.
Charles S. Taylor,	Burlington,	N. J.
Edward D. Thurston,	New York,	N. Y.
Randolph Winslow,	Baltimore,	Md.

Whole number of Graduates, 201.

## Honorary Degrees.

1858.

Hugh D. Vail, A.M.,	Plainfield,	N. J.
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1859.

*Joseph W. Aldrich, A.M.,	*1865, Philadelphia,	Pa.
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1860.

John G. Whittier, A.M.,	Amesbury,	Mass.
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1864.

Edward D. Cope, A.M.,	Caln,	Pa.
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1867.

Joseph Moore, A.M.,	Richmond,	Ind.
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## REMARKS

UPON THE

**Courses of Study and the Discipline.**

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

## CHEMISTRY.

The recitations in Inorganic Chemistry are accompanied with exercises in a Laboratory which is well furnished with material and apparatus. Here the students conduct with their own hands, under the supervision of the Professor, experiments illustrative of the day's lesson, thus familiarizing them with the principles and laws of the science, as well as cultivating dexterity in manipulation.

The study of the Physics of Chemistry and Inorganic Chemistry is also accompanied with experiments.

## GEOLOGY AND PHYSICAL GEOGRAPHY.

The facts and theories presented in the best text-books on these subjects are illustrated in the class-room, by the aid of the Geological and Mineralogical Cabinets, of which the former contains about 2500 specimens, and the latter 2700. These collections, with further illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.



## NATURAL HISTORY.

The laws of vegetable growth are taught in accordance with the best modern text-books on Botany, and further impressed by the practical analysis and naming of specimens gathered by the students in their walks. The principles of Zoology are illustrated, both in the recitations and lectures, by a valuable collection of specimens, models, and diagrams; and endeavors are made to point out the evidence and necessity of intelligent supervision and direction in the various processes of vital organism.

## PHYSIOLOGY AND HYGIENE.

During the Junior year the subjects of General Physiology and Human Anatomy and Physiology receive attention through the Summer Term. Instruction is given by lectures, followed always by recitations, and aided by the use of a text-book. The lectures are illustrated by numerous anatomical diagrams and preparations, including a selection of Auzoux's models, lately presented to the College by Richard Wood. This branch of study is believed to have considerable importance; first, because all natural science culminates in Man, and, secondly, on account of the practical applications by which such knowledge may be made useful to all.

In the first term of the Senior year, Hygiene is taught by lectures and recitations, there being no text-book available upon this subject. Among the topics dwelt upon in the course are the influence upon health of different articles of food and drink, stimulants, and narcotics; the atmosphere and ventilation; clothing, bathing, and exercise; the causation and prevention of the more common and important diseases; physical, mental, and public hygiene.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact



reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the members of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

### MODERN LANGUAGES.

French is regularly taught during the Junior year, and German during the Senior year. This course of study enables diligent students to pursue their reading in those languages with ease after leaving college, and prepares them to gain readily, when travelling abroad, their *conversational* use.

Provision may also be made for teaching voluntary classes in Italian and Spanish.

## GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's and Guyot's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the history and structure of the English Language, and of English and American Literature, will be encouraged.

Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with our mother tongue generally, and especially for understanding the early English authors.

## LOGIC.

In the study of Logic, the exhaustive analyses of Hamilton are orally explained, in connection with Whately's concise presentation of the Aristotelian system. This method exhibits the perfection of the science as a whole, and facilitates the practical application of its rules in the detection of fallacies. The teachings of the text-book are illustrated by copious examples, and frequent exercises are given to the class to test their familiarity with the principles they have learned.

## PSYCHOLOGY.

Mental Philosophy is taught as a safeguard against materialistic and sceptical tendencies, and as an eminently practical science, constituting the sure and only possible groundwork for the knowledge of physical laws. The distinction between fact and theory is so presented as to demonstrate the possibility and propriety of accepting all well-authenticated observations, without adopting the vagaries of biased observers. The facts of intellectual, moral, and religious experience are shown to be even more definite and valid than those which are inferred from physical observation and experiment, while the cardinal truths that all knowledge rests upon faith, and that Eternal Spiritual Existence is the surest of all realities, are carefully inculcated.

## HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and

especially in retaining, a knowledge of both. Important dates are fixed in the mind as aids to the understanding of the steps of human progress. Several standard Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

The science of Individual and of National wealth, and a knowledge of the principles of government which are brought to view in the Constitution of the United States; also, of the general principles of the Law of Nations and of Jurisprudence as related to American Law, are presented to the mind of the student in the Junior year.

### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

### DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such

restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.





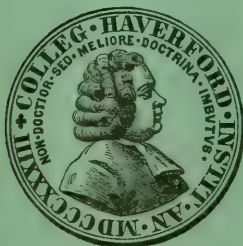








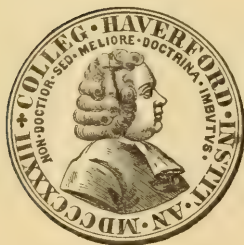
A  
CATALOGUE  
OF THE  
*Officers and Students*  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1872-73.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1873.



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1873.

# Corporation.

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*Secretary.*

PHILIP C. GARRETT.

*Treasurer.*

DAVID SCULL, J. R.

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Office, 109 North Tenth Street, Philadelphia.

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JAMES WHITALL.

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## Faculty.

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SAMUEL J. GUMMERE, A.M., *President.*  
THOMAS CHASE, A.M.,  
JOHN H. DILLINGHAM, A.M.

## Officers of Instruction.

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SAMUEL J. GUMMERE, A.M.,  
PRESIDENT.

THOMAS CHASE, A.M.,  
PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL J. GUMMERE, A.M.,  
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

JOHN H. DILLINGHAM, A.M.,  
SUPERINTENDENT.  
PROFESSOR OF MORAL AND POLITICAL SCIENCE.

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PROFESSOR OF PHYSIOLOGY AND HYGIENE.

PLINY E. CHASE, A.M.,  
PROFESSOR OF PHYSICAL SCIENCE.

EDWARD D. COPE, A.M.,  
LECTURER ON ZOOLOGY.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Comfort, James Cooper, Jr.	Germantown,	Pa.
Cope, Thomas Pim, Jr.	Germantown,	Pa.
Emlen, George Williams	Germantown,	Pa.
Fox, Joseph M.	Philadelphia,	Pa.
Haines, Henry Cope	Germantown,	Pa.
Lowry, Benjamin Howard	Philadelphia,	Pa.
Sampson, Alden, Jr.	New York,	N. Y.
Tomlinson, Julius Lines	Bush Hill,	N. C.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Allinson, Edward Pease	Burlington,	N. J.
Bullock, John Griscom	Wilmington,	Del.
Emlen, James	Germantown,	Pa.
Hartshorne, Charles Robinson	Brighton,	Md.
Hilles, Samuel E.	Wilmington,	Del.
Jones, John Barclay	Germantown,	Pa.
Kirkbride, Mahlon	Morrisville,	Pa.
Longstreth, Henry	Philadelphia,	Pa.
Price, Theophilus Pharo	Tuckerton,	N. J.
Thompson, James B.	Philadelphia,	Pa.
Trotter, Joseph	Philadelphia,	Pa.
Warrington, Curtis Hoopes	West Chester,	Pa.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Bispham, Edward Koons	Philadelphia,	Pa.
Davis, J. Franklin	Westminster,	N. C.
Haines, Charles Edward	Philadelphia,	Pa.
Hunt, William, Jr.	Philadelphia,	Pa.
Huston, Charles Lukens	Coatesville,	Pa.
Kimber, Thomas William	Germantown,	Pa.
Newlin, Harold P.	Philadelphia,	Pa.
Pharo, Walter Willits	Tuckerton,	N. J.
*Richards, Ellis Archer	Germantown,	Pa.
Stokes, N. Newlin, Jr.	Philadelphia,	Pa.
Tebbetts, Charles Edwin	Muscatine,	Iowa.
*Trotter, Walter Newbold	Philadelphia,	Pa.
White, Miles, Jr.	Baltimore,	Md.

\* In the Scientific Course.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Bispham, David Scull	Moorestown,	N. J.
Colton, Reuben	Worcester,	Mass.
Cope, Alfred, Jr.	Germantown,	Pa.
Dudley, Henry Wilson	E. Vassalboro,	Me.
Haines, Francis Cope	Germantown,	Pa.
Hobbs, Lewis Lyndon	New Garden,	N. C.
Longstreet, J. Holmes	Bordentown,	N. J.
Longstreth, Charles Albert	Philadelphia,	Pa.
Nicholson, James Whitall	Haddonfield,	N. J.
Roberts, Percival, Jr.	Philadelphia,	Pa.
Taylor, Frank H.	Cincinnati,	Ohio.
White, David Francis	Dublin,	Ind.

## SUMMARY.

Seniors . . . . .	8
Juniors . . . . .	12
Sophomores . . . . .	11
Freshmen . . . . .	12
Scientific Course . . . . .	2
Total . . . . .	<hr/> 45

## Calendar.

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Winter Term, 1872-73, began*	. . .	9th Mo. 11.
Address before Alumni, 1872	. . .	10th Mo. 26.
Oration before Loganian Society, 1873	. . .	1st Mo. 28.
Junior Exercises, 1873	. . .	1st Mo. 29.
Winter Term, 1872-73, ends	. . .	1st Mo. 29.

### VACATION OF THREE WEEKS.

Summer Term, 1873, begins*	. . .	2d Mo. 19.
Private Review, 1873, begins	. . .	6th Mo. 2.
Annual Examinations, 1873, begin	. . .	6th Mo.
Public Meeting of Loganian Society, 1873	. . .	7th Mo. 1.
Address to the Graduating Class, 1873	. . .	7th Mo. 1.
Commencement, 1873	. . .	7th Mo. 2.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1872	. . .	{ 2d Mo. 18. { 9th Mo. 2.
Winter Term, 1873-74, begins*	. . .	9th Mo. 3

\* The first recitations are due promptly at *nine o'clock* at the beginning of each Term. No absences from them are excused, unless clearly unavoidable.

## Requisites for Admission.

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CANDIDATES for admission to the Freshman Class are examined in the following books (for any of which, however, *real* equivalents will be accepted) :—

### CLASSICAL DEPARTMENT.\*

Latin Grammar, including Prosody,  
 Cæsar's Commentaries (Stuart's),  
 Six books of Virgil's Æneid (Chase's),  
 Cicero's Orations (Stuart's),  
 and any standard text-book on Latin Prose Composition,  
 Greek Grammar,

\* The following pronunciation is recommended in preparatory schools. In Latin (as a near approximation to the ancient method), *ā* as in *father*, *ǎ* the same sound shorter (or as the first *a* in *papa*), *ē* like *a* in *fane*, *ĕ* as in *set*, *ī* as in *machine*, *ĩ* as in *sit*, *ō* as in *tone*, *ō* as in *domestic*, *u* as in Italian, *i. e.*, *ū* as in *rule* (or as *oo* in *moon*), *ū* as *oo* in *boot*, *y* like the French *u*, *ae* and *ai* like *ay*, the English adverb of affirmation, *au* like *ow* in *owl*, *oe* and *oi* nearly like *oi* in *spoil*, *ei* as in *eight*, *eu* like *ĕh-oo* rapidly spoken, *ua* when a diphthong, like *wah*, *ui* like the English *we*, *j* (i consonans) like *y* in *year*, *v* (u consonans) nearly like *w*, *c* and *g* always hard, like Greek *κ* and *γ*, *t* always simple or unsibilated, *s* as in *sin*, and *never* like *z*, or *sh*, *z*, nearly like *s*, *qu* as in English.

In Greek, observing the written *accents*, and giving *ā* the sound of *a* in *father*, *ǎ* the same sound short, *η* that of *a* in *fate*, *ε* that of *e* in *set*, *ĩ* that of *i* in *machine*, *ĩ* that of *i* in *sit*, *ω* that of *o* in *hole*, *ο* that of *o* in *nor*, *υ* that of *u* in French (with the proper distinction as long or short), *ου* that of *oo* in *moon*, *ου* that of *ou* in *house*. If the teacher prefer, the probable ancient pronunciation of the diphthongs, as stated by Professor Sophocles, may be given.

It is more important that students should be well trained in Latin *quantities* and *accents*, than in any particular method of pronunciation. A consistent use of the English method is better than a half-way application of the ancient.

Greek Reader, or Xenophon's Anabasis,  
and in Greek Prose Composition (the exercises to be written  
with the accents and breathings).

☞ *Sufficient KNOWLEDGE of Greek and Latin to pursue the College studies intelligently and with profit, is of importance, rather than the particular BOOKS or authors used in obtaining it.*

#### MATHEMATICAL DEPARTMENT.

Greenleaf's Arithmetic,  
Alsop's First Lessons in Algebra,  
and the first two books in Davies's Legendre.

#### ENGLISH DEPARTMENT.

Brown's English Grammar,  
Mitchell's Ancient and Modern Geography,  
The History of the United States,  
and the historical and geographical notices found in the re-  
quired Greek and Latin Text-books.

The candidates must be well prepared also in reading,  
writing, *spelling*, and other elementary knowledge. For  
pronunciation and orthography, Worcester and Smart are  
held as the standard authorities.


APPLICATIONS FOR ADMISSION must be made to the Presi-  
dent, SAMUEL J. GUMMERE, Haverford College P. O., Mont-  
gomery Co., Pa. Candidates will present themselves at the  
College, for examination by the Faculty, *at 9 o'clock on the  
morning previous to the opening of the term.*

Each candidate must present a certificate of good moral  
character from his last teacher.

Students may be admitted to **ADVANCED STANDING**, when  
they can pass a satisfactory examination in *all* the previous  
studies of the course; being first, however, examined in the  
studies requisite for admission to the Freshman Class, and if



found suitably prepared therein, then examined for admission to the next higher class, and so on.

 It is the desire of the Faculty to discourage undue haste in sending boys to college young or superficially prepared in their studies, and in applying for their admission to advanced classes. The full benefit of a college course is not likely to be obtained, unless the student enters with his class at the *beginning* of the course, qualified not less in maturity of mind and good character than in mental acquirement and discipline, for exercises that are in advance of boyhood. Making up for subsequent examination what has been omitted before entrance into an advanced class is seldom satisfactory, as it takes attention and time from the studies of the year; and the rapid perusal of a text-book is a very imperfect substitute for the extended teaching of its subject in the classroom of the Professor, where much is often added to the matter of the recitations.

## Course of Instruction.

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### FRESHMAN CLASS.

#### FIRST TERM.

1. *Scripture.* The Gospel according to John.
2. *Mathematics.* Euclid's Geometry.
3. *Greek.* Herodotus.—Review of Greek Grammar.—  
Exercises in writing Greek.
4. *Latin.* Livy (Chase).—Review of Latin Grammar.—  
Exercises in writing Latin.
5. *Classical Geography and Antiquities.*
6. *English Literature.* Cleveland's Compendium.—Com-  
positions.—Hart's Rhetoric.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Hooker's Natural History.
9. *History.* Weber's Universal History.

#### SECOND TERM.

1. *Scripture,* continued.
2. *Mathematics.* Alsop's Algebra.—Gummere's Plane  
Trigonometry.—Gummere's Surveying, begun.
3. *Greek.* Plato.—Greek Syntax (Hadley).—Exercises in  
writing Greek.
4. *Latin.* The Odes of Horace.—Latin Syntax and Pro-  
sody.—Exercises in writing Latin.
5. *English Literature.* Cleveland's Compendium, con-  
tinued.—Readings.—Compositions.

6. *Botany.* Wood's or Gray's.
  7. *History.* Weber's Universal History, finished.
  8. *Private Review* and *written Examination* on the studies of the year.
- 

## SOPHOMORE CLASS.

### FIRST TERM.

1. *Scripture.* English New Testament.
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.
3. *Greek.* The Iliad or Odyssey of Homer.—Exercises in writing Greek.
4. *Latin.* Horace (Chase).—Exercises in writing Latin.
5. *Chemistry.* Eliot and Storer's Chemistry.—Bloxam's Laboratory Teaching.—Lectures.
6. *Ethics.* Paley's Evidences of Christianity.—Lectures.—Dymond's Essays on Morality.
7. *Modern History.*
8. *Themes.*

### SECOND TERM.

1. *Scripture.* New Testament, continued.
2. *Physics.* Loomis's Natural Philosophy.
3. *Descriptive Astronomy.* Herschel's Outlines.
4. *Greek.* The Prometheus of Æschylus.—Exercises in writing Greek.
5. *Latin.* The Germania and Agricola of Tacitus.—Exercises in writing Latin.

6. *English.* Anglo-Saxon (March).—History of the English Language.—Themes.
7. *Geology.* Dana's Text-book.
8. *Mental Philosophy.* Haven.
9. *Modern History.*
10. *Private Review and written Examination*, as at the end of previous year.

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## JUNIOR CLASS.

### FIRST TERM.

1. *Scripture.* Selections from the Greek Testament and English Bible committed to memory.—Critical Translation of Greek Testament.
2. *Mathematics.* Davies's Analytical Geometry.
3. *Astronomy.* Descriptive Astronomy (Herschel), finished.
4. *Greek.* The Antigone of Sophocles.—Exercises in writing Greek.
5. *Latin.* Satires and Epistles of Horace.—Juvenal.—Exercises in writing Latin.
6. *French.* Knapp's Grammar.—Translations.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately and Hamilton.
9. *Forensics.*
10. *Political Science.* Wayland's Political Economy.—Kent's Commentaries on the Law of Nations.
11. *Elocution.* Rehearsals for Public Exhibitions.

### SECOND TERM.

1. *Scripture.* Greek Testament as in First Term.
2. *Mathematics.* Differential and Integral Calculus (Davies).

3. *Greek.* Thucydides.—Exercises in writing Greek.
4. *Latin.* Cicero's Tusculan Disputations and Somnium Scipionis (Chase).—Exercises in writing Latin and Extemporalia.
5. *English.* History of English Literature.—Readings.—Philological Study of the English Language.
6. *French.* Fenelon's *Télémaque*.—*Histoire de Charles XII.*
7. *Forensics.*
8. *Organic Science.* Human and General Anatomy and Physiology (Lectures).—Hartshorne's Manual.
9. *Political Science.* Kent's Commentaries on American Law.
10. *Private Review and written Examination,* as at the end of previous years.

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## SENIOR CLASS.

### FIRST TERM.

1. *Scripture.* Greek Testament continued (Tischendorf's edition).
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).
3. *Greek.* Thucydides, continued.—Demosthenes on the Crown.—Exercises in writing Greek.
4. *Latin.* Cicero de Officiis.—Latin Compositions and Extemporalia.
5. *German.* Whitney's Grammar and Reader.—Schiller's *Wilhelm Tell*.
6. *Philology.* Whitney's Science of Language.—English Literature.
7. *Hygiene.* Lectures on the Preservation of Health.
8. *Forensics.*

9. *History.* Guizot's History of Modern Civilization.
10. *Natural and Revealed Religion.* Butler's Analogy.

## SECOND TERM.

1. *Scripture.* Greek Testament, continued (Tischendorf's edition).
2. *Mathematical and Practical Astronomy.* Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* Demosthenes on the Crown.—Modern Greek (Lectures).
4. *Latin.* The Captivi of Plautus.—Cicero's or Pliny's Letters.—Latin Compositions.
5. *German.* Translations and Exercises.
6. *Psychology.* Porter's Human Intellect.—Lectures.
7. *Christian Doctrines.* Gurney's Observations.—Barclay.
8. *History.* Arnold's Lectures on Modern History.
9. *Elocution.*
10. *A Public Oration.*
11. *Private Review and written Examination,* as at the end of previous years.



With the approbation of the Faculty, voluntary classes may be formed in HEBREW, ITALIAN, and SPANISH :

Also, in ANALYTICAL CHEMISTRY (Text-books, Elderhorst's Blowpipe Analysis; Fresenius's Qualitative and Quantitative Analysis).

## Lectures.

Besides lectures delivered to the whole College by the several Professors, the Special Courses of Lectures for the year 1872-73, are as follows:—

### TO THE SENIOR CLASS.

<i>Commercial Arithmetic</i> . . .	PROFESSOR GUMMERE.
<i>The Preservation of Health</i> . .	PROFESSOR HARTSHORNE.
<i>Hamilton's Metaphysics</i> . . .	PROFESSOR P. E. CHASE.

### TO THE JUNIOR CLASS.

<i>Illustrations in Political Eco-</i> <i>nomy</i> . . . . . }	PROFESSOR DILLINGHAM.
<i>Anatomy and Physiology</i> . . .	PROFESSOR HARTSHORNE.
<i>Hamilton's System of Logic</i> . .	PROFESSOR P. E. CHASE.

### TO THE SOPHOMORE CLASS.

<i>Chemistry</i> . . . . .	PROFESSOR P. E. CHASE.
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## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and each student is furnished with a set of questions upon some book or subject in the course, which he is required to answer in writing, with-



out consulting any person or book. The time of writing, for the examination in each book, is limited to three hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least six, on a scale of ten, in the examination upon each book, and an average of six and two-thirds on all the books combined, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts.

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

Special written examinations are occasionally held, as means of mental training.

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## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Faculty and Managers. As it is designed that this degree shall represent real and solid attainments in scholarship, the thesis is expected to exhibit sufficient research, thought, and ability, to attest substantial desert on the part of the applicant. The theses shall be prepared expressly for this purpose, and shall be the exclusive property of the Corporation. They must be presented at least *two months*



before the annual Commencement. The fee for the diploma is Ten Dollars, to be paid before Commencement-day.

Each candidate for this degree, instead of preparing a Thesis, may be examined on any one of the following subjects which he may choose:—

- I. The Pauline Epistles in Greek.
- II. The whole of Thucydides.
- III. Seven Tragedies of Æschylus, Sophocles, or Euripides.
- IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.
- V. The whole of Tacitus.
- VI. Gervinus's History of the Nineteenth Century, in the original German.
- VII. Mill, Carey, and Bowen on Political Economy.
- VIII. The Nichomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.
- IX. The works of Faraday and Tyndall.
- X. Theoretical Astronomy.

Notice of application for examination must be given two months before Commencement. The examinations will be held the first week in the sixth month.

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### Civil Engineering and Practical Science.

SPECIAL and extended instruction will be given in the higher mathematics, with their applications to practical science, and ample facilities and assistance will be furnished for thorough field-practice in Surveying, Levelling, etc., with the use of the best instruments.

To the apparatus in this department valuable additions have recently been made.

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### Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the

use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eyepieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

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## Library and Apparatus.

THE LIBRARY of the College contains 5688 volumes; that of the Loganian Society 2074; those of other societies 950; making the whole number of books in the Libraries 8712. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a gift from generous Friends in England—a copy of the splendid edition of the *CODEx SINAITICUS*, published by the Emperor of Russia, and Woidé's fac-simile edition of the *CODEx ALEXANDRINUS*. To these have been added, by donation and purchase, Tischendorf's edition of the *CODEx VATICANUS*, and the magnificent Roman edition of the same *CODEx*. The Library thus contains copies, nearly in fac-simile, of the three great original sources of the New Testament text. The following are acknowledged among recent donations:—

A fac-simile cast of the Rosetta Stone; The *Biblia Sacra Polyglotta*, published by Bagster; the Geneva Bible (first edition); Francis Fry's fac-simile of Tyndale's New Testament of 1525-6; the first edition of Barclay's Apology in Latin; and a volume of copies of unpublished letters of Barclay, Fox, and others.

It is arranged that the Library shall present to the students every convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a well-furnished LABORATORY, in which students are familiarized with Chemical Manipulations, under the supervision of the Professor.

A valuable set of plastic models made by Auzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the entire human body, and of other interesting subjects in ZOOLOGY, COMPARATIVE ANATOMY, and BOTANY; also, a collection of plaster models of fossil species in Natural History, made by Professor Ward, of Rochester, have recently been added to the resources of instruction in the College, by the liberality of Richard Wood.

## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully elected Library of 2074 volumes, and cabinets of conchology,

geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction. A CARPENTER'S SHOP which belongs to the Society is furnished with the proper conveniences for practice.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 950 volumes.

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### Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, near the Pennsylvania Railroad, nine miles west of Philadelphia. Address HAVERFORD COLLEGE P. O., Montgomery County, Pa. The buildings are situated on a lawn of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, EDITH COLLINS.

## Commencement, Terms, Tuition, &c.

COMMENCEMENT is on the first Fourth-day in the Seventh month of the present year. The JUNIOR EXHIBITION is on the last day of the first term. There are two terms: the first Term beginning nine weeks after Commencement, and continuing twenty weeks; and the second term beginning three weeks from the end of the first Term, and closing on Commencement day. There are accordingly two Vacations, one of nine weeks in the summer, and one of three weeks in the winter.

No student is admitted except at the opening of a Term, and never for a period less than one year. A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who are willing that their children should be educated in conformity with the principles of our religious Society."

The price of Board and Tuition is \$425 00 per annum, payable as follows: \$212 50 at the beginning of each Term.

Washing is charged at the rate of 75 cents per dozen.

## Graduates.

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1836.

Thomas F. Cock, M.D.  
Joseph Walton.

1837.

William C. Longstreth.  
David C. Murray.  
Lindley Murray.  
Benjamin V. Marsh.  
\*Joseph L. Pennock. \*1870.  
Robert B. Parsons.  
Charles L. Sharpless.  
Lloyd P. Smith, A.M.  
\*B. Wyatt Wistar, \*1869.

1838.

James V. Emlen, M.D.  
John Elliott.

1839.

Frederick Collins.  
Thomas P. Cope.  
Henry Hartshorne, M.D., A.M.  
Nereus Mendenhall, M.D.  
Richard Randolph, Jr., M.D.  
Charles Taber.

1840.

Joseph Howell.  
Anthony M. Kimber.  
\*Henry H. G. Sharpless.  
\*John R. Winslow, M.D., \*1866.

1841.

\*Richard H. Lawrence.  
\*James P. Perot, \*1872.  
\*Elias A. White, \*1866.

1842.

Robert Bowne.  
Richard Cadbury.  
William S. Hilles.  
Thomas Kimber, Jr.  
James J. Levick, M.D.  
Edmund Rodman.  
Thomas Rodman.  
Benjamin R. Smith.  
Augustus Taber.  
Caleb Winslow, M.D.

1843.

Robert B. Howland.  
Francis White.  
William D. Stroud, M.D.

1844.

Evan T. Ellis.  
Robert B. Haines.  
Isaac Hartshorne.

1845.

Edmund A. Crenshaw.  
\*Robert Pearsall.

1849.

Albert K. Smiley, A.M.  
Alfred H. Smiley, A.M.

1851.

Joseph L. Bailey.  
Philip C. Garrett.  
Thomas J. Levick.  
Franklin E. Paige, A.M.  
Zaccheus Test, M.D., A.M.  
James C. Thomas, M.D.  
Richard Wood.

1852.

Dougan Clark, M.D.  
 Lewis N. Hopkins.  
 William L. Kinsman.  
 William E. Newhall.  
 James Whitall.

1853.

William B. Morgan, A.M.  
 William H. Pancoast, M.D.

1854.

Frederick Arthur, Jr.  
 John W. Cadbury.  
 John B. Garrett.  
 David Scull, Jr.

1855.

\*Samuel Bettle, \*1859.  
 John R. Hubbard, A.M.

1856.

Bartholomew W. Beesley.  
 Joel Cadbury, Jr.  
 Jonathan J. Comfort, M.D.  
 James M. Walton.  
 Edward R. Wood, A.M.

1857.

Jesse S. Cheyney, A.M.  
 \*Cyrus Mendenhall, \*1858.  
 Stephen Wood.

1858.

Thomas H. Burgess.  
 Thomas Clark.  
 Daniel W. Hunt.  
 \*Samuel T. Satterthwaite, \*1865.  
 William G. Tyler.  
 Thomas Wistar, A.M., M.D.  
 Ellis H. Yarnall, LL.B.

1859.

\*Richard W. Chase, \*1862.  
 James R. Magee.  
 \*Richard C. Paxson, \*1864.  
 \*Edward Rhoads, M.D., \*1871.  
 Edward C. Sampson.  
 \*George Sampson, \*1872.  
 Abram Sharples, M.D.  
 Benjamin H. Smith.

1860.

\*Lindley M. Clark, \*1861.  
 William B. Corbit, M.D.  
 William M. Corlies.  
 Cyrus Lindley.  
 Theodore H. Morris.  
 Frederick W. Morris.  
 Richard Pancoast.  
 John W. Pinkham, M.D.  
 Francis Richardson.  
 Clement L. Smith, A.M.  
 James Tyson, M.D., A.M.  
 Silas A. Underhill, LL.B.

1861.

Edward Bettle.  
 Henry Bettle.  
 Charles Bettle.  
 William B. Broomall.  
 Charles H. Jones.  
 Thomas W. Lamb, A.M., M.D.  
 William N. Potts.  
 Jehu H. Stuart, A.M., M.D.  
 John C. Thomas.

1862.

Henry T. Coates.  
 \*Samuel A. Hadley, \*1864.  
 George B. Mellor.  
 Horace Williams, M.D.  
 Isaac F. Wood.

1863.

Thomas J. Battley.  
 George M. Coates, Jr., A.M.  
 William M. Coates.  
 \*Richard T. Jones, \*1869.  
 William H. Morris.  
 Joseph G. Pinkham, M.D., A.M.

1864.

Franklin Angell, A.M.  
 William Ashbridge, M.D.  
 Edward H. Coates.  
 Howard M. Cooper, A.M.  
 Albin Garrett.  
 Morris Longstreth, M.D., A.M.  
 Albert Pancoast.  
 Charles Roberts.  
 Elijah P. Sampson.



Edward L. Scull.  
Randolph Wood.

1865.

John R. Bringhurst.  
Edward T. Brown.  
James A. Chase.  
Joseph M. Downing.  
Arthur Haviland.  
\*David H. Nichols, \*1865.  
Henry W. Sharpless.  
\*George Smith, Jr., \*1872.  
Robert B. Taber, A.M.  
Allen C. Thomas.  
Benjamin A. Vail.  
Caleb Cresson Wistar.

1866.

Aaron M. Elliott.  
Benjamin E. Valentine, LL.B.

1867.

John Ashbridge.  
George Ashbridge, A.M.  
William P. Clark, A.M.  
Samuel C. Collins, A.M.  
Nathaniel B. Crenshaw.  
Charles H. Darlington, A.M.  
\*Wm. T. Dorsey, M.D., \*1870.  
B. Franklin Eshleman.  
Richard M. Jones.  
Charles W. Sharpless.  
Walter Wood.

1868.

Edward H. Cook.  
Alexis T. Cope.  
Benjamin C. Satterthwaite.  
Louis Starr.  
S. Finley Tomlinson.  
Joseph H. Wills, A.M.

1869.

Johns H. Congdon.  
Henry Cope.  
Ludovic Estes.  
Henry Evaul.  
William B. Kaighn.  
Pendleton King, A.M.  
William H. Randolph.

Edward B. Taylor.  
William S. Taylor.  
James G. Whitlock.  
Walter Wood.  
Henry Wood.

1870.

J. Stuart Brown.  
John E. Carey.  
Alford G. Coale.  
Howard Comfort.  
T. Allen Hilles.  
William Harrison Hubbard.  
Thomas K. Longstreth.  
Oliver G. Owen.  
Charles E. Pratt.  
David F. Rose.  
John D. Steele.  
Charles Wood.  
Stuart Wood.

1871.

Henry G. Brown.  
William P. Evans.  
John S. Garrigues.  
Reuben Haines.  
William H. Haines.  
Joseph Hartshorne.  
Jesse F. Hoskins.  
Walter T. Moore.  
Ellis B. Reeves.  
Alfred R. Roberts.  
Charles S. Taylor.  
Edward D. Thurston.  
Randolph Winslow.

1872.

Richard Ashbridge.  
Richard T. Cadbury.  
James Carey, Jr.  
Thomas S. Downing, Jr.  
Walter Erben.  
Thomas Rowland Estes.  
William H. Gibbons.  
Francis B. Gummere.  
Caspar Wistar Haines.  
Abram Francis Huston.  
Marmaduke Cope Kimber.  
William M. Longstreth.  
Richard H. Thomas.

Whole number of Graduates, 214.



## Honorary Degrees.

1858. Hugh D. Vail, A.M.	1864. Edward D. Cope, A.M.
1859. *Joseph W. Aldrich, A.M., *1865.	1867. Joseph Moore, A.M.
1860. John G. Whittier, A.M.	1872. William Jacobs, A.M.

## REMARKS

UPON THE

**Courses of Study and the Discipline.**

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

## CHEMISTRY.

The recitations in Inorganic Chemistry are accompanied with exercises in a Laboratory which is well furnished with material and apparatus. Here the students conduct with their own hands, under the supervision of the Professor, experiments illustrative of the day's lesson, thus familiarizing them with the principles and laws of the science, as well as cultivating dexterity in manipulation.

The study of the Physics of Chemistry and Inorganic Chemistry is also accompanied with experiments.

## GEOLOGY AND PHYSICAL GEOGRAPHY.

The facts and theories presented in the best text-books on these subjects are illustrated in the class-room, by the aid of the Geological and Mineralogical Cabinets, of which the former contains about 2500 specimens, and the latter 2700. These collections, with further illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.

## NATURAL HISTORY.

The laws of vegetable growth are taught in accordance with the best modern text-books on Botany, and further impressed by the practical analysis and naming of specimens gathered by the students in their walks. The principles of Zoology are illustrated, both in the recitations and lectures, by a valuable collection of specimens, models, and diagrams; and endeavors are made to point out the evidence and necessity of intelligent supervision and direction in the various processes of vital organism.

## PHYSIOLOGY AND HYGIENE.

During the Junior year the subjects of General Physiology and Human Anatomy and Physiology receive attention through the Summer Term. Instruction is given by lectures, followed always by recitations, and aided by the use of a text-book. The lectures are illustrated by numerous anatomical diagrams and preparations, including a selection of Anzoux's models, lately presented to the College by Richard Wood. This branch of study is believed to have considerable importance; first, because all natural science culminates in Man, and, secondly, on account of the practical applications by which such knowledge may be made useful to all.

In the first term of the Senior year, Hygiene is taught by lectures and recitations, there being no text-book available upon this subject. Among the topics dwelt upon in the course are the influence upon health of different articles of food and drink, stimulants, and narcotics; the atmosphere and ventilation; clothing, bathing, and exercise; the causation and prevention of the more common and important diseases; corporeal, mental, and public hygiene.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact

reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the members of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

### MODERN LANGUAGES.

French is regularly taught during the Junior and Senior years, and German during the Senior year. This course of study enables diligent students to pursue their reading in those languages with ease after leaving college, and prepares them to gain the more readily, when travelling abroad, their *conversational* use.

Provision may also be made for teaching voluntary classes in Italian and Spanish.

## GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's and Guyot's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the history and structure of the English Language, and of English and American Literature, will be encouraged.

Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with

our mother tongue generally, and especially for understanding the early English authors.

### LOGIC.

In the study of Logic, the exhaustive analyses of Hamilton are orally explained, in connection with Whately's concise presentation of the Aristotelian system. This method exhibits the perfection of the science as a whole, and facilitates the practical application of its rules in the detection of fallacies. The teachings of the text-book are illustrated by copious examples, and frequent exercises are given to the class to test their familiarity with the principles they have learned.

### PSYCHOLOGY.

Mental Philosophy is taught as a safeguard against materialistic and sceptical tendencies, and as an eminently *practical* science, instructing us in the right use of some of our most important powers, and also presenting the sure and only possible groundwork for the knowledge of physical laws. The distinction between fact and theory is so presented as to demonstrate the propriety of accepting all well-authenticated observations, without adopting the vagaries of biased observers. The facts of intellectual, moral, and religious *experience* are shown to be even more definite and valid than those which are inferred from physical observation and experiment, while the cardinal truths that all knowledge rests upon faith, and that Eternal Spiritual Existence is the surest of all realities, are kept carefully in view.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to



his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. Important dates are fixed in the mind as aids to the understanding of the steps of human progress. Several standard Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

#### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

The science of Individual and of National wealth, and a knowledge of the principles of government which are brought to view in the Constitution of the United States; also, of the general principles of the Law of Nations and of Jurisprudence as related to American Law, are presented to the mind of the student in the Junior year.

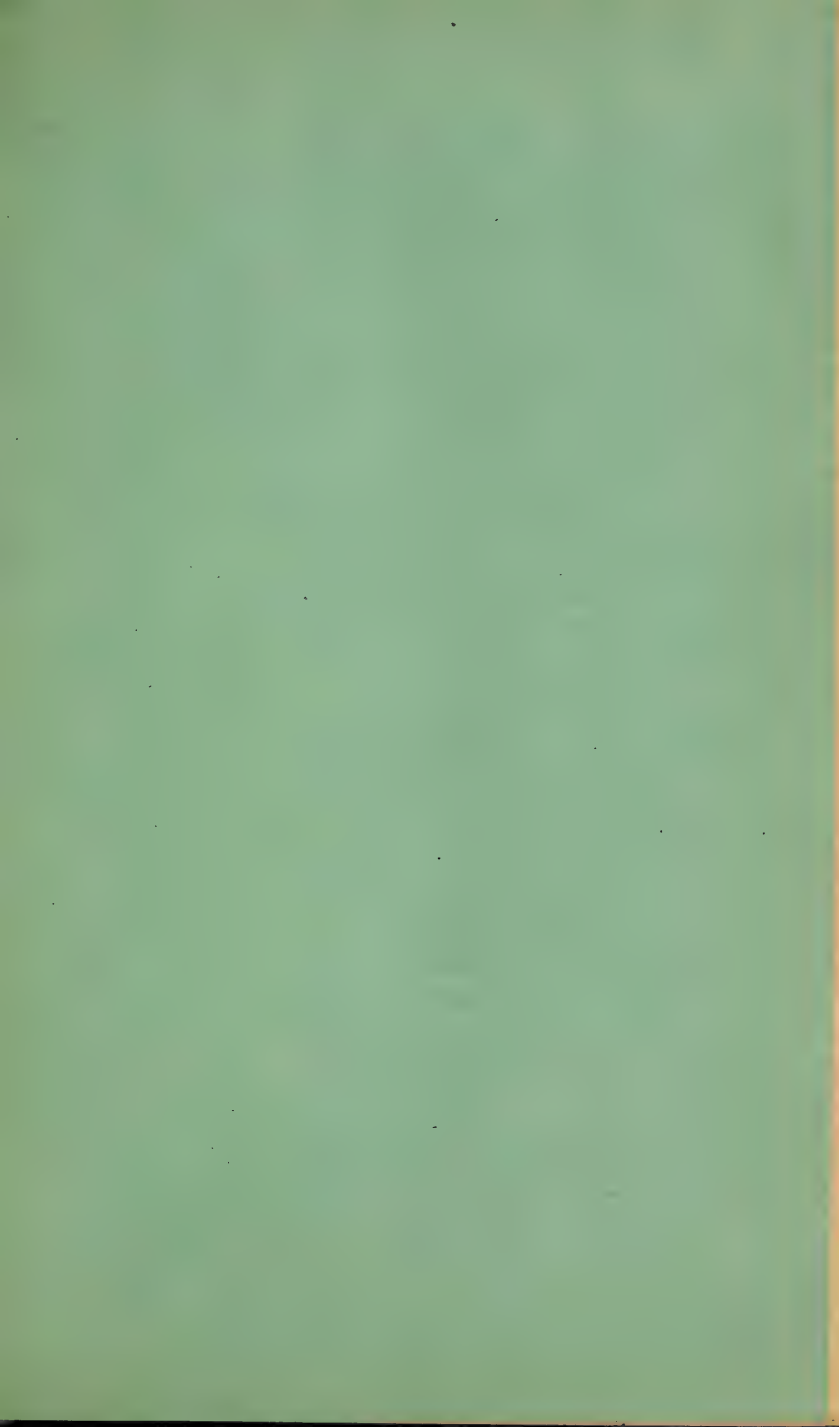
#### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

## DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.







A

CATALOGUE

OF THE

Officers and Students

OF

HVERFORD COLLEGE,

FOR THE

ACADEMICAL YEAR

1873-74.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1874.



A  
CATALOGUE  
OF THE  
*Officers and Students*  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1873-74.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1874.

# Corporation.

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*Secretary.*

PHILIP C. GARRETT.

*Treasurer.*

DAVID SCULL, JR.

## MANAGERS.

WISTAR MORRIS,	JOEL CADBURY,
T. WISTAR BROWN,	RICHARD WOOD,
JOSEPH W. TAYLOR, M.D.,	ROBERT B. HAINES,
JAMES WHITALL,	FRANCIS T. KING,
HUGH D. VAIL, A.M.,	WILLIAM R. THURSTON,
JAS. CAREY THOMAS, M.D.,	GEORGE HOWLAND, JR., A.M.,
BENJAMIN V. MARSH,	WILLIAM F. MOTT,
PHILIP C. GARRETT,	CHARLES HARTSHORNE,
WILLIAM C. LONGSTRETH,	WILLIAM G. RHOADS,
SAMUEL ALLINSON,	JOHN B. GARRETT,
JAMES E. RHOADS, M.D.,	EDWARD BETTLE, JR.,
RICHARD CADBURY,	CHARLES ROBERTS,
DAVID SCULL, JR.,	JOHN S. HILLES.

*Secretary of the Board.*

JAMES WHITALL.

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Office, 109 North Tenth Street, Philadelphia.

## Executive Committee.

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JOSEPH W. TAYLOR, M.D.,  
HUGH D. VAIL, A.M.,  
RICHARD CADBURY,  
JAMES E. RHOADS, M.D.,  
JAMES WHITALL.

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## Faculty.

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SAMUEL J. GUMMERE, A.M., *President.*  
THOMAS CHASE, A.M.,  
JOHN H. DILLINGHAM, A.M.

## Officers of Instruction.

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SAMUEL J. GUMMERE, A.M.,

PRESIDENT.

THOMAS CHASE, A.M.,

PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL J. GUMMERE, A.M.,

PROFESSOR OF MATHEMATICS AND ASTRONOMY.

JOHN H. DILLINGHAM, A.M.,

(SUPERINTENDENT.)

PROFESSOR OF MORAL AND POLITICAL SCIENCE.

HENRY HARTSHORNE, M.D., A.M.,

PROFESSOR OF PHYSIOLOGY AND HYGIENE.

PLINY E. CHASE, A.M.,

PROFESSOR OF PHYSICAL SCIENCE.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Allinson, Edward Pease	Burlington,	N. J.
Bullock, John Griscom	Wilmington,	Del.
Emlen, James	Germantown,	Pa.
Hartshorne, Charles Robinson	Brighton,	Md.
Hilles, Samuel E.	Wilmington,	Del.
Jones, John Barclay	Germantown,	Pa.
Kirkbride, Mahlon	Morrisville,	Pa.
Price, Theophilus Pharo	Tuckerton,	N. J.
Thompson, James B.	Philadelphia,	Pa.
Trotter, Joseph	Philadelphia,	Pa.
Warrington, Curtis Hoopes	West Chester,	Pa.

## JUNIOR CLASS.

NAMES.	RESIDENCE.
Bispham, Edward Koons	Philadelphia, Pa.
Brown, Alonzo	Ironton, Wis.
Davis, J. Franklin	Westminster, N. C.
Haines, Charles Edward	Philadelphia, Pa.
Hunt, William, Jr.	Philadelphia, Pa.
Huston, Charles Lukens	Coatesville, Pa.
Newlin, Harold Parker	Philadelphia, Pa.
Pharo, Walter Willits	Tuckerton, N. J.
Tebbetts, Charles Edwin	Muscatine, Iowa.
White, Miles, Jr.	Baltimore, Md.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Allinson, Francis Greenleaf	Burlington,	N. J.
Bispham, David Scull	Moorestown,	N. J.
Colton, Reuben	Worcester,	Mass.
Cope, Alfred, Jr.	Germantown,	Pa.
Dudley, Henry Wilson	E. Vassalboro,	Me.
Gifford, Seth Kelley	West Falmouth,	Mass.
Haines, Francis Cope	Germantown,	Pa.
Hobbs, Lewis Lyndon	New Garden,	N. C.
Holme, Richard Henry	Salem,	N. J.
Longstreet, J. Holmes	Bordentown,	N. J.
Longstreth, Charles Albert	Philadelphia,	Pa.
Nicholson, John Whittall	Haddonfield,	N. J.
Roberts, Percival, Jr.	Philadelphia,	Pa.
Taylor, Frank H.	Cincinnati,	Ohio.
Taylor, Lewis Alfred	Tecumseh,	Mich.
Taylor, Howard Gardiner	Cinnaminson,	N. J.
Warrington, T. Francis	West Chester,	Pa.
White, David Francis	Dublin,	Ind.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Anderson, Isaac W.	Bryn Mawr,	Pa.
*Baily, Frederic Lang	Philadelphia,	Pa.
†Bell, Charles Dutilh	Philadelphia,	Pa.
*Black, John M. L.	Bryn Mawr,	Pa.
Congdon, Gilbert Arnold	Providence,	R. I.
Krider, James Delaplaine	Chester,	Pa.
Lyon, John Stewart	Bellefonte,	Pa.
†Metcalf, Charles A.	Providence,	R. I.
Paul, Joseph William	Philadelphia,	Pa.
*Pearce, Robert Kaster	Hestonville,	Pa.
Thompson, John J., Jr.	Philadelphia,	Pa.

\* Preparing for full standing as members.

† In a partial course.

## SUMMARY.

Seniors . . . . .	11
Juniors . . . . .	10
Sophomores . . . . .	18
Freshmen and others . . . . .	11
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Total . . . . .	50

## Calendar.

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College Year, 1873-74, began* . . . . .	9th Mo. 3.
Winter Recess from 12th Mo. 24, 1873, to 1st Mo. 7,* 1874.	
Oration before Loganian Society, 1874 . . . . .	4th Mo. 14.
Junior Exercises, 1874 . . . . .	4th Mo. 15.
Spring Recess, 1874, from 4th Mo. 15, to . . . . .	4th Mo. 29.*
Public Meeting of Loganian Society, 1874 . . . . .	6th Mo. 29.
Address before Alumni, 1874 . . . . .	6th Mo. 30.
Address to Graduating Class, 1874 . . . . .	6th Mo. 30.
Commencement Day, 1874 . . . . .	7th Mo. 1.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1874, begin . . . . .	9th Mo. 1.
College Year, 1874-75, begins* . . . . .	9th Mo. 2.

\* The first recitations are due promptly at *nine o'clock* at the beginning of each Term or Session. No absences from them are excused, unless clearly unavoidable.

## Requisites and Terms for Admission.

CANDIDATES for admission to the Freshman Class will be examined as to their proficiency in the following requisites:—

*Classics.\**—A familiar knowledge of the paradigms, and of the leading rules in Syntax, in Latin and Greek Grammar, to be tested, in part, by writing easy sentences in Latin and Greek.

Also, ability to give, after two hours' study—with the aid of a Lexicon—a literal translation of a passage not before read by the candidate, both in Latin and Greek prose or verse, equal in amount to fifty hexameter lines; and to apply the proper rules of Syntax to the constructions in that passage.

\* The following pronunciation is recommended in preparatory schools. In Latin (as a near approximation to the ancient method), *ā* as in *father*, *ā* the same sound shorter (or as the first *a* in *papa*), *ē* like *e* in *fun*e, *ĕ* as in *set*, *ī* as in *machine*, *ĭ* as in *sit*, *ō* as in *tone*, *ō* as in *domestic*, *u* as in Italian, *i. e.*, *ū* as in *rule* (or as *oo* in *moon*), *ū* as *oo* in *boot*, *y* like the French *u*, *ae* and *ai* like *ay*, the English adverb of affirmation, *au* like *ow* in *owl*, *oe* and *oi* nearly like *oi* in *spoil*, *ei* as in *eight*, *eu* like *ĕh-oo* rapidly spoken, *ua* when a diphthong, like *wah*, *ui* like the English *we*, *j* (i consonans) like *y* in *yéar*, *r* (u consonans) nearly like *w*, *c* and *g* always hard, like Greek *κ* and *γ*, *t* always simple or unsibilated, *s* as in *sin*, and *never* like *z* or *sh*, *z* nearly like *s*, *qu* as in English.

In Greek, observing the written accents, and giving *ā* the sound of *a* in *father*, *ā* the same sound short, *η* that of *a* in *fate*, *ε* that of *e* in *set*, *ι* that of *i* in *machine*, *ι* that of *i* in *sit*, *ω* that of *o* in *hole*, *ο* that of *o* in *nor*, *υ* that of *u* in French (with the proper distinction as long or short), *ov* that of *oo* in *moon*, *av* that of *ou* in *house*. If the teacher prefer, the probable ancient pronunciation of the diphthongs, as stated by Professor Sophocles, may be given.

It is more important that students should be well trained in Latin quantities and accents, than in any particular method of pronunciation. A consistent use of the English method is better than a half-way application of the ancient.

*Mathematics.*—Greenleaf's Arithmetic, Alsop's First Lessons in Algebra, and the first two books in Davies's Legendre; or the equivalents for these books.

*English.*—Spelling (according to Worcester), Grammar, Geography, and History of the United States.

Candidates whose preparation is found to fall short of the regular requirements, are not to be admitted as members of the Freshman Class. But such may, in some cases, be allowed to remain as unclassified students, if there is good reason to expect that they will soon become qualified for full standing.

Candidates found fully prepared for admission to the Freshman Class, and also in all the regular studies of the Freshman year, may be admitted to the Sophomore Class.

A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who are willing that their children should be educated in conformity with the principles of our religious Society."

APPLICATIONS FOR ADMISSION must be made to the President, SAMUEL J. GUMMERE, Haverford College P. O., Montgomery Co., Pa. Candidates will present themselves at the College, for examination by the Faculty, at 9 o'clock on the morning previous to the beginning of the college year.


Each candidate must present a certificate of good moral character from his last teacher.

The price of Board and Tuition is \$425 00 per annum, payable one-half at the beginning, and one-half at the middle of the College year. Washing is charged at the rate of 75 cents per dozen.

*Well-prepared* candidates who cannot afford the full payment, but whose purpose is to make the best use of their



opportunities, if admitted, are invited to make known their case to the President.

 **Premature Admissions.**—It is the desire of the Faculty to discourage undue haste in sending boys to college young or superficially prepared in their studies, and in applying for their admission to advanced classes. The full benefit of a college course is not likely to be obtained, unless the student enters with his class at the *beginning* of the course, qualified not less in maturity of mind and good character than in mental acquirement and discipline, for exercises that are in advance of boyhood. Making up for subsequent examination what has been omitted before entrance into an advanced class is seldom satisfactory, as it takes attention and time from the studies of the year; and the rapid perusal of a text-book is a very imperfect substitute for the extended teaching of its subject in the class-room of the Professor, where much is often added to the matter of the recitations.

## Course of Instruction.

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### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John.
  2. *Mathematics.* Euclid's Geometry.—Alsop's Algebra.—Gummere's Plane Trigonometry.—Gummere's Surveying, begun.
  3. *Greek.* Selections from Greek Historians.—Review of Greek Grammar.—Exercises in writing Greek.
  4. *Latin.* Livy (Chase).—Review of Latin Grammar.—Exercises in writing Latin.
  5. *English Literature.* Cleveland's Compendium.—Hart's Rhetoric.—Compositions.
  6. *Physical Geography.* Guyot's Earth and Man.
  7. *Zoology.* Hooker's Natural History.
  8. *Botany.* Wood's or Gray's.
  9. *History.* Weber's Universal History.
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### SOPHOMORE CLASS.

1. *Scripture.* English New Testament.
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.

3. *Physics.* Loomis's Natural Philosophy. — Tyndall's Heat as a Mode of Motion (Special Students.)
  4. *Descriptive Astronomy.* Herschel's Outlines.
  5. *Greek.* The Iliad or Odyssey of Homer.—The Prometheus of Æschylus.—Exercises in writing Greek.
  6. *Latin.* Horace (Chase).—The Germania and Agricola of Tacitus.—Exercises in writing Latin.
  7. *English.* The Philological Study of the English Language.—Themes.
  8. *Chemistry.* Eliot and Storer's Chemistry. — Laboratory Teaching —Lectures.
  9. *Geology.* Dana's Text-book
  10. *Ethics.* Evidences of Christianity.—Dymond's Essays on Morality.
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## • JUNIOR CLASS.

1. *Scripture.* Greek Testament.
2. *Mathematics.* Davies's Analytical Geometry.—Differential and Integral Calculus.
3. *Astronomy.* Descriptive Astronomy (Herschel), finished.
4. *Greek.* Plato.—The Antigone of Sophocles.—Thucydides.—Exercises in writing Greek.
5. *Latin.* Satires and Epistles of Horace.—Juvenal.—Cicero's Tusculan Disputations and Somnium Scipionis (Chase).—Exercises in writing Latin.
6. *English.* Anglo-Saxon.
7. *French.* Knapp's Grammar.—Fenelon's *Télémaque*.—*Histoire de Charles XII.*
8. *Rhetoric.* Whately's Rhetoric.
9. *Logic.* Whately and Hamilton.

10. *Organic Science.* Human and General Anatomy and Physiology (Lectures).
11. *Political Science.* Political Economy.—Kent's Commentaries on the Law of Nations, and American Law.—Frothingham's Rise of the Republic of the United States.
12. *Elocution.* Rehearsals for Public Exhibitions.

## SENIOR CLASS.

1. *Scripture.* Greek Testament continued.
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).—Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* Thucydides, continued.—Demosthenes on the Crown.—Exercises in writing Greek.
4. *Latin.* Cicero de Officiis.—The Captivi of Plautus.—Cicero's or Pliny's Letters.—Latin Compositions.
5. *German.* Whitney's Grammar and Reader.—Schiller's Wilhelm Tell (for advanced students).—Exercises.
6. *Philology.* Whitney's Science of Language.—English Literature.
7. *Hygiene.* Lectures on the Preservation of Health.
8. *Psychology.* Porter's Human Intellect.—Lectures.
9. *Christian Doctrines.* Gurney's Observations.—Barclay.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *History.* Guizot's History of Modern Civilization.—Arnold's Lectures on Modern History.
12. *Elocution.* A Public Oration, and Rehearsals.

## Lectures.

Besides lectures delivered to the whole College by some of the Professors, the Special Courses of Lectures for the year 1873-74, are as follows:—

### TO THE SENIOR CLASS.

<i>Commercial Arithmetic</i> . . .	PROFESSOR GUMMERE.
<i>The Preservation of Health</i> . .	PROFESSOR HARTSHORNE.
<i>Hamilton's Metaphysics</i> . . .	PROFESSOR P. E. CHASE.

### TO THE JUNIOR CLASS.

<i>Anatomy and Physiology</i> . . .	PROFESSOR HARTSHORNE.
<i>Hamilton's System of Logic</i> . .	PROFESSOR P. E. CHASE.

### TO THE SOPHOMORE CLASS.

<i>Chemistry</i> . . . . .	PROFESSOR P. E. CHASE.
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## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of the Summer Term there is a private examination of each class, in writing, in the several studies of the year, each of the three lower classes being examined for admission to the next higher, and the Senior Class for the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and a set of questions is furnished them upon some book or subject in the course, which each student is required to answer in writing, without consulting any person or book. The time of writing, for the

examination in each book, is limited to three hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least six, on a scale of ten, in the examination upon each book, and an average of six and two-thirds on all the books combined, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts. *But no student is entitled to such advancement, whatever his numbers or rank, unless in the private judgment of all his instructors and caretakers, he has been faithful in his daily studies, and satisfactory in his character and conduct.*

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

Special written examinations are occasionally held, as means of mental training.

## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Faculty and Managers. As it is designed that this degree shall represent real and solid attainments in scholarship, the thesis is expected to exhibit sufficient research, thought, and ability, to attest substantial desert on the part of the applicant. The theses shall be prepared expressly

for this purpose, and shall be the exclusive property of the Corporation. They must be presented at least *two months* before the annual Commencement. The fee for the diploma is Ten Dollars, to be paid before Commencement-day.

Each candidate for this degree, instead of preparing a Thesis, may be examined on some course of study previously approved by the Faculty, of which the following are stated as specimens :—

- I. The Pauline Epistles in Greek.
- II. The whole of Thucydides.
- III. Seven Tragedies of Æschylus, Sophocles, or Euripides.
- IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.
- V. The whole of Tacitus.
- VI. Gervinus's History of the Nineteenth Century, in the original German.
- VII. Mill, Carey, and Bowen on Political Economy.
- VIII. The Nicomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.
- IX. The works of Faraday and Tyndall.
- X. Theoretical Astronomy.

Notice of application for examination must be given two months before Commencement. The examinations will be held the first week in the Sixth month.

### Civil Engineering and Practical Science.

SPECIAL and extended instruction will be given in the higher mathematics, with their applications to practical science, and ample facilities and assistance will be furnished for thorough field-practice in Surveying, Levelling, etc., with the use of the best instruments.

To the apparatus in this department valuable additions have recently been made.



Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

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## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

The latitude of the Observatory is  $40^{\circ} 0' 36'' .5$  N.; its longitude,  $5^{\text{h}} 1^{\text{m}} 12^{\text{sec}} .75$  W. from Greenwich.

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## Library and Apparatus.

THE LIBRARY of the College contains 5879 volumes; that of the Logonian Society 2125; those of other societies 928; making the whole number of books in the Libraries 8932. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.



The College possesses—a gift from generous Friends in England—a copy of the imperial edition of the *CODEX SINAITICUS*, published by the Emperor of Russia, and Woidé's edition of the *CODEX ALEXANDRINUS*. To these have been added, by donation and purchase, Tischendorf's edition of the *CODEX VATICANUS*, and the Roman edition of the same *CODEX*. The Library thus contains copies, nearly in fac-simile, of the three great original sources of the New Testament text.

It is arranged that the Library shall present to the students every convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive *APPARATUS* is provided for the illustration of Natural Philosophy and Chemistry.

The large *MINERALOGICAL COLLECTION* of the late Dr. Troost occupies the cases in the Collection Room. The *GEOLOGICAL CABINET* comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a well-furnished *LABORATORY*.

A valuable set of plastic models made by Auzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the entire human body, and of other interesting subjects in *ZOOLOGY*, *COMPARATIVE ANATOMY*, and *BOTANY*; also, a collection of plaster models of fossil species in Natural History, made by Professor Ward, of Rochester, are added to the resources of instruction in the College, by the liberality of Richard Wood.

## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 2100 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction, and a CARPENTER'S SHOP belongs to the Society.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 928 volumes.

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## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, near the Pennsylvania Railroad, nine miles west of Philadelphia. Address HAVERFORD COLLEGE P. O., Montgomery County, Pa. The buildings are situated on a lawn of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, HANNAH KITE.

## Graduates.

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1836.

Thomas F. Cock, M.D.  
Joseph Walton.

1837.

William C. Longstreth.  
David C. Murray.  
Lindley Murray.  
Benjamin V. Marsh.  
\*Joseph L. Pennock, \*1870.  
Robert B. Parsons.  
Charles L. Sharpless.  
Lloyd P. Smith, A.M.  
\*B. Wyatt Wistar, \*1869.

1838.

James V. Emlen, M.D.  
John Elliott.

1839.

Frederick Collins.  
Thomas P. Cope.  
Henry Hartshorne, M.D., A.M.  
Nereus Mendenhall, M.D.  
Richard Randolph, Jr., M.D.  
Charles Taber.

1840.

Joseph Howell.  
Anthony M. Kimber.  
\*Henry H. G. Sharpless.  
\*John R. Winslow, M.D., \*1866.

1841.

\*Richard H. Lawrence.  
\*James P. Perot, \*1872.  
\*Elias A. White, \*1866.

1842.

Robert Bowne.  
Richard Cadbury.  
William S. Hilles.  
Thomas Kimber, Jr.  
James J. Levick, M.D.  
Edmund Rodman.  
Thomas Rodman.  
Benjamin R. Smith.  
Augustus Taber.  
Caleb Winslow, M.D.

1843.

Robert B. Howland.  
Francis White.  
William D. Stroud, M.D.

1844.

Evan T. Ellis.  
Robert B. Haines.  
Isaac Hartshorne.

1845.

Edmund A. Crenshaw.  
\*Robert Pearsall.

1849.

Albert K. Smiley, A.M.  
Alfred H. Smiley, A.M.

1851.

Joseph L. Bailey.  
Philip C. Garrett.  
Thomas J. Levick.  
Franklin E. Paige, A.M.  
Zaccheus Test, M.D., A.M.  
James C. Thomas, M.D.  
Richard Wood.

1852.

Dougan Clark, M.D.  
Lewis N. Hopkins.  
William L. Kinsman.  
William E. Newhall.  
James Whitall.

1853.

William B. Morgan, A.M.  
William H. Pancoast, M.D.

1854.

Frederick Arthur, Jr.  
John W. Cadbury.  
John B. Garrett.  
David Scull, Jr.

1855.

\*Samuel Bettle, \*1859.  
John R. Hubbard, A.M.

1856.

Bartholomew W. Beesley.  
Joel Cadbury, Jr.  
Jonathan J. Comfort, M.D.  
James M. Walton.  
Edward R. Wood, A.M.

1857.

Jesse S. Cheyney, A.M.  
\*Cyrus Mendenhall, \*1858.  
Stephen Wood.

1858.

Thomas H. Burgess.  
Thomas Clark.  
Daniel W. Hunt.  
\*Samuel T. Satterthwaite, \*1865.  
William G. Tyler.  
Thomas Wistar, A.M., M.D.  
Ellis H. Yarnall, LL.B.

1859.

\*Richard W. Chase, \*1862.  
James R. Magee.  
\*Richard C. Paxson, \*1864.  
\*Edward Rhoads, M.D., \*1871.  
Edward C. Sampson.  
\*George Sampson, \*1872.  
Abram Sharples, M.D.  
Benjamin H. Smith.

1860.

\*Lindley M. Clark, \*1861.  
William B. Corbit, M.D.  
William M. Corlies.  
Cyrus Lindley.  
Theodore H. Morris.  
Frederick W. Morris.  
Richard Pancoast.  
John W. Pinkham, M.D.  
Francis Richardson.  
Clement L. Smith, A.M.  
James Tyson, M.D., A.M.  
Silas A. Underhill, LL.B.

1861.

Edward Bettle.  
Henry Bettle.  
Charles Bettle.  
William B. Broomall.  
Charles H. Jones.  
Thomas W. Lamb, A.M., M.D.  
William N. Potts.  
Jehu H. Stuart, A.M., M.D.  
John C. Thomas.

1862.

Henry T. Coates.  
\*Samuel A. Hadley, \*1864.  
George B. Mellor.  
Horace Williams, M.D.  
Isaac F. Wood.

1863.

Thomas J. Battey.  
George M. Coates, Jr., A.M.  
William M. Coates.  
\*Richard T. Jones, \*1869.  
William H. Morris.  
Joseph G. Pinkham, M.D., A.M.

1864.

Franklin Angell, A.M.  
William Ashbridge, M.D.  
Edward H. Coates.  
Howard M. Cooper, A.M.  
Albin Garrett.  
Morris Longstreth, M.D., A.M.  
Albert Pancoast.  
Charles Roberts.  
Elijah P. Sampson.

Edward L. Scull.  
Randolph Wood.

1865.

John R. Bringhurst.  
Edward T. Brown.  
James A. Chase.  
Joseph M. Downing.  
Arthur Haviland.  
\*David H. Nichols, \*1865.  
Henry W. Sharpless.  
\*George Smith, Jr., \*1872.  
Robert B. Taber, A.M.  
Allen C. Thomas.  
Benjamin A. Vail.  
Caleb Cresson Wistar.

1866.

Aaron M. Elliott.  
Benjamin E. Valentine, LL.B.

1867.

John Ashbridge.  
George Ashbridge, A.M.  
William P. Clark, A.M., LL.B.  
Samuel C. Collins, A.M.  
Nathaniel B. Crenshaw.  
Charles H. Darlington, A.M.  
\*Wm. T. Dorsey, M.D., \*1870.  
B. Franklin Eshleman.  
Richard M. Jones.  
Charles W. Sharpless.  
Walter Wood.

1868.

Edward H. Cook.  
Alexis T. Cope.  
Benjamin C. Satterthwaite.  
Louis Starr.  
S. Finley Tomlinson.  
Joseph H. Wills, A.M.

1869.

Johns H. Congdon.  
Henry Cope.  
Ludovic Estes.  
Henry Evaal.  
William B. Kaighn.  
Pendleton King, A.M.  
William H. Randolph.

Edward B. Taylor.  
William S. Taylor.  
James G. Whitlock.  
Walter Wood.  
Henry Wood

1870.

J. Stuart Brown.  
John E. Carey.  
Alford G. Coale.  
Howard Comfort.  
T. Allen Hilles.  
William Harrison Hubbard.  
Thomas K. Longstreth, A.M.  
Oliver G. Owen, A.M.  
Charles E. Pratt.  
David F. Rose.  
John D. Steele.  
Charles Wood, A.M.  
Stuart Wood.

1871.

Henry G. Brown.  
William P. Evans.  
John S. Garrigues.  
Reuben Haines.  
William H. Haines.  
Joseph Hartshorne.  
Jesse F. Hoskins.  
Walter T. Moore.  
Ellis B. Reeves.  
Alfred R. Roberts.  
Charles S. Taylor.  
Edward D. Thurston.  
Randolph Winslow.

1872.

Richard Ashbridge.  
Richard T. Cadbury.  
James Carey, Jr.  
Thomas S. Downing, Jr.  
Walter Erben.  
Thomas Rowland Estes.  
William H. Gibbons.  
Francis B. Gummere.  
Caspar Wistar Haines.  
Abram Francis Huston.  
Marmaduke Cope Kimber.  
William M. Longstreth.  
Richard H. Thomas.

1873.

James C. Comfort.  
Thomas P. Cope.  
George W. Emlen.  
Joseph M. Fox.

Henry C. Haines.  
Benjamin H. Lowry.  
Alden Sampson, Jr.  
Julius L. Tomlinson.

Whole number of Graduates, 222.

## Honorary Degrees.

<p style="text-align: center;">1858.</p> <p>Hugh D. Vail, A.M.</p>		<p style="text-align: center;">1864.</p> <p>Edward D. Cope, A.M.</p>
<p style="text-align: center;">1859.</p> <p>*Joseph W. Aldrich, A.M., *1865.</p>		<p style="text-align: center;">1867.</p> <p>Joseph Moore, A.M.</p>
<p style="text-align: center;">1860.</p> <p>John G. Whittier, A.M.</p>		<p style="text-align: center;">1872.</p> <p>William Jacobs, A.M.</p>

## REMARKS

UPON THE

### *Courses of Study and the Discipline.*

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

#### CHEMISTRY.

In a Laboratory well furnished with material and apparatus, students conduct with their own hands, under the supervision of the Professor, illustrative experiments, thus familiarizing themselves with the principles and laws of the science, as well as cultivating dexterity in manipulation.

The study of the Physics of Chemistry and Inorganic Chemistry is also accompanied with experiments.

#### GEOLOGY AND PHYSICAL GEOGRAPHY.

The facts and theories presented in the best text-books on these subjects are illustrated in the class-room, by the aid of the Geological and Mineralogical Cabinets, of which the former contains about 2500 specimens, and the latter 2700. These collections, with further illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.



## NATURAL HISTORY.

The laws of vegetable growth are taught in accordance with the best modern text-books on Botany, and further impressed by the practical analysis and naming of specimens gathered by the students in their walks. The principles of Zoology are illustrated, both in the recitations and lectures, by a valuable collection of specimens, models, and diagrams; and endeavors are made to point out the evidence and necessity of intelligent supervision and direction in the various processes of vital organism.

## PHYSIOLOGY AND HYGIENE.

In the Junior year the subjects of General Physiology and Human Anatomy and Physiology receive attention through the Summer Term. Instruction is given by lectures, followed always by recitations, and aided by the use of a text-book. The lectures are illustrated by numerous anatomical diagrams and preparations, including a selection of Auzoux's models, lately presented to the College by Richard Wood. This branch of study is believed to have considerable importance; first, because all natural science culminates in Man, and, secondly, on account of the practical applications by which such knowledge may be made useful to all.

In the first term of the Senior year, Hygiene is taught by lectures and recitations, there being no text-book available upon this subject. Among the topics dwelt upon in the course are the influence upon health of different articles of food and drink, stimulants, and narcotics; the atmosphere and ventilation; clothing, bathing, and exercise; the causation and prevention of the more common and important diseases; corporeal, mental, and public hygiene.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the members of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

## MODERN LANGUAGES.

French is regularly taught during the Junior and Senior years, and German during the Senior year. These courses enable diligent students to pursue their studies in those languages with ease after leaving college.

Provision may also be made for teaching voluntary classes in Italian and Spanish.

## GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's and Guyot's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the history and structure of the English Language, and of English and American Literature, will be encouraged.

Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with

our mother tongue generally, and especially for understanding the early English authors.

### LOGIC.

In the study of Logic, the exhaustive analyses of Hamilton are orally explained, in connection with Whately's concise presentation of the Aristotelian system. This method exhibits the perfection of the science as a whole, and facilitates the practical application of its rules in the detection of fallacies. The teachings of the text-book are illustrated by copious examples, and frequent exercises are given to the class to test their familiarity with the principles they have learned.

### PSYCHOLOGY.

Mental Philosophy is taught as a safeguard against materialistic and sceptical tendencies, and as an eminently *practical* science, instructing us in the right use of some of our most important powers, and also presenting the sure and only possible groundwork for the knowledge of physical, as well as mental, laws. The distinction between fact and theory is so presented as to demonstrate the propriety of accepting all well-authenticated observations, without adopting the vagaries of biased observers. The facts of intellectual, moral, and religious *experience* are shown to be even more definite and valid than those which are inferred from physical observation and experiment, while the cardinal truths that all knowledge rests upon faith, and that Eternal Spiritual Existence is the surest of all realities, are kept carefully in view.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to

his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. Important dates are fixed in the mind as aids to the understanding of the steps of human progress. Several standard Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

#### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

The science of Individual and of National wealth; the principles of government which are embodied in the Constitution of the United States; and the general principles of the Law of Nations, and of Jurisprudence as related to American Law, are studied in the Junior year.

#### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

## DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.











A  
CATALOGUE  
OF THE  
*Officers and Students*  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1874-75.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1875.



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1875.

# Corporation.

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*Secretary.*

EDWARD BETTLE, JR.

*Treasurer.*

DAVID SCULL, JR.

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T. WISTAR BROWN,	ROBERT B. HAINES,
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JAMES E. RHOADS, M.D.,	EDWARD BETTLE, JR.,
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DAVID SCULL, JR.,	JOHN S. HILLES,
JOEL CADBURY,	EDWARD L. SCULL.

*Secretary of the Board.*

JAMES WHITALL.

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Office, 109 North Tenth Street, Philadelphia.

## Executive Committee.

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JOSEPH W. TAYLOR, M.D.,

HUGH D. VAIL, A.M.,

JAMES E. RHOADS, M.D.,

DAVID SCULL, JR.,

JAMES WHITALL.

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## Faculty.

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THOMAS CHASE, A.M., *President.*

JOHN H. DILLINGHAM, A.M.

## Officers of Instruction.

THOMAS CHASE, A.M.,

PRESIDENT,

AND PROFESSOR OF PHILOLOGY AND LITERATURE.

JOHN H. DILLINGHAM, A.M.,

SUPERINTENDENT.

HENRY HARTSHORNE, M.D., A.M.,

PROFESSOR OF PHYSIOLOGY, HYGIENE, AND ETHICS.

PLINY E. CHASE, A.M.,

PROFESSOR OF MATHEMATICS AND PHYSICS.

LUDOVIC ESTES, A.B.,

ASSISTANT PROFESSOR OF CLASSICS AND MATHEMATICS.



## Undergraduates.

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### SENIOR CLASS.

NAMES.	RESIDENCE.	
Bispham, Edward Koons	Philadelphia,	Pa.
Brown, Alonzo	Ironton,	Wis.
Davis, J. Franklin	Westminster,	N. C.
Haines, Charles Edward	Philadelphia,	Pa.
Hunt, William, Jr.	Philadelphia,	Pa.
Huston, Charles Lukens	Coatesville,	Pa.
Newlin, Harold Parker	Philadelphia,	Pa.
Pharo, Walter Willits	Tuckerton,	N. J.
Tebbetts, Charles Edwin	Muscatine,	Iowa.
White, Miles, Jr.	Baltimore,	Md.

## JUNIOR CLASS.

NAMES.	RESIDENCE.	
Allinson, Francis Greenleaf	Burlington,	N. J.
Bispham, David Scull	Moorestown,	N. J.
Colton, Reuben	Worcester,	Mass.
Cope, Alfred, Jr.	Germantown,	Pa.
Dudley, Henry Wilson	E. Vassalboro,	Me.
Gifford, Seth Kelley	West Falmouth,	Mass.
Haines, Francis Cope	Germantown,	Pa.
Hobbs, Lewis Lyndon	New Garden,	N. C.
Holme, Richard Henry	Salem,	N. J.
Kimber, T. William	Germantown,	Pa.
Longstreth, Charles Albert	Philadelphia,	Pa.
Nicholson, John Whitall	Haddonfield,	N. J.
Roberts, Percival, Jr.	Philadelphia,	Pa.
Taylor, Frank H.	Cincinnati,	Ohio.
Taylor, Lewis Alfred	Tecumseh,	Mich.
Taylor, Howard Gardiner	Cinnaminson,	N. J.
Warrington, T. Francis	West Chester,	Pa.
White, David Francis	Dublin,	Ind

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Anderson, Isaac W.	Bryn Mawr,	Pa.
Baily, Frederic Lang	Philadelphia,	Pa.
Kridler, James Delaplaine	Chester,	Pa.
Thompson, John J., Jr.	Philadelphia,	Pa.

## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Baily, Henry	Newport,	Pa.
Baily, Albert Lang	Philadelphia,	Pa.
Black, John Maris Lindsay	Bryn Mawr,	Pa.
Brown, Thomas Wistar, Jr.	Germantown,	Pa.
Carey, Francis King	Baltimore,	Md.
Comfort, Edward Thomas	Germantown,	Pa.
Gibbons, Edward	Wilmington,	Del.
Haines, Robert B., Jr.	Cheltenham,	Pa.
Paul, Joseph W.	Philadelphia,	Pa.
Pearce, Robert Kester	Hestonville,	Pa.
Reynolds, Lindley M. H.	Bush Hill,	N. C.
Smiley, Daniel, Jr.	Vassalboro,	Me.
Stokes, Henry Newlin	Philadelphia,	Pa.
Taylor, Henry Longstreet	Cincinnati,	Ohio.
Thomas, John M. W.	Baltimore,	Md.
White, Oliver	Dublin,	Ind.
White, George Wilson	Belvidere,	N. C.

## SUMMARY.

Seniors . . . . .	10
Juniors . . . . .	18
Sophomores . . . . .	4
Freshmen . . . . .	17
Total . . . . .	<hr/> 49

## Calendar.

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College Year, 1874-75, began* . . . . .	9th Mo. 2.
Winter Recess from 12th Mo. 23, 1874, to 1st Mo. 13,* 1875.	
Oration before the Loganian Society, 1875 . . . . .	4th Mo. 13.
Junior Exercises, 1875 . . . . .	4th Mo. 14.
Spring Recess, 1875, from 4th Mo. 14, to . . . . .	4th Mo. 28.*
Public Meeting of the Loganian Society, 1875 . . . . .	7th Mo. 5.
Address before the Alumni, 1875 . . . . .	7th Mo. 6.
Address to the Graduating Class, 1875 . . . . .	7th Mo. 6.
Commencement Day, 1875 . . . . .	7th Mo. 7.

### VACATION OF NINE WEEKS.

Examinations for Admission, 1875, begin . . . . .	9th Mo. 7.
College Year, 1875-76, begins* . . . . .	9th Mo. 8.

\* The first recitations are due promptly at *nine o'clock* at the beginning of each Term or Session. No absences from them are excused, unless clearly unavoidable.

## Requisites and Terms for Admission.

CANDIDATES for admission to the Freshman Class will be examined as to their proficiency in the following requisites:—

*Classics.\**—A familiar knowledge of the paradigms, and of the leading rules in Syntax, in Latin and Greek Grammar, to be tested, in part, by writing easy sentences in Latin and Greek.

Also, ability to give, after two hours' study—with the aid of a Lexicon—a literal translation of a passage not before read by the candidate, both in Latin and Greek prose or verse, equal in amount to fifty hexameter lines; and to apply the proper rules of Syntax to the constructions in that passage.

\* The following pronunciation is recommended in preparatory schools. In Latin (as a near approximation to the ancient method), *ā* as in *father*, *ă* the same sound shorter (or as the first *a* in *papa*), *ē* like *a* in *fate*, *ĕ* as in *set*, *ī* as in *machine*, *ĭ* as in *sit*, *ō* as in *tone*, *ō* as in *domestic*, *u* as in Italian, *i. e.*, *ū* as in *rule* (or as *oo* in *moon*), *ū* as *oo* in *boot*, *y* like the French *u* (with the proper distinction as long or short), *ue* and *ai* like *ay*, the English adverb of affirmation, *au* like *ow* in *owl*, *oe* and *oi* nearly like *oi* in *spoil*, *ei* as in *eight*, *eu* like *ēh-oo* rapidly spoken, *ua* when a diphthong, like *wah*, *ui* like the English *we*, *j* (i consonans) like *y* in *year*, *v* (u consonans) nearly like *w*, or like *ou* in the French word *oui*, *c* and *g* always hard as in *can* and *get*, *t* always simple or unsibilated, *s* as in *sin*, and never like *z* or *sh*, *z* nearly like *s*, *qu* as in English, *bs* like *ps*, *bt* like *pt*, *ch* like *k* followed by *h*; *eicit*, *reicit*, as *ē-yicit*, *rē-yicit*.

In Greek, placing the *accent* always on the syllable which bears the printed accent sign, and giving *ā* the sound of *a* in *father*, *ă* the same sound short, *ῆ* that of *ē* in *set*, *ῆ* that of *ī* in *machine*, *ῆ* that of *i* in *sit*, *ῶ* that of *o* in *hole*, *ῶ* that of *o* in *nor*, *ῦ* that of *u* in French (with the proper distinction as long or short), *ῶ* that of *oo* in *moon*, *ῶ* that of *ou* in *house*. If the teacher prefer, the probable ancient pronunciation of the diphthongs, as stated by Professor Sophocles, may be given.

It is important that students should be well trained in Greek and Latin *quantities* and *accents*.

A consistent use of the English method of pronunciation is better than a *half-way* application of the ancient.

*Mathematics.*—Greenleaf's Arithmetic, Alsop's First Lessons in Algebra, and the first two books in Davies's Legendre; or the equivalents for these books.

*English.*—Spelling (according to Worcester), Grammar, Geography, and History of the United States.

Candidates whose preparation is found to fall short of the regular requirements, are not to be admitted as members of the Freshman Class. But such may, in some cases, be allowed to remain as unclassified students, if there is good reason to expect that they will soon become qualified for full standing.

Candidates found fully prepared for admission to the Freshman Class, and also in all the regular studies of the Freshman year, may be admitted to the Sophomore Class.

A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who are willing that their children should be educated in conformity with the principles of our religious Society."

No student is admitted for a period less than one year.

APPLICATIONS FOR ADMISSION must be made to the President of Haverford College, Haverford College P. O., Montgomery Co., Pa. Candidates will present themselves at the College, for examination by the Faculty, at 9 o'clock on the morning previous to the beginning of the college year.


Each candidate must present a certificate of good moral character from his last teacher.

The price of Board and Tuition is \$425 00 per annum, payable one-half at the beginning, and one-half at the middle of the College year. Washing is charged at the rate of 75 cents per dozen.

*Well-prepared* candidates who cannot afford the full payment, but whose purpose is to make the best use of their



opportunities, if admitted, are invited to make known their case to the President.

 **Premature Admissions.**—It is the desire of the Faculty to discourage undue haste in sending boys to college young or superficially prepared in their studies, and in applying for their admission to advanced classes. The full benefit of a college course is not likely to be obtained, unless the student enters with his class at the *beginning* of the course, qualified not less in maturity of mind and good character than in mental acquirement and discipline, for exercises that are in advance of boyhood. Making up for subsequent examination what has been omitted before entrance into an advanced class is seldom satisfactory, as it takes attention and time from the studies of the year; and the rapid perusal of a text-book is a very imperfect substitute for the extended teaching of its subject in the class-room of the Professor, where much is often added to the matter of the recitations.

## Course of Instruction.

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### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John.
  2. *Mathematics.* Euclid's Geometry.—Alsop's Algebra.—Gummere's Plane Trigonometry.—Gummere's Surveying, begun.
  3. *Greek.* Selections from Greek Historians.—Review of Greek Grammar.—Exercises in writing Greek.
  4. *Latin.* Livy (Chase).—Review of Latin Grammar.—Exercises in writing Latin.
  5. *English Literature.* Cleveland's Compendium.—Hart's Rhetoric.—Compositions.
  6. *Physical Geography.* Guyot's Earth and Man.
  7. *Zoology.* Hooker's Natural History.
  8. *Botany.* Wood's or Gray's.
  9. *History.* Weber's Universal History.
- 

### SOPHOMORE CLASS.

1. *Scripture.* English New Testament.
2. *Mathematics.* Gummere's Surveying, finished.—Field Practice in Surveying.—Lewis's Spherical Trigonometry, Conic Sections, and Spherical Projections.

3. *Physics*. Loomis's Natural Philosophy. — Tyndall's Heat as a Mode of Motion.
4. *Descriptive Astronomy*. Herschel's Outlines.
5. *Greek*. The Iliad or Odyssey of Homer.—Plato's Apology and Crito.—Exercises in writing Greek.
6. *Latin*. Horace (Chase).—The Germania and Agricola of Tacitus.—Exercises in writing Latin.
7. *English*. The Philological Study of the English Language.—Themes.
8. *Chemistry*. Eliot and Storer's Chemistry. — Laboratory Teaching.—Lectures.
9. *Geology*. Dana's Text-book.
10. *Ethics*. Evidences of Christianity.—Dymond's Essays on Morality.

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## JUNIOR CLASS.

1. *Scripture*. Greek Testament.
2. *Mathematics*. Davies's Analytical Geometry.—Differential and Integral Calculus.
3. *Astronomy*. Descriptive Astronomy (Herschel), finished.
4. *Greek*. The Prometheus of Æschylus.—Thucydides.—The Antigone of Sophocles.—Exercises in writing Greek.
5. *Latin*. Satires and Epistles of Horace.—Juvenal.—Cicero's Tusculan Disputations and Somnium Scipionis (Chase).—Exercises in writing Latin.
6. *English*. Anglo-Saxon.
7. *French*. Knapp's Grammar.—Fenelon's *Télémaque*.—*Histoire de Charles XII*.
8. *Rhetoric*. Whately's Rhetoric.
9. *Logic*. Whately and Hamilton.

10. *Organic Science.* Human and General Anatomy and Physiology (Lectures).
11. *Political Science.* Political Economy.—Kent's Commentaries on the Law of Nations, and American Law.—Frothingham's Rise of the Republic of the United States.
12. *Elocution.* Rehearsals for Public Exhibition.

## SENIOR CLASS.

1. *Scripture.* Greek Testament continued.
2. *Mathematics.* Analytical Mechanics.—Optics (Snell's Olmstead).—Loomis's Practical Astronomy.—Calculation of an Eclipse.—Practice in the Observatory.
3. *Greek.* Demosthenes on the Crown.—Exercises in writing Greek.
4. *Latin.* Cicero de Officiis.—The Captivi of Plautus.—Cicero's or Pliny's Letters.—The Ancient Pronunciation of Latin.—Latin Compositions.
5. *German.* Whitney's Grammar and Reader.—Schiller's Wilhelm Tell (for advanced students).—Exercises.
6. *Philology.* Whitney's Science of Language.—English Literature.
7. *Hygiene.* Lectures on the Preservation of Health.
8. *Psychology.* Porter's Human Intellect.—Lectures.
9. *Christian Doctrines.* Gurney's Observations.—Barclay.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *History.* Guizot's History of Modern Civilization.—Arnold's Lectures on Modern History.
12. *Elocution.* A Public Oration, and Rehearsals.

## Lectures.

BESIDES lectures delivered to the whole College by some of the Professors, the Special Courses of Lectures for the year 1874-75, are as follows:—

### TO THE SENIOR CLASS.

*The Preservation of Health* . . PROFESSOR HARTSHORNE.  
*Hamilton's Metaphysics* . . . PROFESSOR P. E. CHASE.

### TO THE JUNIOR CLASS.

*Anatomy and Physiology* . . . PROFESSOR HARTSHORNE.  
*Hamilton's System of Logic* . . PROFESSOR P. E. CHASE.

### TO THE SOPHOMORE CLASS.

*Chemistry* . . . . . PROFESSOR P. E. CHASE.

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## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

Near the close of every Term there are private examinations of each class, in writing, in the studies of the Term, all of which must be passed satisfactorily before a student can be advanced to the next higher class, or receive, finally, the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and a set of questions is furnished them upon some book or subject in the course, which each student is required to answer in writing, without consulting any person or book. The time of writing, for the

examination in each book, is limited to three hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least six, on a scale of ten, in the examination upon each book, and an average of six and two-thirds on all the books combined, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts. *But no student is entitled to such advancement, whatever his numbers or rank, unless in the private judgment of all his instructors and caretakers, he has been faithful in his daily studies, and satisfactory in his character and conduct.*

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

Special written examinations are occasionally held, as means of mental training.

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## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Committee on Instruction satisfactory evidence of continued good moral character, and presenting a well-written thesis on some literary or scientific subject, which shall receive the approbation of the Faculty and Managers. As it is designed that this degree shall represent real and solid attainments in scholarship, the thesis is expected to exhibit sufficient research, thought, and ability, to attest substantial desert on the part of the applicant. The theses shall be prepared expressly

for this purpose, and shall be the exclusive property of the Corporation. They must be presented at least *two months* before the annual Commencement. The fee for the diploma is Ten Dollars, to be paid before Commencement-day.

Each candidate for this degree, instead of preparing a Thesis, may be examined on some course of study previously approved by the Faculty. The following are stated as adequate courses:—

- I. The Pauline Epistles in Greek.
- II. The whole of Thucydides.
- III. Seven Tragedies of Æschylus, Sophocles, or Euripides.
- IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.
- V. The whole of Tacitus.
- VI. Gervinus's History of the Nineteenth Century, in the original German.
- VII. Mill, Carey, and Bowen on Political Economy.
- VIII. The Nicomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.
- IX. The works of Faraday and Tyndall.
- X. Theoretical Astronomy.

Notice of application for examination must be given two months before Commencement. The examinations will be held the first week in the Sixth month.

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### Civil Engineering and Practical Science.

SPECIAL and extended instruction will be given in the higher mathematics, with their applications to practical science, and ample facilities and assistance will be furnished for thorough field-practice in Surveying, Levelling, etc., with the use of the best instruments.

To the apparatus in this department valuable additions have recently been made.



Practical instruction is given in Land Surveying, and the students are made acquainted with the use of the compass and level by operations in the field.

---

## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eyepieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

The latitude of the Observatory is  $40^{\circ} 0' 36''.5$  N.; its longitude,  $5^{\text{h}} 1^{\text{m}} 12^{\text{sec}} .75$  W. from Greenwich.

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## Library and Apparatus.

THE LIBRARY of the College contains 6343 volumes; that of the Loganian Society 2160; those of other societies 1326; making the whole number of books in the Libraries 9829. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.



The College possesses—a gift from generous Friends in England—a copy of the imperial edition of the *CODEX SINAITICUS*, published by the Emperor of Russia, and Woidé's edition of the *CODEX ALEXANDRINUS*. To these have been added, by donation and purchase, the Roman edition of the *CODEX VATICANUS*, and Tischendorf's edition of the same *CODEX*. The Library thus contains copies, nearly in fac-simile, of the most ancient known manuscript-authorities for the genuine text of the New Testament.

It is arranged that the Library shall present to the students every convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises, among other specimens, complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a well-furnished LABORATORY.

A valuable set of elastic models made by Anzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the entire human body, and of other interesting subjects in ZOOLOGY, COMPARATIVE ANATOMY, and BOTANY; also, a collection of plaster models of fossil species in Natural History, made by Professor Ward, of Rochester, are added to the resources of instruction in the College, by the liberality of Richard Wood.

## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 2160 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction, and a CARPENTER'S SHOP belongs to the Society.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 1326 volumes.

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## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, near the Pennsylvania Railroad, nine miles west of Philadelphia. Address HAVERFORD COLLEGE P. O., Montgomery County, Pa. The buildings are situated on a lawn of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. All the students board at the College. The supervision of all the arrangements for the comfort of the family is intrusted to the Matron, HANNAH KITE.

## Graduates.

---

1836.

Thomas F. Cock, M.D.  
Joseph Walton.

1837.

William C. Longstreth.  
David C. Murray.  
Lindley Murray.  
Benjamin V. Marsh.  
\*Joseph L. Pennock, \*1870.  
Robert B. Parsons.  
Charles L. Sharpless.  
Lloyd P. Smith, A.M.  
\*B. Wyatt Wistar, \*1869.

1838.

James V. Emlen, M.D.  
John Elliott.

1839.

Frederick Collins.  
Thomas P. Cope.  
Henry Hartshorne, M.D., A.M.  
Nereus Mendenhall, M.D.  
Richard Randolph, Jr., M.D.  
Charles Taber.

1840.

Joseph Howell.  
Anthony M. Kimber.  
\*Henry H. G. Sharpless.  
\*John R. Winslow, M.D., \*1866.

1841.

\*Richard H. Lawrence.  
\*James P. Perot, \*1872.  
\*Elias A. White, \*1866.

1842.

Robert Bowne.  
Richard Cadbury.  
William S. Hilles.  
Thomas Kimber, Jr.  
James J. Levick, M.D.  
Edmund Rodman.  
Thomas Rodman.  
Benjamin R. Smith.  
Augustus Taber.  
Caleb Winslow, M.D.

1843.

Robert B. Howland.  
Francis White.  
William D. Stroud, M.D.

1844.

Evan T. Ellis.  
Robert B. Haines.  
Isaac Hartshorne.

1845.

Edmund A. Crenshaw.  
\*Robert Pearsall.

1849.

Albert K. Smiley, A.M.  
Alfred H. Smiley, A.M.

1851.

Joseph L. Bailey.  
Philip C. Garrett.  
Thomas J. Levick.  
Franklin E. Paige, A.M.  
Zaccheus Test, M.D., A.M.  
James C. Thomas, M.D.  
Richard Wood.

1852.

Dougan Clark, M.D.  
 Lewis N. Hopkins.  
 William L. Kinsman.  
 William E. Newhall.  
 James Whitall.

1853.

William B. Morgan, A.M.  
 William H. Pancoast, M.D.

1854.

Frederick Arthur, Jr.  
 John W. Cadbury.  
 John B. Garret.  
 David Scull, Jr.

1855.

\*Samuel Bettle, \*1859.  
 John R. Hubbard, A.M.

1856.

Bartholomew W. Beesley.  
 Joel Cadbury, Jr.  
 Jonathan J. Comfort, M.D.  
 \*James M. Walton, \*1874.  
 Edward R. Wood, A.M.

1857.

Jesse S. Cheyney, A.M.  
 \*Cyrus Mendenhall, \*1858.  
 Stephen Wood.

1858.

Thomas H. Burgess.  
 Thomas Clark.  
 Daniel W. Hunt.  
 \*Samuel T. Satterthwaite, \*1865.  
 William G. Tyler.  
 Thomas Wistar, A.M., M.D.  
 Ellis R. Yarnall, LL.B.

1859.

\*Richard W. Chase, \*1862.  
 James R. Magee.  
 \*Richard C. Paxson, \*1864.  
 \*Edward Rhoads, M.D., \*1871.  
 Edward C. Sampson.  
 \*George Sampson, \*1872.  
 Abram Sharples, M.D.  
 Benjamin H. Smith.

1860.

\*Lindley M. Clark, \*1861.  
 William B. Corbit, M.D.  
 William M. Corlies.  
 Cyrus Lindley.  
 Theodore H. Morris.  
 Frederick W. Morris.  
 Richard Pancoast.  
 John W. Pinkham, M.D.  
 Francis Richardson.  
 Clement L. Smith, A.M.  
 James Tyson, M.D., A.M.  
 Silas A. Underhill, LL.B.

1861.

Edward Bettle.  
 Henry Bettle.  
 Charles Bettle.  
 William B. Broomall.  
 Charles H. Jones.  
 Thomas W. Lamb, A.M., M.D.  
 William N. Potts.  
 Jehu H. Stuart, A.M., M.D.  
 John C. Thomas.

1862.

Henry T. Coates.  
 \*Samuel A. Hadley, \*1864.  
 George B. Mellor.  
 Horace Williams, M.D.  
 Isaac F. Wood.

1863.

Thomas J. Battey.  
 George M. Coates, Jr., A.M.  
 William M. Coates.  
 \*Richard T. Jones, \*1869.  
 William H. Morris.  
 Joseph G. Pinkham, M.D., A.M.

1864.

Franklin Angell, A.M.  
 William Ashbridge, M.D.  
 Edward H. Coates.  
 Howard M. Cooper, A.M.  
 Albin Garrett.  
 Morris Longstreth, M.D., A.M.  
 Albert Pancoast.  
 Charles Roberts.  
 Elijah P. Sampson.

Edward L. Scull.  
Randolph Wood.

1865.

John R. Bringhurst.  
Edward T. Brown.  
James A. Chase.  
Joseph M. Downing.  
Arthur Haviland.  
\*David H. Nichols, \*1865.  
Henry W. Sharpless.  
\*George Smith, Jr., \*1872.  
Robert B. Taber, A.M.  
Allen C. Thomas.  
Benjamin A. Vail.  
Caleb Cresson Wistar.

1866.

Aaron M. Elliott.  
Benjamin E. Valentine, LL.B.

1867.

John Ashbridge.  
George Ashbridge, A.M.  
William P. Clark, A.M., LL.B.  
Samuel C. Collins, A.M.  
Nathaniel B. Crenshaw.  
Charles H. Darlington, A.M.  
\*Wm. T. Dorsey, M.D., \*1870.  
B. Franklin Eshleman.  
Richard M. Jones.  
Charles W. Sharpless.  
Walter Wood.

1868.

Edward H. Cook.  
Alexis T. Cope.  
Benjamin C. Satterthwaite.  
Louis Starr, M.D.  
S. Finley Tomlinson.  
Joseph H. Willis, A.M.

1869.

Johns H. Congdon.  
Henry Cope.  
Ludovic Estes.  
Henry Evaul.  
William B. Kaighn.  
Pendleton King, A.M.  
William H. Randolph.

Edward B. Taylor.  
William S. Taylor.  
James G. Whitlock.  
Walter Wood.  
Henry Wood.

1870.

J. Stuart Brown.  
John E. Carey.  
Alford G. Coale.  
Howard Comfort.  
T. Allen Hilles.  
William Harrison Hubbard.  
Thomas K. Longstreth, A.M.  
Oliver G. Owen, A.M.  
Charles E. Pratt.  
David F. Rose.  
John D. Steele.  
Charles Wood, A.M.  
Stuart Wood.

1871.

Henry G. Brown.  
William P. Evans.  
John S. Garrigues.  
Reuben Haines.  
William H. Haines.  
Joseph Hartshorne.  
Jesse F. Hoskins.  
Walter T. Moore.  
Ellis B. Reeves.  
Alfred R. Roberts.  
Charles S. Taylor.  
Edward D. Thurston.  
Randolph Winslow, M.D., A.M.

1872.

Richard Ashbridge.  
Richard T. Cadbury.  
James Carey, Jr.  
Thomas S. Downing, Jr.  
Walter Erben.  
Thomas Rowland Estes.  
William H. Gibbons.  
Francis B. Gummere.  
Caspar Wistar Haines.  
Abram Francis Huston.  
Marmaduke Cope Kimber.  
William M. Longstreth.  
Richard H. Thomas, M.D.

1873.

James C. Comfort.  
Thomas P. Cope.  
George W. Emlen.  
Joseph M. Fox.  
Henry C. Haines.  
Benjamin H. Lowry.  
Alden Sampson, Jr.  
Julius L. Tomlinson.

1874.

Edward P. Allinson,  
John G. Bullock.  
James Emlen.  
Charles R. Hartshorne.  
Samuel E. Hilles.  
John B. Jones.  
Mahlon Kirkbride.  
Theophilus P. Price.  
James B. Thompson.  
Joseph Trotter.

Whole number of Graduates, 232.

## Honorary Degrees.

1858.  
Hugh D. Vail, A.M.

1859.  
\*Joseph W. Aldrich, A.M., \*1865.

1860.  
John G. Whittier, A.M.

1864.  
Edward D. Cope, A.M.

1867.  
Joseph Moore, A.M.

1872.  
William Jacobs, A.M.

THE AIMS  
OF THE  
**Courses of Study and the Discipline.**

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THE Course of Instruction at Haverford, aiming at thorough and generous training, retains the standard studies proved by long experience to be most fruitful in mental culture, but gives them no undue preponderance, and adds to them those scientific and practical studies which are adapted to the special wants of our times.

CHEMISTRY.

In a Laboratory well furnished with material and apparatus, students conduct with their own hands, under the supervision of the Professor, illustrative experiments, thus familiarizing themselves with the principles and laws of the science, as well as cultivating dexterity in manipulation.

The study of the Physics of Chemistry and Inorganic Chemistry is also accompanied with experiments.

GEOLOGY AND PHYSICAL GEOGRAPHY.

The facts and theories presented in the best text-books on these subjects are illustrated in the class-room, by the aid of the Geological and Mineralogical Cabinets, of which the former contains about 2500 specimens, and the latter 2700. These collections, with further illustrations by diagrams, models, and maps, and the direct observation of nature, for which the neighboring country affords ample opportunity, enable the professor and students to fill the time allotted to such studies in a manner at once pleasant and profitable.



## NATURAL HISTORY.

The laws of vegetable growth are taught in accordance with the best modern text-books on Botany, and further impressed by the practical analysis and naming of specimens gathered by the students in their walks. The principles of Zoology are illustrated, both in the recitations and lectures, by a valuable collection of specimens, models, and diagrams; and endeavors are made to point out the evidence and necessity of intelligent supervision and direction in the various processes of vital organism.

## PHYSIOLOGY AND HYGIENE.

In the Junior year the subjects of General Physiology and Human Anatomy and Physiology receive attention through the Summer Term. Instruction is given by lectures, followed always by recitations, and aided by the use of a text-book. The lectures are illustrated by numerous anatomical diagrams and preparations, including a selection of Auzoux's models, lately presented to the College by Richard Wood. This branch of study is believed to have considerable importance; first, because all natural science culminates in Man, and, secondly, on account of the practical applications by which such knowledge may be made useful to all.

In the first term of the Senior year, Hygiene is taught by lectures and recitations, there being no text-book available upon this subject. Among the topics dwelt upon in the course are the influence upon health of different articles of food and drink, stimulants, and narcotics; the atmosphere and ventilation; clothing, bathing, and exercise; the causation and prevention of the more common and important diseases; corporeal, mental, and public hygiene.

## MATHEMATICS, PHYSICS, AND ASTRONOMY.

The object of this course is, first, as a part of general education, to exercise the student in the process of exact reasoning, and thus secure to his mind a thorough logical discipline; and, secondly, as a part of special education, to prepare him to apply the mathematical and mechanical knowledge he acquires to various practical purposes.

Suitable text-books are used, but the great aim is to teach the *subject*, and not the book. To test the student's knowledge, and also to accustom him to independent and original investigations, questions and problems not found in the text-book are frequently proposed for solution.

A valuable collection of apparatus belongs to the College, and is used in connection with the instruction in Mechanical Philosophy. To this collection such additions are made from time to time as are called for by the progress of science. The students are allowed to perform experiments themselves, under the direction of the Professor.

Peculiar advantages for the study of Astronomy are presented in the well-furnished Observatory, of which the members of the Senior Class are required to avail themselves so far as to become practically familiar with the management of the principal instruments.

## MODERN LANGUAGES.

French is regularly taught during the Junior and Senior years, and German during the Senior year. These courses enable diligent students to pursue their studies in those languages with ease after leaving college.

Provision may also be made for teaching voluntary classes in Italian and Spanish.

## GREEK AND LATIN CLASSICS, AND THE SCIENCE OF LANGUAGE.

It is the aim in this department to discipline the mind and cultivate the taste by the study of the great masterpieces of antiquity, and to train and strengthen the reasoning powers by the analysis of words and thoughts required in translation, and particularly by the investigation of the syntax of Greek and Latin, the best practical logic.

In addition to the text-books read in the course, exercises in writing both languages are required, as well as a careful investigation of the various points of history, antiquities, and classical geography involved in the daily lessons. Kiepert's and Guyot's Mural Maps, and various illustrated works on Antiquities and Palæography, are used as aids in instruction.

Instruction is given, both orally and by the use of text-books, in Comparative Philology and the Science of Language.

## RHETORIC AND ENGLISH LITERATURE.

In the recitations in Rhetoric and kindred subjects, the effort is made to stimulate thought, and train the mind to exactness and vigor, as well as to inculcate the principles of good taste and sound criticism. Exercises in the composition of Themes and Forensics are required; and sufficient instruction is given in Declamation to put the student in the right way of self-improvement. The exercises of the Junior exhibition, and of Commencement, are prepared under the supervision of this department.

Throughout the course, the study of the history and structure of the English Language, and of English and American Literature, will be encouraged.

Suitable time will also be given to the study of Anglo-Saxon, as being most useful for a proper acquaintance with

our mother tongue generally, and especially for understanding the early English authors.

### LOGIC.

In the study of Logic, the exhaustive analyses of Hamilton are orally explained, in connection with Whately's concise presentation of the Aristotelian system. This method exhibits the perfection of the science as a whole, and facilitates the practical application of its rules in the detection of fallacies. The teachings of the text-book are illustrated by copious examples, and frequent exercises are given to the class to test their familiarity with the principles they have learned.

### PSYCHOLOGY.

Mental Philosophy is taught as a safeguard against materialistic and sceptical tendencies, and as an eminently *practical* science, instructing us in the right use of some of our most important powers, and also presenting the sure and only possible groundwork for the knowledge of physical, as well as mental, laws. The distinction between fact and theory is so presented as to demonstrate the propriety of accepting all well-authenticated observations, without adopting the vagaries of biased observers. The facts of intellectual, moral, and religious *experience* are shown to be even more definite and valid than those which are inferred from physical observation and experiment; while the cardinal truths that all knowledge rests upon faith, and that Eternal Spiritual Existence is the surest of all realities, are kept carefully in view.

### HISTORY.

In the study of History, each recitation is connected with the study of the Civil and Physical Geography embraced in the lesson; the pupil being required to come to

his recitation prepared to delineate upon the blackboard the region of country to which the lesson refers. Thus, by associating in the mind of the learner what are so intimately connected in nature, the history of a people and their geographical position, he is greatly assisted in acquiring, and especially in retaining, a knowledge of both. Important dates are fixed in the mind as aids to the understanding of the steps of human progress. Several standard Greek and Latin historians are studied in the course; and attention is called to the *philosophy* of history as set forth by Thucydides, Arnold, and Guizot.

### MORAL AND POLITICAL SCIENCE.

In these subjects, it is the aim of the College to hold up the highest standard of public and private duty, and to illustrate and enforce the lessons by bringing them home to the practices and wants of every-day life.

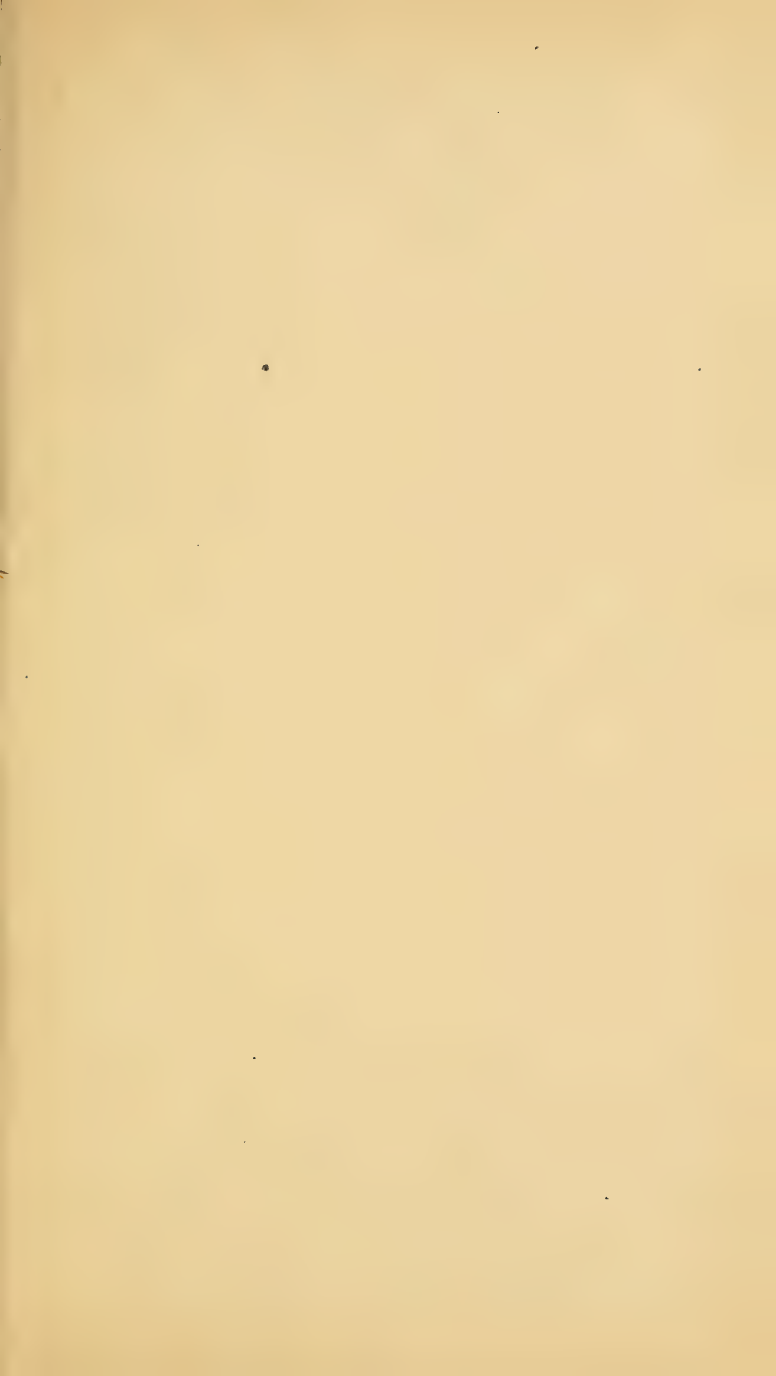
The science of Individual and of National wealth; the principles of government which are embodied in the Constitution of the United States; and the general principles of the Law of Nations, and of Jurisprudence as related to American Law, are studied in the Junior year.

### RELIGIOUS INSTRUCTION.

In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

## DISCIPLINE.

In the discipline of the College, while the Officers endeavor to promote habits of order and regularity, they aim to do this in a spirit of kindness and forbearance. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.











A  
CATALOGUE  
OF THE  
*Officers and Students*  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1875-76.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1876.



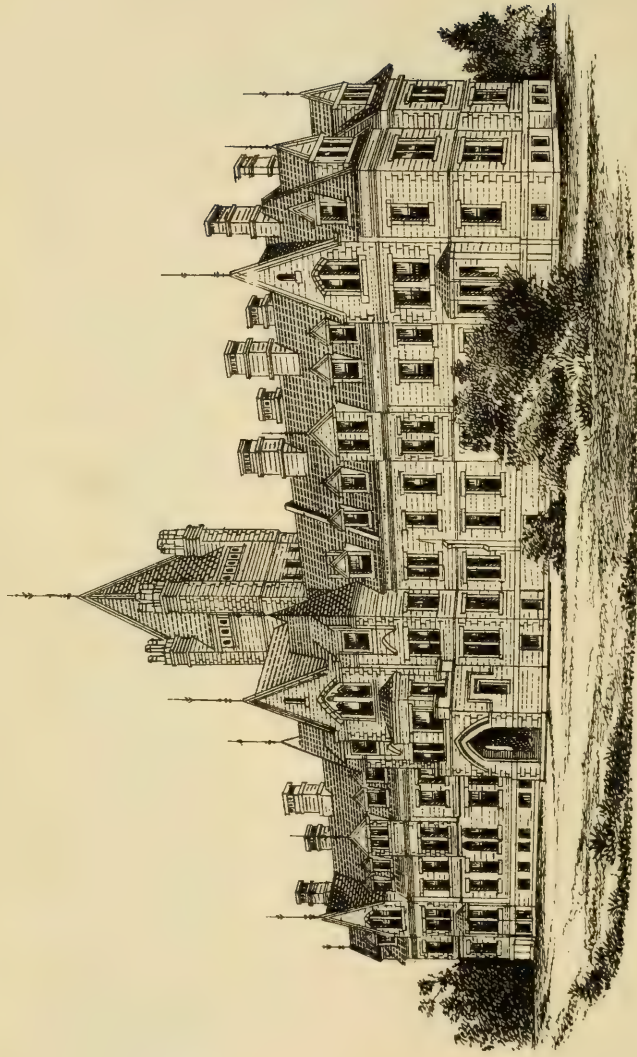
A plan of the proposed building at  
Haverford college (i. e. Barclay Hall) was  
inserted loose in this catalog. For copies

see <sup>STACK</sup>  
locked case.

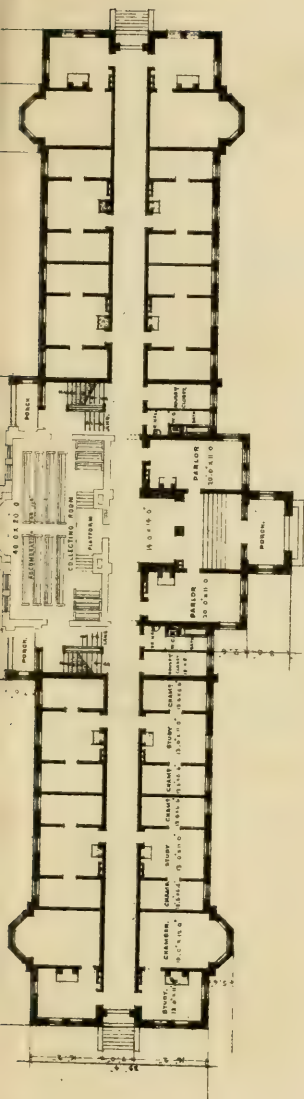
LD 2215

B2 H3

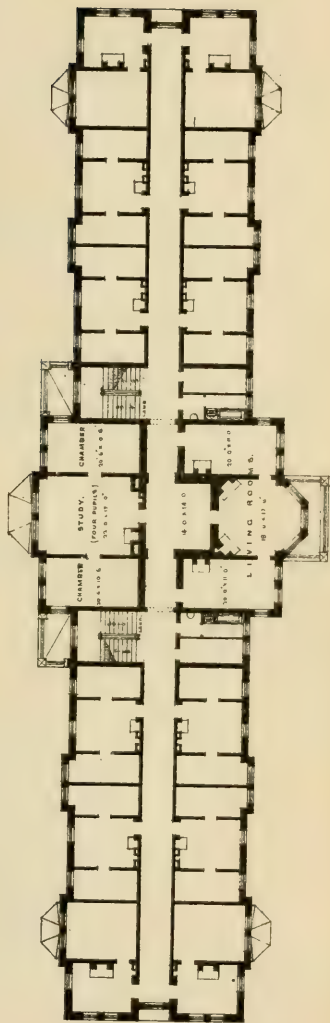
PROPOSED BUILDING AT HAVERFORD COLLEGE.



EASTERN ELEVATION.



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.





A

CATALOGUE

OF THE

Officers and Students

OF

HVERFORD COLLEGE,

FOR THE

ACADEMICAL YEAR

1875-76.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1876.

# Corporation.

---

*Secretary.*

EDWARD BETTLE, JR.

*Treasurer.*

DAVID SCULL, JR.

**MANAGERS.**

WISTAR MORRIS,	RICHARD WOOD,
T. WISTAR BROWN,	ROBERT B. HAINES,
JOSEPH W. TAYLOR, M.D.,	FRANCIS T. KING,
JAMES WHITALL,	WILLIAM R. THURSTON,
HUGH D. VAIL, A.M.,	GEORGE HOWLAND, JR., A.M.,
JAS. CAREY THOMAS, M.D.,	WILLIAM F. MOTT,
BENJAMIN V. MARSH,	CHARLES HARTSHORNE,
PHILIP C. GARRETT,	WILLIAM G. RHOADS,
WILLIAM C. LONGSTRETH,	JOHN B. GARRETT,
JAMES E. RHOADS, M.D.,	EDWARD BETTLE, JR.,
RICHARD CADBURY,	CHARLES ROBERTS,
DAVID SCULL, JR.,	JOHN S. HILLES,
JOEL CADBURY,	EDWARD L. SCULL.

*Secretary of the Board.*

JAMES WHITALL.

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**EXECUTIVE COMMITTEE.**

JOSEPH W. TAYLOR, M.D.,	JAMES E. RHOADS, M.D.,
HUGH D. VAIL, A.M.,	DAVID SCULL, JR.,
JAMES WHITALL.	

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Office, 109 North Tenth Street, Philadelphia.

A

CATALOGUE

OF THE

*Officers and Students*

OF

H A V E R F O R D C O L L E G E,

FOR THE

ACADEMICAL YEAR

1875-76.



PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1876.

# Corporation.

---

*Secretary.*

EDWARD BETTLE, JR.

*Treasurer.*

DAVID SCULL, JR.

## MANAGERS.

WISTAR MORRIS,	RICHARD WOOD,
T. WISTAR BROWN,	ROBERT B. HAINES,
JOSEPH W. TAYLOR, M.D.,	FRANCIS T. KING,
JAMES WHITALL,	WILLIAM R. THURSTON,
HUGH D. VAIL, A.M.,	GEORGE HOWLAND, JR., A.M.,
JAS. CAREY THOMAS, M.D.,	WILLIAM F. MOTT,
BENJAMIN V. MARSH,	CHARLES HARTSHORNE,
PHILIP C. GARRETT,	WILLIAM G. RHOADS,
WILLIAM C. LONGSTRETH,	JOHN B. GARRETT,
JAMES E. RHOADS, M.D.,	EDWARD BETTLE, JR.,
RICHARD CADBURY,	CHARLES ROBERTS,
DAVID SCULL, JR.,	JOHN S. HILLES,
JOEL CADBURY,	EDWARD L. SCULL.

*Secretary of the Board.*

JAMES WHITALL.

---

## EXECUTIVE COMMITTEE.

JOSEPH W. TAYLOR, M.D.,	JAMES E. RHOADS, M.D.,
HUGH D. VAIL, A.M.,	DAVID SCULL, JR.,
JAMES WHITALL.	

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Office, 109 North Tenth Street, Philadelphia.

## Faculty and Officers of Instruction.

---

THOMAS CHASE, A. M.,  
PRESIDENT,  
AND PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL ALSOP, JR., A. M.,  
SUPERINTENDENT,  
AND PROFESSOR OF PHYSICS AND ASTRONOMY.

---

JOHN H. DILLINGHAM, A. M.,  
PROFESSOR OF MORAL AND POLITICAL SCIENCE.

HENRY HARTSHORNE, M. D., A. M.,  
PROFESSOR OF PHYSIOLOGY AND HYGIENE.

PLINY E. CHASE, A. M.,  
PROFESSOR OF PHILOSOPHY AND LOGIC.

ISAAC SHARPLESS, S. B.,  
PROFESSOR OF MATHEMATICS AND MECHANICS.

EDWARD D. COPE, A. M.,  
LECTURER ON ZOOLOGY.

## Undergraduates.

### SENIOR CLASS.

NAMES.	RESIDENCE.
Allinson, Francis Greenleaf	Burlington, N. J.
Bispham, David Scull	Moorestown, N. J.
Colton, Reuben	Worcester, Mass.
Dudley, Henry Wilson	E. Vassalboro, Me.
Gifford, Seth Kelley	West Falmouth, Mass.
Haines, Francis Cope	Germantown, Pa.
Hobbs, Lewis Lyndon	New Garden, N. C.
Holme, Richard Henry	Salem, N. J.
Kimber, T. William	Germantown, Pa.
Longstreth, Charles Albert	Philadelphia, Pa.
Nicholson, John Whitall	Haddonfield, N. J.
Roberts, Percival, Jr.	Philadelphia, Pa.
Taylor, Frank H.	Cincinnati, Ohio.
Taylor, Lewis Alfred	Tecumseh, Mich.
Taylor, Howard Gardiner	Cinnaminson, N. J.

## JUNIOR CLASS.

NAMES.	RESIDENCE.
Anderson, Isaac W.	Bryn Mawr, Pa.
Baily, Frederic Lang	Philadelphia, Pa.
Forsythe, Isaac	Media, Pa.
Krider, James Delaplaine	Chester, Pa.
Thompson, John J.	Philadelphia, Pa.
Townsend, Wilson	Rahway, N. J.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Baily, Henry	Newport,	Pa.
Baily, Albert Lang	Philadelphia,	Pa.
Black, John Maris Lindsay	Bryn Mawr,	Pa.
Brown, Thomas Wistar, Jr.	Germantown,	Pa.
Carey, Francis King	Baltimore,	Md.
Comfort, Edward Thomas	Germantown,	Pa.
Crosman, Charles Sumner	Lynn,	Mass.
Gibbons, Edward	Wilmington,	Del.
Haines, Robert B., Jr.	Cheltenham,	Pa.
Hill, Samuel H.	Minneapolis,	Minn.
Paul, Joseph W.	Philadelphia,	Pa.
Reynolds, Lindley M. H.	Bush Hill,	N. C.
Smiley, Daniel, Jr.	Vassalboro,	Me.
Stokes, Henry Newlin	Philadelphia,	Pa.
Taylor, Henry Longstreet	Cincinnati,	Ohio.
Thomas, John M. W.	Baltimore,	Md.
White, George Wilson	Belvidere,	N. C.



## FRESHMAN CLASS.

NAMES.	RESIDENCE.	
Bispham, Samuel, Jr.	Philadelphia,	Pa.
Henderson, Francis	Philadelphia,	Pa.
Newkirk, John Bacon	Greenwich,	N. J.
Sheppard, John E.	Greenwich,	N. J.
*Phillips, John L.	Pittsburg,	Pa.

## SUMMARY.

Seniors . . . . .	15
Juniors . . . . .	6
Sophomores . . . . .	17
Freshmen . . . . .	5
Total . . . . .	43

\* Unclassified.

## Calendar.

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College Year, 1874-75, began* . . . . .	9th Mo. 8.
Winter Recess from 12th Mo. 22, 1875, to 1st Mo. 5,* 1876.	
Second Half-year begins . . . . .	2d Mo. 2, 1876.
Oration before the Loganian Society, 1876 . . . . .	4th Mo. 11.
Junior Exercises, 1876 . . . . .	4th Mo. 12.
Spring Recess, 1876, from 4th Mo. 12, to . . . . .	4th Mo. 26.*
Public Meeting of the Loganian Society, 1876 . . . . .	6th Mo. 26.
Address before the Alumni, 1876 . . . . .	6th Mo. 27.
Address to the Graduating Class, 1876 . . . . .	6th Mo. 27.
Commencement Day, 1876 . . . . .	6th Mo. 28.
Examinations for Admission, 1876 . . . . .	6th Mo. 28.

### VACATION OF TEN WEEKS.

Examinations for Admission, 1876 . . . . .	9th Mo. 5.
College Year, 1876-77, begins* . . . . .	9th Mo. 6

\* The first recitations are due promptly at *nine o'clock* at the beginning of each Term or Session. No absences from them are excused, unless clearly unavoidable.

## Requisites and Terms for Admission.

CANDIDATES for admission to the Freshman Class in the Classical Course, will be examined as to their proficiency in the following requisites:—

*Classics.\**—A familiar knowledge of the paradigms, and of the leading rules in Syntax, in Latin and Greek Grammar, to be tested, in part, by writing easy sentences in Latin and Greek.

Also, ability to give, after two hours' study—with the aid of a Lexicon—a literal translation of a passage *not before read* by the candidate, both in Latin and Greek prose or verse, equal in amount to fifty hexameter lines; and to apply the proper rules of Syntax to the constructions in that passage.

\* The following pronunciation may be recommended in preparatory schools. In Latin (as a near approximation to the ancient method), *ā* as in *father*, *ă* the same sound shorter (or as the first *a* in *papa*) *ē* like *a* in *fane*, *ĕ* as in *set*, *ī* as in *machine*, *ĭ* as in *sit*, *ō* as in *tone*, *ō* as in *domestic*, *u* as in Italian, *i. e.*, *ū* as in *rule* (or as *oo* in *moon*), *ū* as *oo* in *boot*, *y* like the French *u* (with the proper distinction as long or short), *ae* and *ai* like *ay*, the English adverb of affirmation, *au* like *ow* in *owl*, *oe* and *oi* nearly like *oi* in *spoil*, *ei* as in *eight*, *eu* like *ĕh-oo* rapidly spoken, *ua* when a diphthong, like *wah*, *ui* like the English *we*, *j* (i consonans) like *y* in *year*, *v* (u consonans) nearly like *w*, or like *ou* in the French word *oui*, *c* and *g* always hard as in *can* and *get*, *t* always simple or unsibilated, *s* as in *sin*, and *never* like *z* or *sh*, *z* nearly like *s*, *qu* as in English, *bs* like *ps*, *bt* like *pt*, *ch* like *k* followed by *h*; *icit*, *reicit*, as *ĕ-yicit*, *rĕ-yicit*.

In Greek, placing the *accent* always on the syllable which bears the printed accent sign, and giving *ā* the sound of *a* in *father*, *ă* the same sound short, *η* that of *a* in *fate*, *ε* that of *e* in *set*, *ι* that of *i* in *machine*, *ι* that of *i* in *sit*, *ω* that of *o* in *hole*, *ο* that of *o* in *nor*, *υ* that of *u* in French (with the proper distinction as long or short), *ου* that of *oo* in *moon*, *αυ* that of *ou* in *house*. If the teacher prefer, the probable ancient pronunciation of the diphthongs, as stated by Professor Sophocles, may be given.

It is important that students should be well trained in Greek and Latin *quantities* and *accents*.

A consistent use of the English method of pronunciation is better than a *half-way* application of the ancient.

Candidates are recommended to read the books of a preparatory course in Greek and Latin which are ordinarily prescribed in the requisitions for admission to American colleges; but this course may be varied at the discretion of teachers, provided the candidate is found to possess a sufficient knowledge of both languages to enable him to pursue, with facility and advantage, the studies of the Freshman year.

*Mathematics.*—Arithmetic, including the Metric System, Algebra, as far as Quadratic Equations, and the first two books in Davies's Legendre; or the equivalents for these books.

*English.*—Spelling, Grammar, Geography, and History of the United States; also, the leading facts of Greek and Roman History.

Candidates for admission to the Freshman Class in the Scientific Course will pass the same examination as candidates for the Classical Course, except in the Greek language. In Mathematics, some additional questions will be proposed.

Candidates found fully prepared for admission to the Freshman Class, and also in all the regular studies of the Freshman year, may be admitted to the Sophomore Class.

A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others, who are willing that their children should be educated in conformity with the principles of our religious Society."

Each candidate must present a certificate of good moral character from his last teacher.

No student is admitted for a period less than one year.

APPLICATIONS FOR ADMISSION must be made to the President, Thomas Chase, Haverford College P. O., Montgomery Co., Pa. Candidates will present themselves at the College, for examination by the Faculty, *at 12 o'clock on Commencement-day*, or *at 9 o'clock on the morning previous to the beginning of the college term* at which they desire to enter.

The price of Board and Tuition is \$425 00 per annum, payable one-half at the beginning, and one-half at the middle of the College year. Washing is charged at the rate of 75 cents per dozen.

*Well-prepared* candidates who cannot afford the full payment, but whose purpose is to make the best use of their opportunities, if admitted, are invited to make known their case to the President.

## Courses of Instruction.

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### CLASSICAL COURSE.

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#### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John.
  2. *Mathematics.* Euclid's Geometry.—Alsop's Algebra.—Plane Trigonometry.
  3. *Greek.* Selections from Greek Historians.—Homer.—Review of Greek Grammar.—Exercises in writing Greek.
  4. *Latin.* Livy (Chase).—Horace.—Review of Latin Grammar.—Exercises in writing Latin.
  5. *English Literature.* Cleveland's Compendium.—Hart's Rhetoric.—Compositions.
  6. *History.* Greek and Roman History.
  7. *Physical Geography.* Guyot's Earth and Man.
  8. *Zoology.* Tenney's.
  9. *Drawing.*
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#### SOPHOMORE CLASS.

1. *Scripture.* English New Testament.
2. *Mathematics.* Loomis's Trigonometry and Surveying, with Field Practice—Loomis's Spherical Trigonometry.

3. *Greek.* The Iliad or Odyssey of Homer.—Plato's Apology and Crito —The Prometheus of Æschylus.—Exercises in writing Greek.
4. *Latin.* Horace (Chase).—The Germania and Agricola of Tacitus.—Exercises in writing Latin.
5. *English.* March's Philological Study of the English Language.—Themes.
6. *Ethics.* Dymond's Essays on Morality.
7. *Political Economy.*
8. *History.* Mediæval and Modern History.
9. *Physics.* Loomis's Natural Philosophy.—Lectures.
10. *Chemistry.* Eliot and Storer's Chemistry.—Lectures.
11. *Botany.* Wood's or Gray's.
12. *Drawing.*

## JUNIOR CLASS.

1. *Scripture.* Greek Testament.
2. *Mathematics.* Analytical Geometry.—Differential and Integral Calculus.
3. *Astronomy.* Descriptive Astronomy (Loomis).
4. *Greek.* Thucydides.—The Antigone of Sophocles.—Exercises in writing Greek.
5. *Latin.* Juvenal.—Cicero's Tusculan Disputations and Somnium Scipionis (Chase).—Exercises in writing Latin.
6. *French.* Knapp's Grammar.—Fénelon's Télémaque.—Histoire de Charles XII.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately and Hamilton.
9. *Ethics.* Evidences of Christianity (Paley).
10. *Geology.* Dana.

11. *Political Science.* Kent's Commentaries on the Law of Nations, and American Law.—Frothingham's Rise of the Republic of the United States.—Forensics.
12. *Elocution.* Rehearsals for Public Exhibition.

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SENIOR CLASS.

1. *Scripture.* Greek Testament continued.
2. *Mathematics.* Analytical Mechanics.
3. *Astronomy.* Loomis's Practical Astronomy, with Practice in the Observatory.
4. *Greek.* Demosthenes on the Crown, or the Seven against Thebes of Æschylus.—Exercises in writing Greek.
5. *Latin.* The Captivi of Plautus.—Cicero's or Pliny's Letters.—The Ancient Pronunciation of Latin.—Latin Compositions.
6. *German.* Whitney's Grammar and Reader.—Exercises.
7. *Philology.* Whitney's Science of Language.—English Literature.
8. *Psychology.* Haven's Mental Philosophy.—Porter's Human Intellect.—Lectures.
9. *Christian Doctrines.* Gurney's Observations.—Barclay.
10. *Natural and Revealed Religion.* Butler's Analogy.
11. *History.* Guizot's History of Modern Civilization.—Arnold's Lectures on Modern History.
12. *Physics.* Acoustics, Optics, &c.—Lectures.
13. *Anatomy and Hygiene.* Lectures and Recitations.
14. *Elocution.* A Public Oration at Commencement.



## SCIENTIFIC COURSE.

## FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John.
2. *Mathematics.* Euclid's Geometry.—Alsop's Algebra.—Plane Trigonometry
3. *Latin.* Livy.—Horace.—Review of Latin Grammar.—Exercises in writing Latin.
4. *English Literature.* Cleveland's Compendium.—Hart's Rhetoric.—Compositions.
5. *History.* Greek and Roman History.
6. *Physics.* Loomis's Natural Philosophy.—Lectures.
7. *Chemistry.* Eliot and Storer.—Lectures.
8. *Physical Geography* Guyot's Earth and Man.
9. *Zoology.* Tenney's.
10. *Drawing.*

## SOPHOMORE CLASS.

1. *Scripture.* The New Testament.
2. *Mathematics.* Loomis's Trigonometry and Surveying, with Field Practice.—Loomis's Spherical Trigonometry.—Descriptive Geometry.
3. *Descriptive Astronomy.* Loomis's.
4. *French.* Knapp's Grammar.—Télémaque.—Histoire de Charles XII
5. *English.* March's Philological Study of the English Language.—Themes.
6. *Ethics.* Dymond's Essays on Morality.
7. *Political Economy.*
8. *History.*
9. *Chemistry* Laboratory Practice.
10. *Natural History.* Lectures.—Wood's or Gray's Botany.
11. *Mechanical Drawing.*

## JUNIOR CLASS.

1. *The Holy Scriptures.*
2. *Mathematics.* Analytical Geometry.—Differential and Integral Calculus.
3. *French.* Racine.—Sauveur's Entretiens sur la Grammaire.
4. *German.* Whitney's Grammar, Exercises, and Reader.
5. *Rhetoric.* Whately.
6. *Logic.* Whately and Hamilton.—Forensics.
7. *Ethics.* Evidences of Christianity (Paley).
8. *Constitutional Law.* Kent.
9. *Chemistry.* Qualitative and Quantitative Analysis.—Laboratory Practice.
10. *Geology and Mineralogy.* Dana.
11. *Physics.* Acoustics.—Optics —Meteorology.
12. *Elocution.* Rehearsals for Public Exhibition.

## SENIOR CLASS.

## REQUIRED STUDIES.

1. *The Holy Scriptures.*
2. *Mathematics.* Analytical Mechanics.
3. *Practical Astronomy.* Loomis's, with practice in the Observatory.
4. *German.* Whitney's Reader.—Schiller's Wilhelm Tell.—Grammar and Exercises.
5. *Psychology.* Haven.
6. *Christian Doctrine.* Gurney's Observations.—Barelay.
7. *Natural and Revealed Religion.* Butler's Analogy.
8. *History.* Guizot's History of Modern Civilization.—Arnold's Lectures on Modern History.
9. *Anatomy and Hygiene.* Lectures and Recitations.
10. *Elocution.* A Public Oration at Commencement.

## ELECTIVE STUDIES.

*(Recitations for three hours per week to be selected.)*

1. *Mathematics.* Quaternions. (*Two hours a week.*)
2. *Physics*, with Lectures, and Laboratory Practice. (*Three hours the first half year.*)
3. *Engineering*, with *Drawing*, and other Exercises. (*Three hours the second half year.*)
4. *International Law.* Kent. (*Two hours a week the first Term.*)
5. *Anglo-Saxon.* March's Reader. (*One hour a week the first Term.*)
6. *Psychology.* Porter's Human Intellect. (*Two hours a week the second and third Terms.*)
7. *History.* Hallam's Constitutional History. (*One hour a week the second and third Terms.*)

## ELECTIVE STUDIES IN THE CLASSICAL COURSE.

On and after Ninth month 6th, 1876, the following studies will be elective in the Classical Course:—

## JUNIOR YEAR.

*(Recitations for three hours per week to be selected.)*

1. *Mathematics.* Differential and Integral Calculus. (*Three hours a week in the second and third Terms.*)
2. *Physical Science.* Qualitative and Quantitative Analysis, with Laboratory Practice.—Mineralogy. (Or any other scientific course which can be pursued in the hours left for elective studies.) *Three hours a week in the first Term.*

3. *International Law.* Kent. (*Two hours a week the first Term.*)
4. *Anglo-Saxon.* March's Reader. (*One hour a week the first Term.*)
5. *German.* Whitney's Grammar, Reader, and Exercises. (*Three hours a week the second and third Terms.*)

## SENIOR YEAR.

(*Four hours per week to be selected, or five hours, if French is one of the studies chosen.*)

1. *Mathematics.* Quaternions. (*Two hours a week.*)
2. *Mechanics.* (*Two hours a week.*)
3. *Practical Astronomy.* Loomis's, with Practice in the Observatory. (*Two hours a week.*)
4. *Greek.* (*Two hours a week*)
5. *French.* (*Three hours a week.*)
6. *Psychology.* Porter's Human Intellect. (*Two hours a week the second and third Terms.*)
7. *History.* Hallam's Constitutional History. (*Two hours a week the second and third Terms.*)
8. *Physics.* Acoustics. — Optics. — Meteorology. — Lectures. (*Two hours a week.*)

## Lectures.

THE Courses of Lectures for the year 1875-76, are as follows:—

### TO THE WHOLE COLLEGE.

<i>The Preservation of Health</i> . . . . .	PROFESSOR HARTSHORNE.
<i>Zoology</i> . . . . .	PROFESSOR COPE.
<i>Modern Scientific Investigations and Theories</i> . . . . .	} PROFESSOR P. E. CHASE.
<i>English Literature</i> . . . . .	

### TO THE SENIOR CLASS.

<i>Hygiene</i> . . . . .	PROFESSOR HARTSHORNE.
<i>Hamilton's Metaphysics</i> . . . . .	PROFESSOR P. E. CHASE.
<i>Physics</i> . . . . .	PROFESSOR ALSOP.

### TO THE JUNIOR CLASS.

<i>Hamilton's System of Logic</i> . . . . .	PROFESSOR P. E. CHASE.
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### TO THE SOPHOMORE CLASS.

<i>Nat. Philosophy and Chemistry</i> . . . . .	PROFESSOR ALSOP.
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## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

There are private examinations of each class, in writing, in the studies of the year, all of which must be passed satisfactorily before a student can be advanced to the next higher class, or receive, finally, the degree of Bachelor of Arts. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and a set of questions is furnished them upon some book or subject in the course, which each student is required to answer in writing, without consulting any person or book. The time of writing, for the

examination in each book, is limited to three hours. The questions are upon topics and passages selected throughout the text-books, and are calculated to test as accurately as possible the student's knowledge of the whole subject. *Orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least six, on a scale of ten, in the examination upon each book, and an average of six and two-thirds on all the books combined, before he can be advanced to the next higher class, or receive the diploma of Bachelor of Arts. *But no student is entitled to such advancement, whatever his numbers or rank, unless, in the private judgment of all his instructors and caretakers, he has been faithful in his daily studies, and satisfactory in his character and conduct.*

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

*Special* written examinations are occasionally held, as means of mental training.

## Degree of Master of Arts.

GRADUATES of three years' standing may take the degree of Master of Arts, on submitting to the Executive Committee satisfactory evidence of continued good moral character, and passing an Examination on some literary or scientific Course of Study, which shall receive the approbation of the Faculty and Managers. As it is designed that this degree shall represent real and solid attainments in scholarship, the results of the Examination must exhibit sufficient research, thought, and ability, to attest substantial desert on the part of the applicant.

The following are stated as adequate Courses of Study to be presented by candidates for the Degree:—

- I. The Pauline Epistles in Greek (with Winer's or Buttman's N. T. Grammar, and Scrivener's Introduction).
- II. The whole of Thucydides.
- III. Seven Tragedies of Æschylus, Sophocles, or Euripides.
- IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.
- V. The whole of Tacitus.
- VI. Schiller's History of the Thirty Years' War, and Wallenstein (all the parts), in the original German.
- VII. The Nicomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.
- VIII. The works of Faraday and Tyndall.
- IX. Theoretical Astronomy.

Notice of application for examination must be given two months before Commencement. The examinations will be held the first week in the Sixth month. The fee for the diploma is Twenty Dollars, to be paid before Commencement-day.

## Prize for Excellence in Composition and Oratory.

THE Association of the Alumni have this year instituted an ANNUAL PRIZE of a Gold Medal, of the value of Eighty-five Dollars, for Excellence in Composition and Oratory. The competition is confined to members of the Senior and Junior Classes, and is made before Five Judges, appointed by a Committee of the Alumni. The successful competitor will deliver his Oration publicly on the evening of Alumni Day, the President of the Association awarding the Prize.



## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eyepieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

The latitude of the Observatory is  $40^{\circ} 0' 36''.5$  N.; its longitude,  $5^{\text{h}} 1^{\text{m}} 12^{\text{sec}} .75$  W. from Greenwich.

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## Library and Apparatus.

THE number of bound volumes in the Library Hall, accessible to the members of the College, is 10,407. Of these, the LIBRARY OF HAVERFORD COLLEGE contains 6913 volumes; that of the Loganian Society 2217; those of other societies 1277. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By liberal contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a gift from generous Friends in England—a copy of the imperial edition of the *CODEx SINAITICUS*, published



by the Emperor of Russia, and Woidé's edition of the *CODEX ALEXANDRINUS*. To these have been added, by donation and purchase, the Roman edition of the *CODEX VATICANUS*, and Tischendorf's edition of the same *CODEX*. The Library thus contains copies, nearly in fac-simile, of the most ancient known manuscript-authorities for the genuine text of the New Testament.

It is arranged that the Library shall present to the students every convenience for usefulness, by the free use of it as a reading-room several hours daily, and by unrestrained consultation of the volumes in the alcoves.

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

The large MINERALOGICAL COLLECTION of the late Dr. Troost, containing about 2700 specimens, occupies the cases in the Collection Room. The GEOLOGICAL CABINET comprises about 2500 specimens, and contains complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

In the rear of the Lecture and Apparatus Rooms is a well-furnished LABORATORY.

A valuable set of elastic models made by Auzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the entire human body, and of other interesting subjects in ZOOLOGY, COMPARATIVE ANATOMY, and BOTANY; also, a collection of plaster models of FOSSIL SPECIES in Natural History, made by Professor Ward, of Rochester, have been presented to the College by Richard Wood.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The

Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 2217 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction, and a CARPENTER'S SHOP belongs to the Society.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 1277 volumes.

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## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, near the Pennsylvania Railroad, nine miles west of Philadelphia. Address HAVERFORD COLLEGE P. O., Montgomery County, Pa. The buildings are situated on a lawn of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. All the students board at the College.

A new College Hall, furnishing additional and improved accommodations for private studies and dormitories, will be completed before the end of the present year.

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## Instruction and Discipline.

THE Courses of Instruction at Haverford, aiming at thorough and generous training, retain the standard studies proved by long experience to be most fruitful in mental culture, but give them no undue preponderance, and add to them those scientific and practical studies which are adapted to the special wants of our times.

As the students form one household, their Religious Instruction is carefully provided for. In addition to the daily

readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Paley's Evidences, Butler's Analogy, Dymond's Ethics, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

In the Discipline of the College, the Officers endeavor to promote habits of order and regularity. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.

## Graduates.

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1836.

Thomas F. Cock, M.D.  
Joseph Walton.

1837.

William C. Longstreth.  
David C. Murray.  
Lindley Murray.  
Benjamin V. Marsh.  
\*Joseph L. Pennock, \*1870.  
Robert B. Parsons.  
Charles L. Sharpless.  
Lloyd P. Smith, A.M.  
\*B. Wyatt Wistar, \*1869.

1838.

James V. Emlen, M.D.  
John Elliott.

1839.

Frederick Collins.  
Thomas P. Cope.  
Henry Hartshorne, M.D., A.M.  
Nereus Mendenhall, M.D.  
Richard Randolph, Jr., M.D.  
Charles Taber.

1840.

Joseph Howell.  
Anthony M. Kimber.  
\*Henry H. G. Sharpless.  
\*John R. Winslow, M.D., \*1866.

1841.

\*Richard H. Lawrence.  
\*James P. Perot, \*1872.  
\*Elias A. White, \*1866.

1842.

Robert Bowne.  
Richard Cadbury.  
William S. Hilles.  
Thomas Kimber, Jr.  
James J. Levick, M.D.  
Edmund Rodman.  
Thomas Rodman.  
Benjamin R. Smith.  
Augustus Taber.  
Caleb Winslow, M.D.

1843.

Robert B. Howland.  
Francis White.  
William D. Stroud, M.D.

1844.

Evan T. Ellis.  
Robert B. Haines.  
Isaac Hartshorne.

1845.

Edmund A. Crenshaw.  
\*Robert Pearsall.

1849.

Albert K. Smiley, A.M.  
Alfred H. Smiley, A.M.

1851.

Joseph L. Bailey.  
Philip C. Garrett.  
Thomas J. Levick.  
Franklin E. Paige, A.M.  
Zaccheus Test, M.D., A.M.  
James C. Thomas, M.D.  
Richard Wood.

1852.

Dougan Clark, M.D.  
 Lewis N. Hopkins.  
 William L. Kinsman.  
 William E. Newhall.  
 James Whittall.

1853.

William B. Morgan, A.M.  
 William H. Pancoast, M.D.

1854.

Frederick Arthur, Jr.  
 John W. Cadbury.  
 John B. Garrett.  
 David Scull, Jr.

1855.

\*Samuel Bettle, \*1859.  
 John R. Hubbard, A.M.

1856.

Bartholomew W. Beesley.  
 Joel Cadbury, Jr.  
 Jonathan J. Comfort, M.D.  
 \*James M. Walton, \*1874.  
 Edward R. Wood, A.M.

1857.

Jesse S. Cheyney, A.M.  
 \*Cyrus Mendenhall, \*1858.  
 Stephen Wood.

1858.

Thomas H. Burgess.  
 Thomas Clark.  
 Daniel W. Hunt.  
 \*Samuel T. Satterthwaite, \*1865.  
 William G. Tyler.  
 Thomas Wistar, A.M., M.D.  
 Ellis H. Yarnall, LL.B.

1859.

\*Richard W. Chase, \*1862.  
 James R. Magee.  
 \*Richard C. Paxson, \*1864.  
 \*Edward Rhoads, M.D., \*1871.  
 Edward C. Sampson.  
 \*George Sampson, \*1872.  
 Abram Sharples, M.D.  
 Benjamin H. Smith.

1860.

\*Lindley M. Clark, \*1861.  
 William B. Corbit, M.D.  
 William M. Corlies.  
 Cyrus Lindley.  
 Theodore H. Morris.  
 Frederick W. Morris.  
 Richard Pancoast.  
 John W. Pinkham, M.D.  
 Francis Richardson.  
 Clement L. Smith, A.M.  
 James Tyson, M.D., A.M.  
 Silas A. Underhill, LL.B.

1861.

Edward Bettle.  
 Henry Bettle.  
 Charles Bettle.  
 William B. Broomall.  
 Charles H. Jones.  
 Thomas W. Lamb, A.M., M.D.  
 William N. Potts.  
 Jehu H. Stuart, A.M., M.D.  
 John C. Thomas.

1862.

Henry T. Coates.  
 \*Samuel A. Hadley, \*1864.  
 George B. Mellor.  
 Horace Williams, M.D.  
 Isaac F. Wood.

1863.

Thomas J. Battey.  
 George M. Coates, Jr., A.M.  
 William M. Coates.  
 \*Richard T. Jones, \*1869.  
 William H. Morris.  
 Joseph G. Pinkham, M.D., A.M.

1864.

Franklin Angell, A.M.  
 William Ashbridge, M.D.  
 Edward H. Coates.  
 Howard M. Cooper, A.M.  
 Albin Garrett.  
 Morris Longstreth, M.D., A.M.  
 Albert Pancoast.  
 Charles Roberts.  
 Elijah P. Sampson.

Edward L. Scull.  
Randolph Wood.

1865.

John R. Bringhurst.  
Edward T. Brown.  
James A. Chase.  
Joseph M. Downing.  
Arthur Haviland.  
\*David H. Nichols, \*1865.  
Henry W. Sharpless.  
\*George Smith, Jr., \*1872.  
Robert B. Taber, A.M.  
Allen C. Thomas.  
Benjamin A. Vail.  
Caleb Cresson Wistar.

1866.

Aaron M. Elliott.  
Benjamin E. Valentine, LL.B.

1867.

John Ashbridge.  
George Ashbridge, A.M.  
William P. Clark, A.M., LL.B.  
Samuel C. Collins, A.M.  
Nathaniel B. Crenshaw.  
Charles H. Darlington, A.M.  
\*Wm. T. Dorsey, M.D., \*1870.  
B. Franklin Eshleman.  
Richard M. Jones.  
Charles W. Sharpless.  
Walter Wood.

1868.

Edward H. Cook.  
Alexis T. Cope.  
Benjamin C. Satterthwaite.  
Louis Starr, M.D.  
S. Finley Tomlinson.  
Joseph H. Wills, A.M.

1869.

Johns H. Congdon.  
Henry Cope.  
Ludovic Estes.  
Henry Eval, A.M.  
William B. Kaighn.  
Pendleton King, A.M.  
William H. Randolph.

Edward B. Taylor, M.C.E.  
William S. Taylor.  
James G. Whitlock.  
Walter Wood.  
Henry Wood.

1870.

J. Stuart Brown.  
John E. Carey.  
Alford G. Coale.  
Howard Comfort.  
T. Allen Hilles.  
William Harrison Hubbard.  
Thomas K. Longstreth, A.M.  
Oliver G. Owen, A.M.  
Charles E. Pratt.  
David F. Rose.  
John D. Steele.  
Charles Wood, A.M.  
Stuart Wood, Ph.D.

1871.

Henry G. Brown.  
William P. Evans.  
John S. Garrigues.  
Reuben Haines.  
William H. Haines.  
Joseph Hartshorne.  
Jesse F. Hoskins.  
Walter T. Moore.  
Ellis B. Reeves.  
Alfred R. Roberts.  
Charles S. Taylor.  
Edward D. Thurston.  
Randolph Winslow, M.D., A.M.

1872.

Richard Ashbridge, M.D.  
Richard T. Cadbury.  
James Carey, Jr., LL.B.  
Thomas S. Downing, Jr.  
Walter Erben.  
Thomas Rowland Estes  
William H. Gibbons, A.M.  
Francis B. Gummere, A.M.  
Caspar Wistar Haines, C.E.  
Abram Francis Huston.  
Marmaduke Cope Kimber.  
William M. Longstreth.  
Richard H. Thomas, M.D.

1873.

James C. Comfort.  
 Thomas P. Cope.  
 George W. Emlen.  
 Joseph M. Fox.  
 Henry C. Haines.  
 Benjamin H. Lowry.  
 Alden Sampson, Jr.  
 Julius L. Tomlinson.

1874.

Edward P. Allinson,  
 John G. Bullock.  
 James Emlen.  
 Charles R. Hartshorne.  
 Samuel E. Hilles.  
 John B. Jones.

Mahlon Kirkbride.  
 Theophilus P. Price.  
 James B. Thompson.  
 Joseph Trotter.

1875.

Edward K. Bispham.  
 Alonzo Brown.  
 J. Franklin Davis.  
 Charles E. Haines.  
 William Hunt, Jr.  
 Charles L. Huston.  
 Harold P. Newlin.  
 Walter W. Pharo.  
 Charles E. Tebbetts.  
 Miles White, Jr.

Whole number of Graduates, 242.

## Honorary Degrees.

1858.

Hugh D. Vail, A.M.

1859.

\*Joseph W. Aldrich, A.M., \*1865.

1860.

John G. Whittier, A.M.

1864.

Edward D. Cope, A.M.

1867.

Joseph Moore, A.M.

1872.

William Jacobs, A.M.

1875.

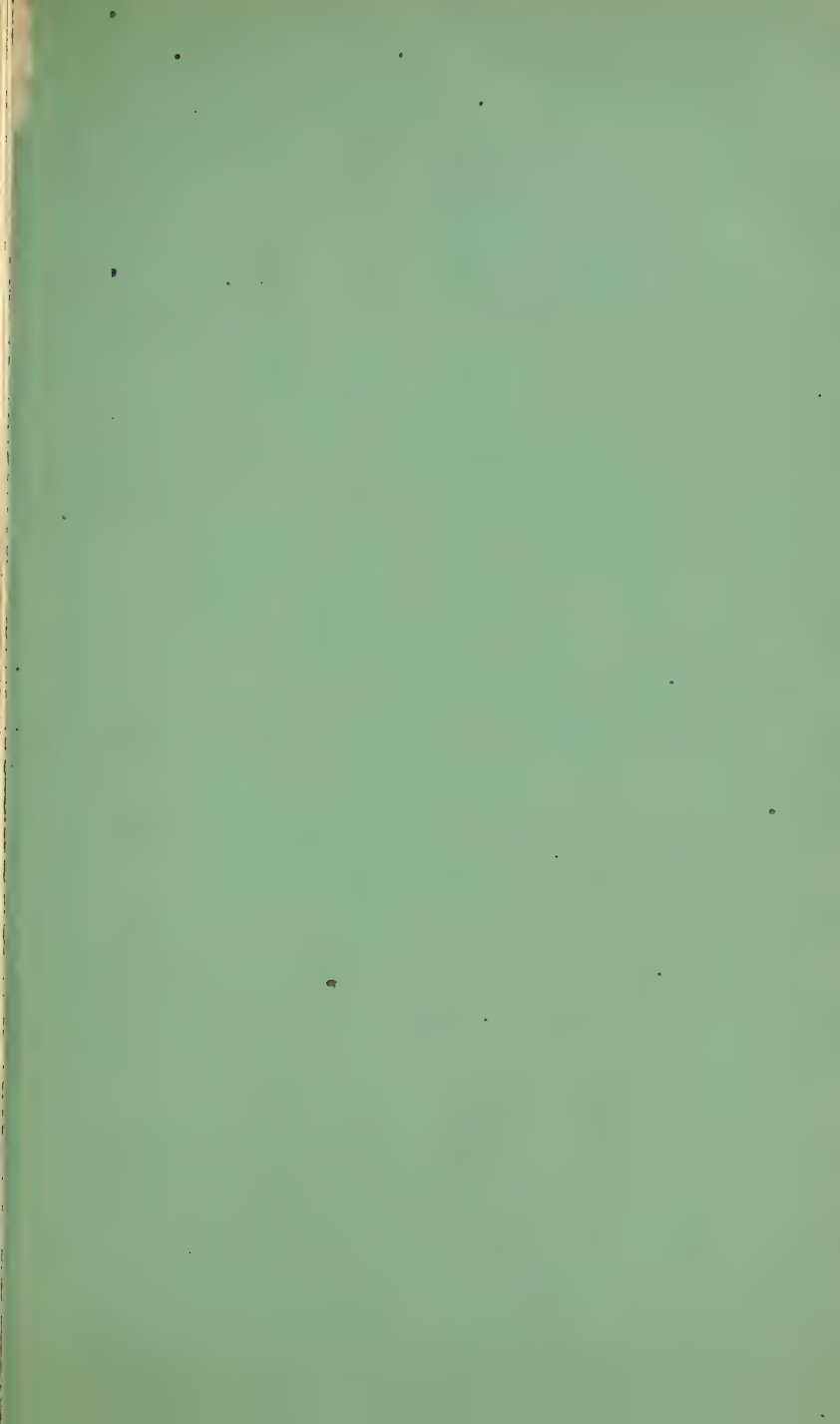
Samuel Alsop, Jr., A. M.













A  
CATALOGUE  
OF THE  
*Officers and Students*  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1876-77.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1877.



A  
CATALOGUE  
OF THE  
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1876-77.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1877.

# Corporation.

---

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EDWARD BETTLE, J R.

*Treasurer.*

DAVID SCULL, J R.,  
125 Market Street, Philadelphia.

## MANAGERS.

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T. WISTAR BROWN,	ROBERT B. HAINES,
JOSEPH W. TAYLOR, M.D.,	FRANCIS T. KING,
JAMES WHITALL,	WILLIAM R. THURSTON,
HUGH D. VAIL, A.M.,	GEORGE HOWLAND, JR., A.M.,
JAS. CAREY THOMAS, M.D.,	WILLIAM F. MOTT,
BENJAMIN V. MARSH,	CHARLES HARTSHORNE,
PHILIP C. GARRETT,	WILLIAM G. RHOADS,
WILLIAM C. LONGSTRETH,	JOHN B. GARRETT,
JAMES E. RHOADS, M.D.,	EDWARD BETTLE, JR.,
RICHARD CADBURY,	CHARLES ROBERTS,
DAVID SCULL, JR.,	EDWARD L. SCULL,
JOEL CADBURY,	CHARLES S. TAYLOR.

*Secretary of the Board.*

JAMES WHITALL.

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## EXECUTIVE COMMITTEE.

JOSEPH W. TAYLOR, M.D.,	JAMES E. RHOADS, M.D.,
HUGH D. VAIL, A.M.,	DAVID SCULL, JR.,
JAMES WHITALL,	EDWARD L. SCULL.



## Faculty and Officers of Instruction.

---

THOMAS CHASE, A.M.,

PRESIDENT,

AND PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL ALSOP, JR., A.M.,

SUPERINTENDENT,

AND PROFESSOR OF PHYSICS AND ASTRONOMY.

JOHN H. DILLINGHAM, A.M.,

PROFESSOR OF MORAL AND POLITICAL SCIENCE.

PLINY E. CHASE, LL.D.,

PROFESSOR OF PHILOSOPHY AND LOGIC.

ISAAC SHARPLESS, S.B.,

PROFESSOR OF MATHEMATICS AND CHEMISTRY

THOMAS E. TAYLOR, A.B.,

ASSISTANT SUPERINTENDENT,

AND ASSISTANT PROFESSOR.

EDWARD D. COPE, A.M.,

LECTURER ON ZOOLOGY.

## Undergraduates.

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### SENIOR CLASS.

NAMES.

RESIDENCE.

#### CLASSICAL SECTION.

Anderson, Isaac W.	Bryn Mawr,	Pa.
Baily, Frederic Lang	Philadelphia,	Pa.
Forsythe, Isaac	Media,	Pa.
Krider, James Delaplaine	Chester,	Pa.
Mercer, George Gluyas	Philadelphia,	Pa.
Townsend, Wilson	Rahway,	N. J.

#### SCIENTIFIC SECTION.

Smith, William Foulke	Pennsville,	Ohio.
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## JUNIOR CLASS.

## CLASSICAL SECTION.

Baily, Henry	Newport,	Pa.
Baily, Albert Lang	Philadelphia,	Pa.
Carey, Francis King	Baltimore,	Md.
Comfort, Edward Thomas	Germantown,	Pa.
Crosman, Charles Sumner	Lynn,	Mass.
Hill, Samuel H.	Minneapolis,	Minn.
Reynolds, Lindley M. H.	Bush Hill,	N. C.
Smiley, Daniel, Jr.	Vassalboro,	Me.
Taylor, Henry Longstreet	Cincinnati,	Ohio.
Thomas, J. M. Whitall	Baltimore,	Md.
White, George Wilson	Belvidere,	N. C.

## SCIENTIFIC SECTION.

Haines, Robert B., Jr.	Cheltenham,	Pa.
Stokes, Henry Newlin	Moorestown,	N. J.

## SOPHOMORE CLASS.

NAMES.	RESIDENCE.	
Beezley, James	Earlham,	Iowa.
Bispham, Samuel, Jr.	Philadelphia,	Pa.
Gibbons, Edward	Wilmington,	Del.
Gifford, John Henry	West Falmouth, Mass.	
Henderson, Francis	Germantown,	Pa.
Lowry, William C.	Philadelphia,	Pa.
Newkirk, John Bacon	Greenwich,	N. J.
Sheppard, John E.	Greenwich,	N. J.

## FRESHMAN CLASS.

## CLASSICAL SECTION.

Bachman, Frank Eshleman	Strasburg,	Pa.
Cope, Francis Hazen	Germantown,	Pa.
Cox, Charles Elwood	Lawrence,	Kan.
Edwards, Josiah Pennington,	Spiceland,	Ind.
Lynch, James Lewis	Longwood,	Mo.
Mason, Samuel, Jr.	Germantown,	Pa.
Schively, Edwin Ford	Germantown,	Pa.
Whitall, John M., Jr.	Germantown,	Pa.
White, Thomas Newby	Belvidere,	N. C.

## SCIENTIFIC SECTION.

Bines, David Adams	Philadelphia,	Pa.
Corbit, Alexander P.	Odessa,	Del.
Hill, Mahlon Patterson	Mt. Pleasant,	Ohio.
Phillips, John L.	Pittsburg,	Pa.
Roberts, J. R. Evans	Philadelphia,	Pa.

## SUMMARY.

Seniors . . . . .	7
Juniors . . . . .	13
Sophomores . . . . .	8
Freshmen . . . . .	14
Total . . . . .	<hr/> 42

## Calendar.

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College Year, 1876-77, began with the beginning of the Autumn Term, 1876 . . . . .	9th Mo. 6.
Winter Recess began . . . . .	12th Mo. 20.
Winter Term begins,* 1877 . . . . .	1st Mo. 3.
Second Half-year begins . . . . .	2d Mo. 28.
Oration before the Loganian Society . . . . .	4th Mo. 10.
Junior Exercises . . . . .	4th Mo. 11.
Spring Recess begins . . . . .	4th Mo. 11.
Spring Term begins* . . . . .	4th Mo. 25.
Public Meeting of the Loganian Society . . . . .	6th Mo. 25.
Address before the Alumni . . . . .	6th Mo. 26.
Address to the Graduating Class . . . . .	6th Mo. 26.
Commencement Day . . . . .	6th Mo. 27.
Examinations for Admission . . . . .	6th Mo. 27.

### VACATION OF TEN WEEKS.

Examinations for Admission . . . . .	9th Mo. 4.
College Year, 1877-78, begins* . . . . .	9th Mo. 5.
Winter Recess begins . . . . .	12th Mo. 20.

\* The first recitations are due promptly at *nine o'clock* at the beginning of each Term. No absences from them are excused, unless clearly unavoidable

## Requisites and Terms for Admission.

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CANDIDATES for admission to the Freshman Class in the Classical Course, will be examined as to their proficiency in the following requisites:—

*Classics.*—A familiar knowledge of the paradigms, and of the leading rules in Syntax, in Latin and Greek Grammar, to be tested, in part, by writing easy sentences in Latin and Greek; acquaintance with Prosody, to be proved by scanning verses from Virgil; and ability to give, after an hour's study—with the aid of a Lexicon—a literal translation of a passage *not before read* by the candidate, both in Latin and Greek prose or verse, equal in amount to fifty hexameter lines, and to apply the proper rules of Syntax to the constructions in that passage.

Candidates are recommended to read the books of a preparatory course in Greek and Latin which are ordinarily prescribed in the requisitions for admission to American colleges; but this course may be varied at the discretion of teachers, provided the candidate is found to possess a sufficient knowledge of both languages to enable him to pursue, with facility and advantage, the studies of the Freshman year.

*Mathematics.*—Arithmetic, including the Metric System, Algebra, as far as Quadratic Equations, and some introductory knowledge in Geometry, gained from the first two books in Playfair's Euclid, or their equivalents.

*English.*—Spelling, Grammar, English Composition, Geography, and the History of the United States. (The examinations in these subjects will be regarded as of no less weight than those in classics and mathematics.)

Candidates for admission to the Freshman Class in the SCIENTIFIC COURSE will pass the same examination as candidates for the Classical Course, except in the Greek language.

Satisfactory examination-papers written under proper supervision at first-class schools, and forwarded to us by the teachers, will be accepted so far as they cover the same ground as our own requisitions.

Students not candidates for a Degree may, at the discretion of the Faculty, be admitted to pursue special courses, for proficiency in which certificates may be granted; but this permission shall be given only to students of sufficient age, ability, and diligence to ensure their success.

Candidates found fully prepared for admission to the Freshman Class, and also in all the regular studies of the Freshman year, may be admitted to the Sophomore Class.

A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others who are willing that their children should be educated in conformity with the principles of our religious Society."

Each candidate must forward, together with his application, a certificate of good moral character from his last teacher; and students from other colleges must present also certificates of honorable dismission in good standing.

No student is admitted for a period less than one year.

APPLICATIONS FOR ADMISSION must be made to the President, THOMAS CHASE, Haverford College P. O., Montgomery Co., Pa. Candidates will present themselves at the College, for examination by the Faculty, at 12 o'clock on Commence-



*ment-day, or at 9 o'clock on the morning previous to the beginning of the college term at which they desire to enter.*

The price of Board and Tuition is \$425.00 per annum, payable one-half at the beginning, and one-half at the middle of the College year. Washing is charged at the rate of 75 cents per dozen.

For day-students, who dine at the College, the annual charge is \$250.00.

## Courses of Instruction.

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NOTE.—The number of hours per week allotted to each subject may be somewhat modified, if it be found necessary, in order to do equal justice to the different studies pursued.

### CLASSICAL COURSE.

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#### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John. 1 hour a week.
2. *Mathematics.* Euclid's Geometry.—Alsop's Algebra.—Loomis's Plane Trigonometry. 4 hours a week.
3. *Greek.* Selections from Greek Historians.—Homer.—Review of Greek Grammar.—Exercises in writing Greek. 3 hours a week.
4. *Latin.* Livy (Chase).—Horace (Chase).—Review of Latin Grammar.—Exercises in writing Latin. 4 hours a week.
5. *English Literature.* Cleveland's Compendium.—Hart's Rhetoric.—Compositions.
6. *History.* Smith's History of Greece.—Liddell's History of Rome. Subjects 5 and 6, 2 hours a week.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Tenney's.
9. *Botany.* Wood or Gray. Subjects 7, 8, and 9, 2 hours a week.
10. *Drawing.* White's Art Studies. 1 hour a week.

## SOPHOMORE CLASS.

1. *Scripture.* English New Testament. 1 hour a week.
2. *Mathematics.* Loomis's Trigonometry and Surveying, with Field Practice — Loomis's Spherical Trigonometry. 3 hours a week the first half year, 2 hours the second.
3. *Greek.* The Iliad or Odyssey of Homer.—Plato's Apology and Crito.—The Prometheus of Æschylus.—Exercises in writing Greek. 3 hours a week.
4. *Latin.* Horace (Chase).—The Germania and Agricola of Tacitus.—Exercises in writing Latin. 3 hours a week.
5. *Ethics and Christian Evidences.* Dymond's Essays on Morality.—Paley's Evidences of Christianity.
6. *Political Economy.* Wayland and Thompson.
7. *History.* Freeman's Outlines, or an equivalent. Subjects 5, 6, and 7, 3 hours a week.
8. *Physics.* Loomis's Natural Philosophy.—Lectures. 3 hours a week the first half year.
9. *Chemistry.* Eliot and Storer's Chemistry.—Lectures. 3 hours a week the second half year.
10. *Geology.* Dana's Text-book. 1 hour a week the second half year.
11. *Drawing.* White's Art Studies. 1 hour a week.

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 JUNIOR CLASS.

## REQUIRED STUDIES.

1. *Scripture.* Greek Testament (Westcott and Hort, or Tischendorf's 8th edition). 1 hour a week.
2. *Mathematics.* Analytical Geometry. 3 hours a week the first half year.

3. *Astronomy.* Descriptive Astronomy (Herschel and Loomis). 3 hours a week the second half year.
4. *Greek.* Thucydides.—The Antigone of Sophocles.—Exercises in writing Greek. 2 hours a week.
5. *Latin.* Chase's Selections from Juvenal.—Cicero's Tusculan Disputations and Somnium Scipionis (Chase).—Exercises in writing Latin. 2 hours a week.
6. *French.* Knapp's Grammar.—Fénelon's *Télémaque*.—*Histoire de Charles XII.*—Exercises. 2 hours a week.
7. *Rhetoric.* Whately's Rhetoric.
8. *Logic.* Whately and Hamilton.
9. *Psychology.* Haven's Mental Philosophy (begun).
10. *Political Science.* Kent's Commentaries on American Law.—Constitution of the United States.—Forensics. Subjects 7, 8, 9, and 10, 3 hours a week.
11. *Geology.* Dana's Text-book (finished).
12. *Elocution.* Rehearsals for Public Exhibition.

## ELECTIVE STUDIES.

(Two hours a week to be selected.)

1. *Descriptive Geometry and Drawing.* 2 hours a week.
2. *Political Science.* Kent's Commentaries on the Law of Nations, and Municipal Law.
3. *Anglo-Saxon.* Subjects 2 and 3, together, 2 hours a week the first half year.
4. *Chemistry.* Qualitative Analysis.—Laboratory Practice. 2 hours a week the first half year.
5. *Mathematics.* Loomis's Differential and Integral Calculus. 2 hours a week the second half year.
6. *German.* Whitney's Grammar, Exercises, and Reader. 3 hours a week the second half year, counting as 2 hours.

## SENIOR CLASS.

## REQUIRED STUDIES.

1. *Scripture.* Greek Testament continued. *1 hour a week.*
2. *Latin; and Classical Literature.* The Captivi of Plautus.—Cicero's Letters.—Pliny's Letters.—The Ancient Pronunciation of Latin.—Latin Compositions.—History of the Literatures of Greece and Rome. *Two hours a week.*
3. *German.* Whitney's Grammar, Reader, and Exercises. (Required, in lieu of one of the elective studies, of those members only of the Senior Class who have not previously studied German.) *3 hours a week the second half year, counting as two hours.*
4. *Psychology.* Haven continued.—Porter's Human Intellect.—Lectures.
5. *Philology.* Whitney's Science of Language. Subjects 4 and 5, *3 hours a week the first half year.*
6. *Natural and Revealed Religion.* Butler's Analogy.
7. *Christian Doctrines.* Barclay and Gurney.
8. *English.* March's Philological Study, or an equivalent.—Themes. Subjects 6, 7, and 8, *2 hours a week.*
9. *History.* Hallam's Constitutional History of England.—Guizot's History of Modern Civilization.—Arnold's Lectures on Modern History. *2 hours a week.*
10. *Anatomy, Physiology, and Hygiene.* *3 hours a week the second half year.*

## ELECTIVE STUDIES.

(*Three studies to be selected.*)

1. *Mechanics.* Peck's Mechanics. *2 hours a week the first half year.*
2. *Physics.* Acoustics.—Optics.—Heat and its Applications.—Electricity. *2 hours a week.*
3. *Astronomy, etc.* Loomis's Practical Astronomy, with

- Practice in the Observatory.—Meteorology. 2 hours a week the second half year.
4. *Classical Philology and Greek.* Demosthenes on the Crown.—Greek Lyric Poets.—Greek Composition.—Papillon's Greek and Latin Inflections.—Peile's Greek and Latin Etymology, with Curtius, Vanıçek, and Corssen for reference.—Curtius's and Roby's Grammars.—Inscriptions. 2 hours a week.
  5. *Psychology.* Jouffroy.—Berkeley.—Porter (continued). 2 hours a week.
  6. *French.* Duruy's Histoire Grecque.—Durny's Histoire Romaine.—Racine.—Sauveur's Entretiens sur la Grammaire.—Exercises. 3 hours a week, counting as two hours.
  7. *Advanced German.* Der Neffe als Onkel.—Schiller's Wilhelm Tell—Review of the Grammar.—Exercises. 3 hours a week, counting as two hours.
  8. *History.* Modern European History.—American History. 3 hours a week, counting as two hours.
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## SCIENTIFIC COURSE.

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### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John. 1 hour a week.
2. *Mathematics.* Euclid's Geometry—Alsop's Algebra.—Loomis's Plane Trigonometry. 4 hours a week.
3. *Latin.* Livy (Chase).—Horace (Chase).—Review of Latin Grammar.—Exercises in writing Latin. 4 hours a week.
4. *English Literature.* Cleveland's Compendium—Hart's Rhetoric.—Compositions.

5. *History.* Greek and Roman History. Subjects 4 and 5, 2 hours a week.
6. *Physics.* Loomis's Natural Philosophy —Lectures. 3 hours a week the first half year.
7. *Chemistry.* Eliot and Storer.—Lectures. 3 hours a week the second half year.
8. *Physical Geography.* Guyot's Earth and Man.
9. *Zoology.* Tenney's.
10. *Botany.* Wood or Gray. Subjects 8, 9, and 10, 2 hours a week.
11. *Drawing.* White's Art Studies. 2 hours a week.

## SOPHOMORE CLASS.

1. *Scripture.* The New Testament. 1 hour a week.
2. *Mathematics.* Loomis's Trigonometry and Surveying, with Field Practice.—Loomis's Spherical Trigonometry. 3 hours a week the first half year, 2 hours the second.
3. *Descriptive Astronomy.* Herschel and Loomis. 3 hours a week the second half year.
4. *French.* Knapp's Grammar.—Fénelon's *Telémaque*.—*Histoire de Charles XII*—Exercises. 2 hours a week.
5. *Ethics and Christian Evidences.* Dymond's Essays on Morality.—Paley's Evidences of Christianity.
6. *Political Economy.* Wayland and Thompson.
7. *History.* Freeman's Outlines, or an equivalent. Subjects 5, 6, and 7, 3 hours a week.
8. *Chemistry.* Cooke's Chemical Philosophy.—Qualitative Analysis.—Laboratory Practice. 5 hours a week.
9. *Geology.* Dana's Text-book. 1 hour a week the second half year.



10. *Natural History, etc.* Botany (continued).—Zoology.—Comparative Anatomy.—Comparative Physiology.—Hygiene. *3 hours a week, the first half year.*
11. *Drawing.* White's Art Studies.—Mechanical Drawing. *2 hours a week.*

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### JUNIOR CLASS.

#### REQUIRED STUDIES.

1. *The Holy Scriptures.* The English Bible; or the Greek Testament (for students having a sufficient knowledge of Greek). *1 hour a week.*
2. *Mathematics.* Analytical Geometry.—Differential and Integral Calculus. *3 hours a week the first half year, 2 hours a week the second.*
3. *Descriptive Geometry and Drawing.* *2 hours a week.*
4. *French.* Duruy's Histoire Grecque. Duruy's Histoire Romaine. Racine. —Sauveur's Entretiens sur la Grammaire.—Exercises. *3 hours a week.*
5. *German.* Whitney's Grammar, Exercises, and Reader. *3 hours a week the second half year.*
6. *Rhetoric.* Whately's Rhetoric.
7. *Logic.* Whately and Hamilton.
8. *Psychology.* Haven's Mental Philosophy (begin).
9. *Political Science.* Kent's Commentaries on American Law.—Constitution of the United States.—Forensics. Subjects 6, 7, 8, and 9, *3 hours a week.*
10. *Physics.* Acoustics.—Optics.—Heat and its Applications.—Electricity. *2 hours a week.*
11. *Practical Engineering.* Field Work.—Sketches of Structures and Machines. *1 hour a week.*
12. *Elocution.* Rehearsals for Public Exhibition.



## ELECTIVE STUDIES.

*(One study to be selected.)*

1. *Advanced Geology, and Mineralogy.* Lyell.—Dana.  
*2 hours a week the first half year.*
2. *Elementary Greek.* Grammar and Reader.—Scientific  
Nomenclature. *2 hours a week the first half year.*

## SENIOR CLASS.

## REQUIRED STUDIES.

1. *The Holy Scriptures.* The English Bible, or Greek  
Testament. *1 hour a week.*
2. *Mathematics.* Analytical Mechanics. *2 hours a week.*
3. *Astronomy, etc.* Loomis's Practical Astronomy, with  
practice in the Observatory.—Meteorology. *2 hours  
a week the second half year.*
4. *German.* Der Neffe als Onkel.—Schiller's Wilhelm  
Tell.—Review of the Grammar.—Exercises. *3 hours  
a week.*
5. *Psychology.* Haven (continued).—Porter's Human In-  
tellect.—Lectures.
6. *Philology.* Whitney's Science of Language. Subjects  
5 and 6, *3 hours a week the first half year.*
7. *Natural and Revealed Religion.* Butler's Analogy.
8. *Christian Doctrines.* Barclay and Gurney.
9. *English.* March's Philological Study.—Themes. Sub-  
jects 7, 8, and 9, *2 hours a week.*
10. *History.* Guizot's History of Modern Civilization.—  
Arnold's Lectures on Modern History. *1 hour a  
week the second half year.*
11. *Elocution.* A Public Oration at Commencement.

## ELECTIVE STUDIES.

*(Three studies to be selected.)*

1. *Mathematics.* Determinants.—Theory of Equations.—Quaternions. 2 hours a week.
2. *Experimental Physics.* 2 hours a week.
3. *Applied Mechanics and Constructive Engineering.* 2 hours a week.
4. *Political Science.* Kent's Commentaries on the Law of Nations and Municipal Law.
5. *Anglo-Saxon.* Subjects 4 and 5 (counting as one study), 2 hours a week the first half year.\*
6. *Psychology.* Jouffroy.—Berkeley.—Porter (continued).—Lectures. 2 hours a week.
7. *Greek.* Homer.—History of Greek Literature. 2 hours a week.
8. *History.* Modern European History.—American History. 3 hours a week, counting as two hours.
9. *English Constitutional History.* Hallam. 2 hours a week the first half year.\*

\* Students choosing subjects 4 and 5, or 9, can join the class in Elective History (8) for the second half year, or take any other of the elective courses in which the work of the first half year is not indispensable for the understanding of the lessons.

## Lectures.

THE Courses of Lectures for the year 1876-77, are as follows:—

### TO THE WHOLE COLLEGE.

<i>Harmonies of Art, Science, and Religion . . . . .</i>	} PROFESSOR P. E. CHASE.
<i>Hildebrand: Bernard: Loyola</i>	PROFESSOR SHARPLESS.
<i>English Poets . . . . .</i>	PRESIDENT CHASE.
<i>History . . . . .</i>	PROF. JOSEPH THOMAS.
<i>Zoology . . . . .</i>	PROFESSOR COPE.
<i>International Law and Christianity . . . . .</i>	} PROF. DILLINGHAM.

### TO THE SENIOR CLASS.

<i>Philosophical Principles . . . . .</i>	PROFESSOR P. E. CHASE.
<i>Physics . . . . .</i>	PROFESSOR ALSOP.

### TO THE JUNIOR CLASS.

<i>Inductive and Deductive Logic</i>	PROFESSOR P. E. CHASE.
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### TO THE SOPHOMORE CLASS.

<i>Nat. Philosophy and Chemistry</i>	PROFESSOR ALSOP.
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## Examinations.

In determining the rank of the students, equal weight is given to the  *viva voce* and the written examinations.

There are private examinations of each class, in writing, in the studies of the year, all of which must be passed satisfactorily before a student can be advanced to the next higher class, or receive, finally, the degree of Bachelor of Arts or that of Bachelor of Science. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and a set of questions is furnished them upon some book or subject in the course, which each student is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to three hours. The questions

are upon topics and passages selected throughout the text-books, or upon matters which have been clearly illustrated in the teacher's instructions, and are calculated to test as accurately as possible the student's knowledge of the whole subject. Neatness of penmanship, *orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least six, on a scale of ten, in the examination upon each book, and an average of six and two-thirds on all the books combined, before he can be advanced to the next higher class, or receive a diploma as a graduate. *But no student is entitled to such advancement, whatever his numbers or rank, unless, in the private judgment of all his instructors and caretakers, he has been faithful in his daily studies, and satisfactory in his character and conduct.*

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

*Special* written examinations are occasionally held, as means of mental training.

## Degree of Master.

BACHELORS OF ARTS of three years' standing may take the degree of Master of Arts, and BACHELORS OF SCIENCE of three years' standing may take the degree of Master of Science, on submitting to the Executive Committee satisfactory evidence of continued good moral character, and passing an Examination on some literary or scientific Course of Study, which shall receive the approbation of the Faculty and Managers. As it is designed that these degrees shall represent real and solid attainments in scholarship, the results of the Examination must exhibit sufficient research, thought, and ability, to attest substantial desert on the part of the applicant.

The following are stated as adequate Courses of Study to be presented by candidates for the Degree:—

I. The Pauline Epistles in Greek (with Winer's or Buttmann's N. T. Grammar, Grimm's Lexicon, and Scrivener's Introduction).

II. The whole of Thucydides.

III. Seven Tragedies of Æschylus, Sophocles, or Euripides.

IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.

V. The whole of Tacitus.

VI. Schiller's History of the Thirty Years' War, and Wallenstein (all the parts), in the original German.

VII. The Nicomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.

VIII. Thermodynamics.

IX. Theoretical Astronomy (Watson and Gauss).

Notice of application for examination must be given two months before Commencement. The examinations will be held the first week in the Sixth month. The fee for the diploma is Twenty Dollars, to be paid before Commencement-day.

In lieu of examinations, Theses (if sufficiently elaborate and well-studied) may be received until 1879.

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## Alumni Prize for Composition and Oratory.

THE Association of the Alumni, in the year 1875, instituted an ANNUAL PRIZE of a Gold Medal, of the value of eighty-five dollars, for excellence in Composition and Oratory. The competition is confined to members of the Senior and Junior Classes, and is made before five judges, appointed by a committee of the Alumni. The successful competitor will deliver his oration publicly on the evening of Alumni Day, the President of the Association handing him the Prize.

The prize was awarded last year to RICHARD HENRY HOLME, of the class of 1876, for his oration on "Christianity as a Factor in Civilization."

## Library.

LIBRARIAN, Prof. SAMUEL ALSOP, Jr.; COMMITTEE in charge of the Library, Richard Wood, *Chairman*; Benjamin V. Marsh, Philip C. Garrett, Charles Roberts, Edward Bettle, Jr., Edward L. Scull.

THE number of bound volumes in the Library Hall, accessible to the members of the College, is 10,700. Of these, the LIBRARY OF HAVERFORD COLLEGE contains 7150 volumes; that of the LOGANIAN SOCIETY 2250; those of other societies 1300. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a gift from Friends in England—a copy of the imperial edition of the CODEX SINAITICUS, published by the Emperor of Russia, and Woidé's edition of the CODEX ALEXANDRINUS. To these have been added, by donation and purchase, the Roman edition of the CODEX VATICANUS, and Tischendorf's edition of the same CODEX. The Library thus contains copies, nearly in facsimile, of the most ancient known manuscript-authorities for the genuine text of the New Testament.

Fine copies of Walton's Polyglot and Castell's Lexicon were presented in 1876 by J. Bevan Braithwaite.

An excellent cast of the ROSETTA STONE, with its tri-lingual inscription, is among our palæographic treasures.

The Library is open as a reading-room several hours daily, during which the volumes in the alcoves are freely consulted.

A CARD CATALOGUE of the College and the Society Libraries has been made in the last year, and is of great service in showing at once what books, essays, or review articles these Libraries possess on any subject, and where they may be found.



## Collections in Natural History, and Apparatus.

The large MINERALOGICAL COLLECTION of the late Dr. Troost, contains about 2700 specimens. The GEOLOGICAL CABINET comprises about 2500 specimens, and contains complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem. Arrangements will soon be made for the display of these collections in the MUSEUM OF NATURAL HISTORY, in such a manner as to facilitate the study of them.

A valuable set of elastic models made by Auzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the entire human body, and of other interesting subjects in ZOOLOGY, COMPARATIVE ANATOMY, and BOTANY; also, a collection of plaster models of FOSSIL SPECIES in Natural History, made by Professor Ward, of Rochester, have been presented to the College by Richard Wood

Extensive APPARATUS is provided for the illustration of Natural Philosophy and Chemistry.

In the rear of the Apparatus Rooms is a well-furnished LABORATORY.

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## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eyepieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4

inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

The latitude of the Observatory is  $40^{\circ} 0' 36''.5$  N.; its longitude,  $5^{\text{h}} 1^{\text{m}} 12^{\text{sec}} .75$  W. from Greenwich.

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## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 2250 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction, and a CARPENTER'S SHOP belongs to the Society.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 1300 volumes.

## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, nine miles west of Philadelphia. It is near HAVERFORD COLLEGE STATION, on the Pennsylvania Railroad. Address HAVERFORD COLLEGE P. O., Montgomery County, Pa. The buildings are situated on a lawn of upwards of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. The grounds of the College comprise excellent fields for cricket and base-ball.

The old College Hall was built in the years 1832-33; the



Astronomical Observatory in 1852; the Chemical Laboratory and Gymnasium in 1853; the Alumni Hall and Library in 1863-64; and Barclay Hall in 1876-77. BARCLAY HALL is a beautiful edifice of granite, 220 by 40 feet, containing private studies and dormitories for about eighty students. It is furnished with the best modern conveniences, and with everything calculated to make it a healthful, comfortable, and agreeable residence. The dining-room, recitation-rooms, and Museum are in the Old College.

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## Instruction and Discipline.

THE Courses of Instruction at Haverford, aiming at thorough and generous training, retain the standard studies proved by long experience to be most fruitful in mental culture, but give them no undue preponderance, and add to them those scientific and practical studies which have risen into prominence in recent times. Both courses are designed to give a broad, as well as thorough culture, so that the Baccalaureate degrees, whether in Arts or Science, may attest a comprehensive and truly liberal education.

As the students form one household, their Religious Instruction is carefully provided for. In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Dymond's Ethics, Paley's Evidences, Butler's Analogy, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

In the Discipline of the College, the Officers endeavor to promote habits of order and regularity. Such restraints only are imposed as are deemed necessary to attain this

end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most relied upon.

## DEGREES GRANTED IN 1876.

At the Commencement in 1876, Degrees were granted, in course, to the following graduates :—

### BACHELORS OF ARTS.

FRANCIS G. ALLINSON,	THOMAS WM. KIMBER,
DAVID S. BISPHAM,	CHARLES A. LONGSTRETH,
REUBEN COLTON,	JOHN W. NICHOLSON,
HENRY W. DUDLEY,	PERCIVAL ROBERTS, Jr ,
SETH K. GIFFORD,	FRANK H. TAYLOR,
LEWIS L. HOBBS,	LEWIS A. TAYLOR,
RICHARD H. HOLME,	HOWARD G. TAYLOR.

### MASTERS OF ARTS.

BENJAMIN H. LOWRY (Class of 1873).  
ALDEN SAMPSON, Jr. (Class of 1873).

Honorary Degrees were granted as follows :—

### MASTER OF ARTS.

WILLIAM H. PANCOAST, M.D. (Class of 1853).

### DOCTOR OF LAWS.

PLINY E. CHASE, A.M. (1877.).

# Haverford Examination Papers.

## XENOPHON'S ANABASIS.

1. Translate IV. iii., § 10 and § 11.

2. Where are Ἴδοῦσι, διαβῆναι, ἔφασαν, and λαβόντες made (§ 12)? Give their principal parts. Where is ἤδεσαν made?

3. Explain the agreement of προσέτρεχον with its subject νεανίσκω. What is the subject of ἐξείη, and why the optative? Explain the mood of τυγχάνοιεν. What kind of narration is employed in quoting the young men's statement, and what change of grammatical form does the narration undergo in § 12? To what class would the conditional clauses of lines 3d and 4th belong, if they were in the *oratio recta*?

4. Translate IV. vi., §§ 4 and 5.

5. Explain the cases of σταδμούς, ἡμέρας, αὐτοῖς, πολεμίοις. What character does εἰς τὸ πεδίον derive from its position between the article and its substantive?

6. How much is a parasang? a plethrum? a stade? Where is the Phasis? Describe the river along which the Retreat had mostly been conducted.

7. Translate IV. vii., §§ 23, 24, and 25.

8. What sea did they behold? Decline πλείων. What dative is πολλῶ? What does Xenophon say he has described in the books preceding this? (vid. i. 1.) What is the date of the Anabasis? Is the title *Anabasis* applicable to Book IV.? Where is the army at the beginning of Book IV., and where at the end?

## THE ILIAD OF HOMER.

1. Translate *Il. i.* 68-80:—

Ἦτοι ὄγ' ὡς εἰπὼν κατ' ἀρ' ἔζετο. τοῖσι δ' ἀνέστη	
Κάλχας Θεστορίδης, οἰωνοπολῶν ὄχ' ἀριστος·	
ὅς ἤδη τά τ' εἶντα, τά τ' ἐσόμενα, πρό τ' εἶντα,	70
καὶ νήσσο' ἠγγύσατ' Ἀχαιῶν Ἴλιον εἰσω,	
ἦν διὰ μαντοσύνην, τήν οἱ πόρε Φοῖβος Ἀπόλλων·	
ὁ σφιν ἐνφρονέων ἀγορήσατο καὶ μετέειπεν·	
Ω Ἀχιλεῦ, χέλειά με, Διὶ φίλε, μνήσασθαι	
μῆνιν Ἀπόλλωνος ἑκατηβελέταο ἀιακτος.	75
τοιγὰρ ἐγὼν ἐρέω· σὺ δὲ σύνθεο, καὶ μοι ὁμοσοῦν,	
ἧ μὲν μοι πρόφρων ἔπεισιν καὶ χερσὶν ἀρήξειν.	
ἧ γὰρ οἶομαι ἀνδρα χολωσέμεν, ὅς μέγα πάντων	
Ἀργείων κρατέει, καὶ οἱ πείθονται Ἀχαιοί.	
κρείσσω γὰρ βασιλεύς, ὅτε χῶσεται ἀνδρὶ χέρη·	80

2. Divide the first five lines of this passage into feet, and mark the place of the principal *cæsura* in each. Name the metre of the *Iliad*. Why is it so named? Define *cæsura of the foot* and *cæsura of the verse*.

3. State fully where the following forms are found, and from what presents: ἀνέστη, ἤδη, σύνθεο, ὁμοσοῦν. Give the principal parts of any two of these verbs.

4. Give the Attic forms of εἶντα, χέλειαι, ἑκατηβελέταο, σύνθεο, and χολωσέμεν.

5. What is the subject of χολωσέμεν (78)? and give the rule. Rules of syntax for τοῖσι (68), σφιν (73), μοι (77), ἔπεισιν (77), μέγα (78), Ἀργείων (79). What use of the article is frequent in Homer (cf. 72)? Parse οἱ (72), and explain the accent of τήν.

6. Translate *Il. ii.* 211-220:—

Ἄλλοι μὲν ῥ' ἔζοντο, ἐρήτυθεν δὲ καθ' ἑδρας.	
Θερσίτης δ' ἴτι μόνος ἀμετροεπῆς ἐκολῶα,	
ὅς ῥ' ἔπειτα φρεσὶν ἦσιν ἀκοσμία τε πολλά τε ἤδη,	
μάψ, ἀτὰρ οὐ κατὰ κόσμον, ἐριζέμεται βασιλευσίν,	
ἀλλ' ὁ, τι οἱ ἤπαιτο γελοῖον Ἀργείοισιν	215
ἔμμεναι. αἰσχιστος δὲ ἀῆρ' ὑπὸ Ἴλιον ἦλθεν·	
φολκὸς ἔην, χολὸς δ' ἕτερον πόδα· τῷ δὲ οἱ ὤμο	
κνιτῷ, ἐπὶ στῆθος συνοχωχότε· αὐτὰρ ὑπερθεν	
φοξὸς ἔην κεφαλῆν, ψιδνή δ' ἐπειρήθη λάχνη.	
ἔχθιστος δ' Ἀχιλλεὶ μάλιστ' ἦν ἤδ' Ὀδυσσεὺς·	220

7. Force of the tense in ἐκολόφα. Explain the mood of εἶσαιτο. Attic forms of ἐρήπυθεν, ἦσιν, ἐμμεναι. Composition of ἀμετροπέγης. Comment on the form συνοχωχότε. Rules of syntax for πόδα and οἶ (217).

8. Translate *Il.* vi. 466-475 :—

Ὦς εἰπὼν οὐ παιδὸς ὀρέξατο φαίδιμος Ἔκτωρ.  
 ἀψ' δ' ὁ πάϊς πρὸς κόλπον εὐζώνιοιο τιθήνης  
 ἐκλίνθη ἰάχων, πατρὸς φίλου ὄψιν ἀτυχθεῖς,  
 ταρβήσας χαλκὸν τ' ἠδὲ λόφον ἰππιόχαίτην,  
 δεινὸν ἀπ' ἀχροτάτης κόρυθος κεύοντα νοήσας \* 470  
 ἐκ δ' ἐγέλασσε πατὴρ τε φίλος καὶ πότνια μήτηρ.  
 αὐτίκ' ἀπὸ κρατὸς κόρυθ' εἶλετο φαίδιμος Ἔκτωρ,  
 καὶ τὴν μὲν κατέθηκεν ἐπὶ χθοῖι παμφανώσων \*  
 αὐτὰρ οὖν ὄν φίλον υἷον ἐπεὶ κῦσε, πῆλὲ τε χερσίν,  
 εἶπεν ἐπενξάμενος Διὶ τ' ἀλλοισίν τε θεοῖσιν \* 475

9. Syntax of παιδός. Attic form of εὐζώνιοιο.

10. Τὸν δ' ἡμείβετ' ἔπειτα γέρων Πρίαμος θεοειδής·  
 μή μέ πω ἐς θρόνον ἴζε. Διοτρεφές, ὄφρα κεν Ἔκτωρ  
 κείται ἐν κλισίῃσιν ἀκηδής· ἀλλὰ τάχιστα  
 λῦσον, ἰν' ὄφθαλμοῖσιν ἰδῶ· σὺ δὲ δέξαι ἀποῖα 555  
 πολλά, τὰ τοι φέρομεν· σὺ δὲ τῶνδ' ἀπόνοιο, καὶ ἔλθοις  
 σὴν ἐς πατρίδα γαίαν, ἐπεὶ με πρῶτον ἔασας.—*Il.* xxiv. 552-557.

Rules for the moods of ἰδῶ and ἔλθοις.

11. Derivation of the preposition μετά. Translate the epithets εὐνήμειδες, πολίφλοισσος, εὐρεκρείων, Διοτρεφής.

12. State briefly the different opinions held on the authorship of the Homeric poems. How can the Wrath of Achilles be called the subject of the whole of the *Iliad*?

State precisely the geographical situation of the cities or countries whence Achilles, Agamemnon, Menelaus, and Nestor, respectively, came to Troy.

Physical explanation of the *arrows of Apollo* (Book i.).

What words in the prelude of the *Iliad* indicate Homer's belief in a Divine providence?

## THE PROMETHEUS OF ÆSCHYLUS.

1. Translate lines 12-28.

2. Composition of *τηλουρον* (1), *αβατον* (2), *ορσοβουλου* (18), *ακων* (19), *δυσλντοις* (19). Where is *διδαχθη* (10) made? Give the rule for the mood. Rules for the cases of *τροπον* (11), *σφων* (12), *βια* (15). What part of speech is *του* (21), and how is it recognized?

3. Translate lines 640-654.

4. Where are these verbs made, and from what Presents Indicative: *πενυσεσθε* (642), *τυχειν* (649), *απολακτισγης* (651). Force of the tense in *παρηγορουν* (646). Rule for the mood and tense of *λωφηγη* (654). Parse *εξον* (648), and give the rule of syntax. State the difference between the aorist subjunctive, in a negative command, and the present imperative.

5. Translate lines 937-943.

6. Force of the tense of *αγγελων* (943). Translate *γαρ* idiomatically in lines 745, 757, and 780.

The forms of what dialect occur often in the choruses, and why? Describe briefly the origin of the Athenian drama.

How does Æschylus depart from the ordinary legend in regard to the mother of Prometheus, and why?

7. Where are Dodona? Lerna? the Caucasus? Why is the conjectural reading in line 677 unnecessary?

8. Scan lines 1, 2, 6, 397-405, and 1060-1062, marking the quantities of every syllable, the divisions of the feet, and the places of ictus and cæsura, and naming the metres and the feet.

## THUCYDIDES.

1. Translate I. xxii.

2. What tenses of the infinitive may follow *μελλω*? Where is the antecedent of *αυτω* (1)? Expand *ων* (1). Rules for the cases of *γνώμης* (1), *του παρατυχοντος* (2), *οις, ακριβεια, εκαστου, εκατερων* (3), *απρσασιν* (4). Expand *παρὰ των άλλων*. Comment on the mood and tense of *ιδουουν* and *εχοι*.

3. Translate II. xliii.

4. Rules for the mood and tense of *μηχίνοι, δόξῃ, σφαλείησαν*. Why *μηδέν* (1) rather than *οὐδέν*? Rules for the cases of *πείρα* and *του, κοινῆ, βίου*. What is the easiest remedy of the textual difficulty in the last sentence of the chapter?

5. Translate II. lxxv. 8-14.

6. Comment on *προγεγενημένων* (I. i. 1). Force of the two prepositions in the compound word *μεταναστάσεις* (ii.) Comment on *οἱ γὰρ ἐν Σικελίᾳ* (xvii.).

7. Why does Homer never speak of all the Greeks under one common name?

Can you think of anything in the geographical position and the physical geography of Acarnania and Aetolia to account for the rudeness of the inhabitants (I. v.)?

To which of the great races of the Greeks did the Athenians and the Spartans belong, respectively? The chief characteristic differences between these races?

In which direction did the Thebans march in going to Plataea? What stream flows between the two towns?

8. Describe the style of Thucydides, and his merits as an historian. What high idea had he of the purpose of history? When did he begin the composition of his work?

Give the dates of the most important events in the Peloponnesian war.

## THE ANTIGONE OF SOPHOCLES.

1. Rules for the mood of *κλύεις* (19) and *ἐνρεθείῃ* (327). Comment on the use of *μή* in lines 91 and 500, and on *γάρ* in lines 44, 450, and 511.

2. Translate lines 388-400.

3. Rules of syntax for *ἀπειλαιῖς, μῆκος, ἡδονῆ, and κακῶν*. Resolve *δοῦρματων* and comment upon it.

4. Translate lines 444-462.

5. From what verbs are *ὑπερδραμεῖν* and *εἰξήδη*, and where made? Principal parts of *θανομένη*.



6. Translate lines 891-899.
7. What emendations have been proposed in lines 106 and 110?
8. What is for the most part the metre of the dialogue in Attic tragedies? For the expression of what kind of sentiments are dochmiacs appropriate? Indicate fully the scanning of lines 8, 9, 11, 781-790, and 1317-1325.
9. Tell briefly the story of Œdipus and his children, and the plot of this play.
10. Name the three great Athenian tragedians, with the dates at which they flourished, and give the characteristics of each as an author.

## LIVY.

- I. Translate XXI. iv., lines 15-30
- II. What is the force of *quisque* with a superlative? Explain the case of *Harmoni*, *Hamilearem*, *parendum*, *duce*; and the mood of *credere*, *esset* (24), *discerneres*, *esset*.
- III. Who were the persons named in this passage?
- IV. Translate XXI. xxvii. p. 106, lines 3-22.
- V. Explain the mood or case of *averteret*, *vigilia*, *facto*, *adoriatur*, *milis*, *insulae*, *eo*, *traicerentur*.
- VI. Give the principal parts of *terrebant*, *averteret*, *jubet*, *trajecto*, *caesa*, *tranavere*, *fessus*, *exsequendum*.
- VII. Translate XXI. xli., p. 118, lines 30-39.
- VIII. In what construction is *vestri adhortandi*, *existimet*, *licuit*, *haberem*, *praetercherer*?
- IX. Translate into Latin:—Do not fear, oh brothers, that the enemy may think that we sailed past the coast of Gaul for the sake of disembarking in Spain. It was permitted us to proceed where Hasdrubal rather than Hannibal would have been our enemy.



## HORACE.

## I. Translate :—

Parcus deorum cultor et infrequens,  
 Insanientis dum sapientiae  
     Consultus erro, nunc retrorsum  
         Vela dare atque iterare cursus  
 Cogor relictos : namque Diespiter,  
 Igni corusco tubula dividens  
     Plerumque, per purum tonantes  
         Egit equos volucremque currum,  
 Quo bruta tellus et vaga flumina,  
 Quo Styx et invisi horridi Taenari  
     Sedes Atlantensque finis  
         Concutitur. Valet ima summis  
 Mutare et insignem attenuat deus,  
 Obscura promens ; hinc apicem rapax  
     Fortuna cum stridore acuto  
         Sustulit, hic posuisse gaudet.

II. Explain Horace's allusion in *insanientis sapientiae*, and his change of religious views ; the composition and derivation of *Diespiter* ; the meaning of *Atlanteus finis* ; the locality and meaning of *Taenarum* ; the grammatical use or construction of *erro, sapientiae, Quo, mutare, summis* (and remark upon other constructions with *mutare*), *sustulit, posuisse*. Give the equivalent pronouns for *hinc—hic*.

## III. Translate :—

Rectius vives, Licini, neque altum  
 Semper urgendo, neque, dum procellas  
 Cautus horrescis, nimium premendo  
     Litus iniquum.  
 Auream quisquis mediocritatem  
 Diligit, tutus caret obsoleti  
 Sordibus tecti, caret invidenda  
     Sobrius aula.  
 Saepius ventis agitur ingens  
 Pinus, et celsae graviore casu  
 Decidunt turres, feriuntque summos  
     Fulgura montes.

IV. Explain the metre of this ode, properly marking the feet and quantities of the first two stanzas.

Appropriateness of the word *auream*. What special grammatical remark may be made upon *Rectius*, *Licini*, *urgendo*, *horrescis*, *sordibus*?

V. Name and denote by proper marks the metre of the following stanzas:—

O fons Bandusiae, splendidior vitro,  
 Dulci digne mero non sine floribus,  
     Cras donaberis haedo,  
     Cui frons turgida cornibus  
 Primis et venerem et proelia destinat;  
 Frustra: nam gelidos inficiet tibi  
     Rubro sanguine rivos  
     Lascivi suboles gregis.

VI. Translate:—

Nunc ad me redeo libertino *patre* natum,  
 Quem rodunt omnes libertino *patre* natum,  
 Nunc, quia *sim* tibi, Maecenas convictor: at olim,  
 Quod *mihî* pareret legio Romana tribuno.  
 Dissimile hoc illi est; quia non, ut forsit honorem  
 Jure *mihî invidet* quivis, ita te quoque amicum,  
 Praesertim cautum dignos *assumere*, prava  
 Ambitione procul. Felicem dicere non hoc  
 Me *possim*, casu quod te sortitus amicum;  
 Nulla etenim *mihî* te fors obtulit: optimus olim  
 Vergilius, post hunc Varius dixere *quid essem*.  
 Ut veni coram, singultim pauca loquutus,  
 (Infans namque pudor prohibebat plura profari,)  
 Non ego me claro natum *patre*, non ego circum  
 Me Satureiano vectari rura caballo,  
 Sed, *quod eram*, narro. Respondes, ut tuus est mos,  
 Pauca: abeo; et revocas nono post *mensē* jubesque  
 Esse in amicorum numero. Magnum hoc ego duco,  
 Quod placui tibi, qui *turpi* secernis honestum,  
 Non *patre* praeclaro, sed *vita* et pectore puro.

VII. What history of Horace's life and times can be gathered from his writings which you have read? Give the grammatical construction of the words in *Italics*.

## THE AGRICOLA OF TACITUS.

1. Translate Chapter V.
2. Give the rules of syntax for *contubernio*, *aestimaret*, and *noscere*.
3. Rules for the mood of *occurreret* (ii), *addiderim* (x), *coluerint* (xi), *deprehendas* (xi), *quaereretur* (xiv); and for the mood and tenses of *perdidissemus* and *esset* (ii *in fine*).
4. Translate Chapter XXX. to *Sed nulla*.
5. Composition of *expers* and *securus*
6. What is the force of *citra* in *citra fidem* (i), *citra Romanum sanguinem* (xxxv)?  
 Meaning of *divus* before an emperor's name?  
 Give the English dates corresponding to the Roman dates in Chapter xlv.  
 How is the emperor C. Caesar generally called?
7. Where were *Frojulensium colonia*, *Massilia*, *Liguria*, and *Mona*?  
 What was Tacitus's idea of the relative situation of Britain, Ireland, and Spain?

## CICERO'S TUSCULAN DISPUTATIONS.

1. Translate I. xi. to § 24.
2. What kind of a pronoun is *quae* (22)? Can a relative stand in this position? Rules for the mood of *omittamus*, *conficiat*, *sit*, *cuperem*, *posset*, *disserantur*.
3. Translate xix., beginning at § 44.
4. Rules for the mood of *habeant* and *velimus*, and for the cases of *corporibus*, *multo*, *ea*.
5. Translate xxxv., § 85.
6. Rules for the mood of *sit* and *habeat*, and for the cases of *filiis*, *uxore*, *progenie*.
7. To what school in philosophy did Cicero belong? Characteristics of that school? Its founders? What proposition is defended in the first book of the *Tusculans*? What were the views of the Epicureans in regard to immortality? What the views of the Stoics? How did educated men in Cicero's day regard the ancient mythology?

## ELEMENTARY GERMAN.

1. Translate: Darauf fasste er Wasser in seine hohle Hand aus dem Büchlein, das vorüber floss, und besprengte dreimal die Aeste, und siehe, nun hingen die Aeste allesammt voll grünender Blätter, also dass ein kühler Schatten uns umgab, vermischt mit lieblichen Düften. Woher, rief ich, diese Wohlgerüche zu dem erquicklichen Schatten?

Siehst du nicht, sprach der Mann Gottes, die purpurfarbige Blüthe, wie sie aus den grünen Blättern hervorsprosset und in Büscheln herniederhängt?

2. In what case is *Hand*? Give the rule of syntax. Of what declension is *kühler*? *erquicklichen*? Give the rule of declension in each instance. Parse *hingen* and *rief*, and give their principal parts.

3. Inflect the adjective *gut*, in both declensions; and state fully the rules which determine the declension of an adjective to be used in any instance.

4. Give the principal parts of *denken*, *geben*, *gehen*, *lesen*, *liegen*, and *sitzen*.

5. Translate into German:—

The flowers are blue, and white, and red.

The blue flowers in the little basket are very beautiful.

The pretty child has a little red apple in its right hand.

The English woman is handsome, but the American woman is yet handsomer.

The landlord's eldest daughter is prettier than the merchant's younger sister.

A good, sensible teacher loves an industrious boy.

You are giving yourself unnecessary trouble.

The merchant gives me my bill, and I give him his money.

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 RHETORIC.

1. What is the first step which should be taken by one who wishes to convey truth to others by reasoning? What common faults will be avoided by observing this rule?

2. Which is the more likely to furnish copiousness of matter, a wide or a restricted view of a subject?

3. What is the proper province of Rhetoric as distinguished from Logic? Give an example of an *à priori* argument as defined by Whately, and the *test* by which such an argument is recognized. Which of the two great classes of *arguments, as such*, is the more effectual in refutation?

4. Illustrate the distinction between logical and physical sequences.

5. On what kind of testimony do men in general believe in such facts as the motions of the heavenly bodies?

6. On which side did the presumption lie in regard to the truth of Christianity, at the introduction of the religion? What is the rhetorical meaning of *presumption*, corresponding with the etymology of the word? How far is there an advantage in having the presumption in one's favor? What is *deference*? In what cases does there exist a counter presumption to that implied in the rule, *peritis credendum est in arte sua*?

7. Which is the more effective *order* in presenting the arguments belonging to the two classes of arguments as such, in the statement to infidels of the evidences of Christianity, and why?

8. How should one's style of narration differ, according as he desires to excite the feelings of his hearers as much, or as little, as possible?

9. How far are appeals to the passions or emotions justifiable? Are our feelings under the *immediate* control of the will? How can they be excited or allayed?

10. Of what advantage is a lively imagination in the study of history?

11. Which class of terms make the most vivid impression, *general* or *special*, and why?

12. Define *metaphor*, *simile*, *epithet*, and *antithesis*, and give an example of each.

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### LOGIC.

1. Are arguments necessarily, or generally, written in the syllogistic form? What is the advantage, in the examination of arguments, of reducing them to this form? What is an argument with one premise suppressed called?

2. Which of the following moods are invalid, and what is the logical fallacy in each instance of invalidity?—In the first figure AEE, AII, EAA, IAA; in the second figure, AAA, AII, AOO; and in the third, AAA, IAI.

3. The premises being probable, how can we estimate arithmetically the probability of the conclusion?

4. The difference between a property and an accident? What is the objection to such a statement as this: Books are *divided* into quartos, French books, histories, Elzevirs, etc.?

5. What fallacy is employed in our language the more easily from the fact that English is a composite of Latin and Saxon, and how?

6. What two kinds of "New Truth" and "Discovery" are there, taking these words in their widest sense? Can either kind be elicited by a process of reasoning?

7. What is the difference between proving and inferring? What between a verbal and a real question?

8. Are the following arguments sound? If not, what are the fallacies?

"All studies are useful which tend to increase national and private wealth; but the course of studies pursued at Oxford has no such tendency; therefore it is not useful."

"Testimony is a kind of evidence which is very likely to be false; the evidence on which most men believe that there are pyramids in Egypt is testimony; therefore the evidence on which most men believe that there are pyramids in Egypt is very likely to be false."

"He who cannot possibly act otherwise than he does, has neither merit nor demerit in his action; a liberal and benevolent man cannot possibly act otherwise than he does in relieving the poor; therefore such a man has neither merit nor demerit in his action."

9. What axiom or first truth is the groundwork of induction? Which is generally the least certain proposition in an inductive syllogism?

10. State the most important of the modifications which Sir William Hamilton has proposed in the science of Logic. Which of them has the most practical value?

## MENTAL PHILOSOPHY (HAVEN).

1. "The science of matter and the science of mind agree perfectly in this, that all we know of either matter or mind, is"—what?

2. What fact is told of a short-hand writer in the House of Lords, and what theory does Wayland deduce from it in regard to consciousness? Will the facts bear out the theory, or how otherwise may they be explained?

3. What answer can be given to those who deny the credibility of our senses?

4. Into what three classes does Hamilton divide the qualities of bodies, and how are these classes characterized? Name the most important qualities of bodies under these different heads.

5. State the principal laws of the association of ideas.

6. What effect has the invention of printing had upon the use and development of extraordinary powers of memory? What directions are given for the cultivation of the memory?

7. What is the character of intuitive ideas? what their relation to experience, logically and chronologically? Give the most important criteria of instinctive beliefs or first truths. What is the importance of first truths in science and reasoning?

8. Give a brief exposition of the spiritual theory of beauty.

9. Name and characterize the three classes into which the sensibilities may be divided. What is the natural order of the several classes of emotions in relation to each other?

10. State the most important presumptions in favor of the freedom of the will. What is the ultimate proof of human freedom? How can strength of will be cultivated?

## INTELLECTUAL SCIENCE (PORTER).

1. Explain the scientific basis of psychology, and its relations to physiology.

2. What are the most important relations of the soul to matter, and what arguments against materialism may be drawn from those relations?

3. Define *subjective* and *objective*, and describe the faculties which are mathematically deducible from their necessary mutual relations.



4. Define consciousness, and give a brief summary of the chief views that have been held respecting it.

5. In what respects does the division of the mind into faculties differ from physical divisions into parts or organs?

6. What are the principal criteria of knowledge, and what are the necessary relations of knowledge to faith?

7. Describe the process of Sense-perception, and the several conditions involved in its exercise.

8. Define and explain the Representative Power, its subdivisions, and their respective offices.

9. Give a brief statement of the argument upon the question of Free Will.

10. Explain the intuitions of Time, Space, Causation, and Design.

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#### POLITICAL ECONOMY.

1. Explain each of the four divisions of Political Economy.

2. Explain the three changes which human industry can effect in matter.

3. In what proportion will labor generally be applied to capital? How will labor be affected by division of property? How will division of property depend upon the condition of the government? Show the operation of a still greater security for property than the government.

4. What are the disadvantages of relieving men from the necessity of labor?

5. Upon what does the rate of wages depend, and why?

6. How will exchanges be affected by the intelligence or ignorance of a people?

7. Why are rapid exchanges peculiarly profitable, even with a small profit on each?

8. How may different persons' debts be used to check one another by the agency of Banks?

9. Explain the origin of Rent.

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#### KENT'S COMMENTARIES.

1. How did the United States come under the International Law of Europe?



2. What is a necessary consequence of the equality of nations ?
3. What is the extent of jurisdiction over adjoining seas ?
4. What is equivalent to a declaration of war on the part of the United States ?
5. How is privateering allowed to be carried on ?
6. What is the law for enemies' goods found in a neutral ship, and a neutral's goods in an enemy's vessel ?
7. What is to be said on the right of search ?
8. What successive steps have been taken by the United States, and when, to suppress the Slave Trade ?
9. What are the proceedings which led to the formation of the Constitution ?
10. What is the constitution of the Senate as to the number and qualification of members, their term of service, and manner of election ?
11. What is the constitution of the Lower House in these respects ?
12. In what do the functions of the Senate differ from those of the Lower House ?
13. Explain what is meant by Statute Law and Common Law ?
14. Give your best account of the Civil Law.

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#### PALEY'S EVIDENCES OF CHRISTIANITY.

1. Show the probability that Paley's first proposition derives from the nature of the case.
2. Show how far the testimony of heathen writers tends to support the first proposition.
3. Show that the story for which the first propagators of Christianity suffered was a miraculous one.
4. Show that the same is the story which we now have.
5. Show how early the historical books of the New Testament were referred to, and with reverence, by Christian writers.
6. On what grounds have the Apocryphal writings no place in the New Testament canon ?
7. In estimating stories of miracles brought into competition with those of early Christianity, what seven particulars must be laid out of the case ?

8. What testimony to the Christian miracles and story is borne by the early rapid reception of the unpopular religion?

### DYMOND ON MORALITY.

1. Show how the standard of morality recognized by Dymond is really the basis of the standards known under the name of the Understanding, Sympathy, Accordance with Nature in conformity with the Conscience, the Eternal and Necessary Differences of things, and Utility, respectively.

2. On what two modes of communication of the Divine Will to men, do Christians most rely? Which of them is primary, which secondary, and what other modes are subordinate to these?

3. Exhibit the inferiority of human calculations of Expediency as a primary guide in morals, as respects, 1st, the Future Life; 2d, the Christian Revelation; 3d, Promptness, Clearness, and Simplicity; 4th, Obviousness and palpability of Sanction.

4. Explain the relation of Conscience to the Sense of Obligation; and produce a definition of Conscience accordingly, so as to show why every one's conscience is not infallible.

5. Demonstrate the duty and limit of Civil Obedience.

6. What moral restrictions should be observed in legal practice?

7. Show that Oaths are condemned by reason and by Christianity.

8. Give a synopsis of the argument against Capital Punishment.

9. Show the incongruity of War with Christianity according to Prophecy, the teachings of the New Testament, and the testimony of the early Christians.

### BUTLER'S ANALOGY.

1. How is each apprehension that death will destroy us, removed?

2. How are pleasures and pains accounted for? Compare the teachings of the Scriptures and of nature on this subject.

3. How can we explain the fact that gratifying results sometimes follow evil deeds?

4. What discipline suits us for a happy condition in this life; and what is the relation of such discipline to the world to come?

5. How is a new character formed naturally? Describe the natural supply to our deficiencies.

6. What accompanies the progress of resistance to evil?

7. What of the objection that there is no merit in obedience induced by hope or fear?

8. Why is there no man who can, with reason, censure the least particular in the works of God? How would this apply to any written revelation from Him?

9. Compare Christianity with natural religion as to their contents and relative importance.

10. Show that the whole world exhibits mediation. Compare repentance in nature and in the gospel, as preventive of punishment.

11. Answer the objection made against Christianity, that if it were true it would be more unmistakably and universally made known.

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#### EUCLID.

1. If, from the ends of one side of a triangle, straight lines be drawn to a point within the triangle, these straight lines shall be less than the other sides of the triangle, but shall contain a greater angle. (21.1.)

2. If a straight line cut two parallel straight lines, it makes the alternate angles equal to each other; the exterior angle equal to the interior and opposite on the same side; and the two interior angles on the same side equal to two right angles. (29.1.)

3. The sum of the squares of the diagonals of a parallelogram is equal to the sum of the squares of the sides. (B 2.)

4. The angle in a semicircle is a right angle, etc. etc. (31.3.)

5. Describe a circle about a given square.

6. If four quantities be in proportion, they will be in proportion by *division*.

7. If a straight line be drawn parallel to one of the sides of a triangle, it will cut the other sides proportionally. (2.6.)

8. Cut a given straight line in extreme and mean ratio. (30.6.)
9. If a straight line be perpendicular to two straight lines at the point of their intersection, it is perpendicular to the plane in which these straight lines are. (4.2 Sup.)
10. Define Cone, Cylinder, Pyramid, Prism, Parallelopiped, Parallelogram, Rhombus, Scalene Triangle, Axiom, Hypothesis.

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### ALGEBRA.

1. Define Exponent, Coefficient, Monomial. State the rules for signs in subtraction and multiplication.

2. From  $\frac{x+y}{x-y}$  take  $\frac{x-y}{x+y}$ .

3. Expand  $(\frac{1}{2}x - 3ax)^4$  by the Binomial Theorem.

4. Given  $\sqrt{a^2+x} + \sqrt{x} = \frac{2a^2}{\sqrt{a^2+x}}$  to find  $x$ .

5. A. can do a piece of work in 20 days, and B. and C. together can perform it in 12 days. Now, if all three work for 6 days, C. can finish it in 30 days. In what time would B. and C. have performed it?

6. The sum of the square roots of the means of four numbers in arithmetical progression is 19, and the difference of the extremes 171. What are the numbers?

7. Given  $\sqrt{\left(\frac{a^2}{x^2} + b^2\right)} - \sqrt{\left(\frac{a^2}{x^2} - b^2\right)} = b$  to find  $x$ .

8. A person laid out a certain sum of money upon a speculation, upon which he found he had gained £69 the first year. This he added to his stock, and at the end of the second year found he had gained as much per cent. as in the year preceding. Proceeding in the same manner for four years, he found at the end of that time that his stock was to the sum invested as 243 to 48. What was the sum laid out, and the gain per cent.?

9. Given  $\sqrt{x^5} - \frac{40}{\sqrt{x}} = 3x$  to find  $x$ .

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### TRIGONOMETRY.

1. Deduce expressions showing the relations of sines, cosines, tangents, etc., to each other.

2. Prove that in any plane triangle, the base is to the sum of the sides, as the difference of those sides is to twice the distance between the middle of the base and the perpendicular let fall on it from the vertex of the triangle.

3. In a right-angled triangle, there are given one of the legs 94, and the segment of the hypotenuse adjacent to the other leg made by a perpendicular from the right angle 66, to determine the triangle.

4. Define spherical angle, triangle. What measures a spherical angle?

5. Prove that, in isosceles spherical triangles, the angles opposite the equal sides are equal.

6. In a right-angled spherical triangle, given the hypotenuse and one of the oblique angles, to determine the other parts by Napier's Rules.

7. Show how to cut a cone to obtain the five conic sections.

8. Prove that in a parabola the abscissas vary as the squares of the ordinates.

ANALYTICAL GEOMETRY.

1 Construct the expression

$$x = \sqrt{a^2 - bc}.$$

2. Determine the area of a triangle whose angular points are 3, 4; -3, -4; 0, 4.

3. Find the equation of the straight line that passes through the points

$$x_1 = 1, y_1 = 2 \text{ and } x_2 = 2, y_2 = -4.$$

4. Find the equation of the circle referred to any rectangular co-ordinates, and from the equation show when the curve will cut the axes.

5. Find the equation to the tangent at any point of the parabola.

6. Trace and name the curves of which the following are the equations, and state the number of points of intersection:—

$$y^2 = \frac{25}{100} (100 - x^2)$$

$$y^2 + (x - 2)^2 = 64.$$

7. Trace the curve

$$y^2 = x^3 - x.$$

8. Determine the curve which results from the intersection of a right cylinder with a plane.

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### DIFFERENTIAL CALCULUS.

1. What is the object of differential calculus?
2. Deduce the formula for finding the differential of the product of two functions depending on the same variable.
3. Differentiate  $\frac{u}{v}$ , performing the operation in full, and thus form a rule for differentiating a fraction.
4. Deduce Maclaurin's theorem.
5. What is the length of the axis of the maximum parabola which can be cut from a given right cone?
6. Differentiate the function  $u = (a^x + 1)^2$ .
7. Prove the rule for differentiating the sine of an arc.
8. Integrate  $du = (a + x)^n x^{n-1} dx$ , and give the rule for integrating all analogous expressions.
9. Integrate  $du = \frac{dx}{a + x}$ . Integrate by series.
10. Find the expression for  $\log(a + x)$ .
11. Find the area of the common parabola.
12. Find the solidity of a sphere.

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### DESCRIPTIVE ASTRONOMY (HERSCHEL).

1. Explain what is meant by *the Equation of Time*, and give the cause of it. What are the lengths of the sidereal and tropical years, and why do they differ?
2. Prove from our knowledge of the time of the moon's revolution that gravity varies inversely as the square of the distance.
3. At what intervals do *Transits of Venus* occur? Explain the method of obtaining the sun's distance by transits. Why is it more accurate than direct observations for parallax?
4. Describe *Encke's Comet*. For what is it noted?
5. Explain Bessel's method of obtaining the parallax of 61 Cygni. What are its parallax and distance?



6. Describe the variations of the periodical star *Alyol*. By what are they probably occasioned?

7. Explain the necessity for *Leap Years*; and give the Gregorian Rule.

8. Give the diameter of the *Earth*—the *Sun*—*Jupiter*; distance from the Sun of *Venus*—*Saturn*. How much is the earth's axis inclined to the plane of the ecliptic?

### PRACTICAL ASTRONOMY.

1. Describe the Equatorial Telescope.

2. What is a Transit Instrument? What are its adjustments, and for what purposes is it used?

3. Find the amplitude and the hour angle of a Star when it is in the horizon, the declination of the Star and the latitude of the place being given.

4. Define *Solar Day* and *Sidereal Day*, and give the rule for converting the one kind of time into the other.

5. The Longitude and Latitude of a Star being given, find its Right Ascension and Declination.

6. Explain Parallax, and find the Parallax in Altitude of the Moon.

7. What is the latitude of a place equal to? and how may it be derived from observations of a Circum-polar Star?

8. Explain by a diagram the mode of determining, both by construction and calculation, the times of beginning, middle, and end of an eclipse of the Moon.

### CHEMISTRY.

1. Is there any exception to the law that all bodies expand by heat and contract on cooling? if so, what is it, and under what circumstances does it occur? Give the experiment.

2. Explain the formation of dew. Why is it deposited during clear nights only, and why in calm nights only? What is meant by the dew point?

3. In obtaining oxygen from potassium chlorate, what chemical changes in this salt occur? Write the reaction.

4. In obtaining hydrosulphuric acid from iron protosulphide

and diluted sulphuric acid, what chemical changes take place? Write the reaction.

5. If air be admitted to sulphuretted hydrogen water, what chemical change will occur? Write the reaction.

6. If, while sulphuretted hydrogen was flowing from the tube in the above experiment, the gas were ignited, what chemical changes would *then* take place in the compound gas? Write the reaction.

7. If sulphuretted hydrogen water be added to a solution of the acetate of the oxide of lead, what changes will occur?

8. What reactions will take place if a solution of  $\text{FeSO}_4$  in water be mixed with hydrosulphuric acid and then some lime-water be added to the mixture?

9. When phosphuretted hydrogen is obtained from lime and phosphorus in water, what new compounds result? On admitting air to this gas, what chemical changes occur?

10. What chemical changes take place in a Grove's battery when in action?

11. What is dextrine, and how is it produced? Under what circumstances is diastase produced, and what specific action has it upon starch?

#### PHYSICS. (SOPHOMORE CLASS.)

1. Through what space would a body descend *in the fifth second* of its fall? How many feet would it have fallen through *in four seconds*? Prove both answers.

2. What is the law of the Inclined Plane?

1. When the power acts parallel to the plane?

2. " " " " " " base?

Prove both cases.

3. Describe the Hydraulic Press. Upon what principle of hydrostatics is it founded?

4. In what three particulars do musical sounds differ from one another? Upon what does each depend? Give the laws governing the vibrations of strings.

5. Explain what is meant by *latent heat*. What are Freezing Mixtures? Give the reason why lower the temperature.

6. If a pencil of diverging rays fall upon a plane mirror, from what point will the reflected rays appear to proceed? Prove its



position. What is meant by *conjugate foci* of a spherical concave mirror? Prove the equation by which, if we know the radius of the mirror and the position of either focus, we can determine that of the other.

7. What is meant by spherical aberration of lenses? by chromatic aberration? How is the latter corrected?

8. Describe the Leyden Jar. Explain its theory. Give the reason for the existence of free electricity in the Leyden Jar.

9. Describe the Galvanometer—and explain its use. What is an electro-magnet? What is supposed to be the source of the earth's magnetism?

### MECHANICS OF SOLIDS.

1. Prove that if three forces be in equilibrium, each is proportional to the sine of the angle between the other two.

2. Deduce expressions for the measure of the tendency to rotation, of a system of forces, about three rectangular axes.

3. Let there be a square, and suppose it divided by its diagonals into four equal parts, one of which is removed. Required the distance of the centre of gravity of the remaining figure from the opposite side of the square.

4. A sustaining wall of granite has a rectangular cross-section. From the following data find the least thickness to prevent overturning: Height 12 ft.; pressure of 4500 lbs., applied horizontally 4 ft. from base (case of water pressure); weight per cubic foot of granite, 160 lbs.

5. Find the ratio of power to resistance in a wedge.

6. Define co-efficient of friction, and explain a method for obtaining it.

7. From the general equation for bodies projected vertically,  $h = vt - \frac{1}{2}gt^2$ , prove that the path of a projectile is a parabola.

8. Given the distance between the rails =  $d$ , radius of curve =  $r$ , height of centre of gravity of car =  $h$ ; what velocity must be given to the car that it may be on the point of being overturned by centrifugal force, the rails being on the same level?

9. Define *Work*, and give the expression for it. What is a horse-power?

10. Explain the principle of the gyroscope.

## GUYOT'S EARTH AND MAN.

1. Give the main features of the relief of the two continents.
2. Give a probable theory of the origin and growth of the earth.
3. Give the cause of the trade winds; of the prevailing winds of the Temperate Zones; of the Monsoons.
4. Explain the course of main ocean currents.
5. Give illustrations of the reliefs of countries affecting their history.
6. Give the main points of superiority and inferiority of the Tropic and Temperate Zones.
7. Give the characteristics of the civilizations of Western Asia, India, Greece, Rome.

## GEOLOGY.

1. Define *rock, strata, formation, layer, outcrop, dip, strike, anticlinal*.
2. What are the principal elementary constituents of rocks? Describe the most important minerals.
3. Name the different kinds of rock-structure, and give an account of their origin.
4. Explain some of the principal difficulties in determining the age of rocks, and the best means of determining identity of formation.
5. What is meant by non-conformable strata, and how are they accounted for?
6. Give the characteristics of each of the Geological Ages, and name their principal subdivisions.
7. Describe the development of life in successive ages, and the rock-formations that are due to vital organisms.
8. Describe the processes, results, and evidences of denudation.
9. In what region of America are there evidences of the greatest geological changes? State the thickness of the formations, and how they were formed.
10. Explain the dynamic actions of air, water, and heat, and the principal formations to which they have contributed.

## ZOOLOGY.

1. Give a general description of the Animal Kingdom.
2. Point out some of the most important relations between Zoology and Geology.
3. Name the formations of vegetation and of animal life, and describe the processes of nutrition and growth.
4. Describe the different tissues of the animal body.
5. What are the Branches, or Sub-kingdoms of the Animal Kingdom, and their several characteristics?
6. Give the subdivisions of the branch to which man belongs, and describe their peculiarities.
7. Name the principal points, both of resemblance and of difference, between Man and the Simiadae.
8. Describe the Ungulata and Cetacea, and their sub-sections.
9. Give a description of the principal sub-sections of the Aves, Reptilia, and Batrachians.
10. Name the characteristics of the Insecta, Crustacea, and Annulata.
11. Define Cephalopods and Gasteropods. Name typical genera of each.
12. Describe the Asteroidea, Hydroidea, Infusoria, and Rhizopoda.

## ANATOMY AND PHYSIOLOGY.

1. Give the composition and structure of bones, and the names of the bones of the upper extremities.
2. Give the composition of *fats*, the changes they undergo in the body, the kind of tissue they form, and its use in the system.
3. Describe the complete course of the blood through the system. Draw a diagram of, and name the main arteries of the lower extremities.
4. Give the functions of the liver.
5. Give the subdivisions and functions of the pneumogastric nerve.
6. Describe the organ of hearing. What arrangement is there to destroy waves of sound in the ear?

7. Describe accurately the hip-joint. Give the bony prominences in its vicinity, and the actions of the principal muscles thereto attached.

*The foregoing Examination Papers are chiefly those of the last academical year, with a few which were used in former years. They represent fairly the character of the questions generally asked. The examination in Mechanics in 1876 took the place of the former examinations in Senior Physics. Examinations have also been held in some other subjects, as Integral Calculus, Hygiene, and additional classical authors.*

*New papers of questions are prepared for the examinations every year.*









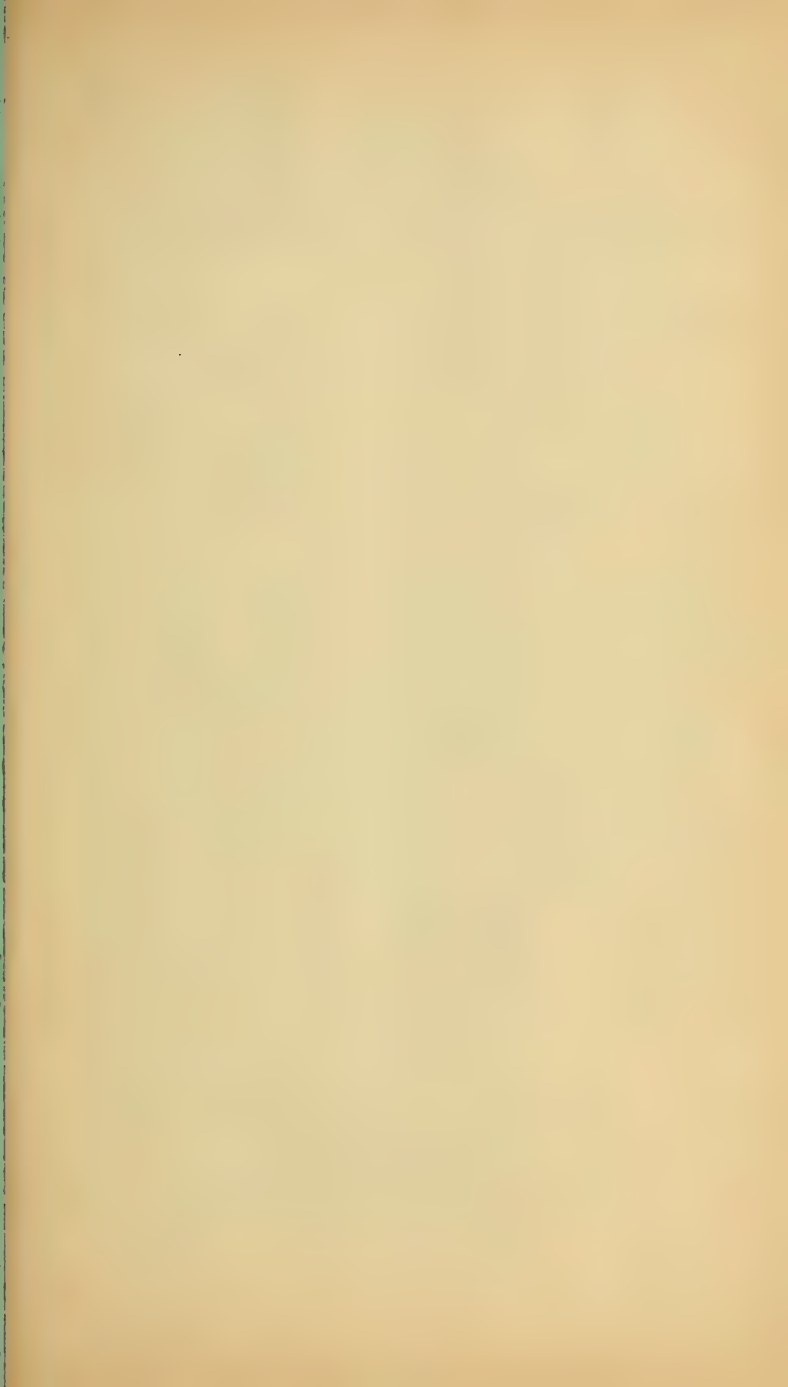


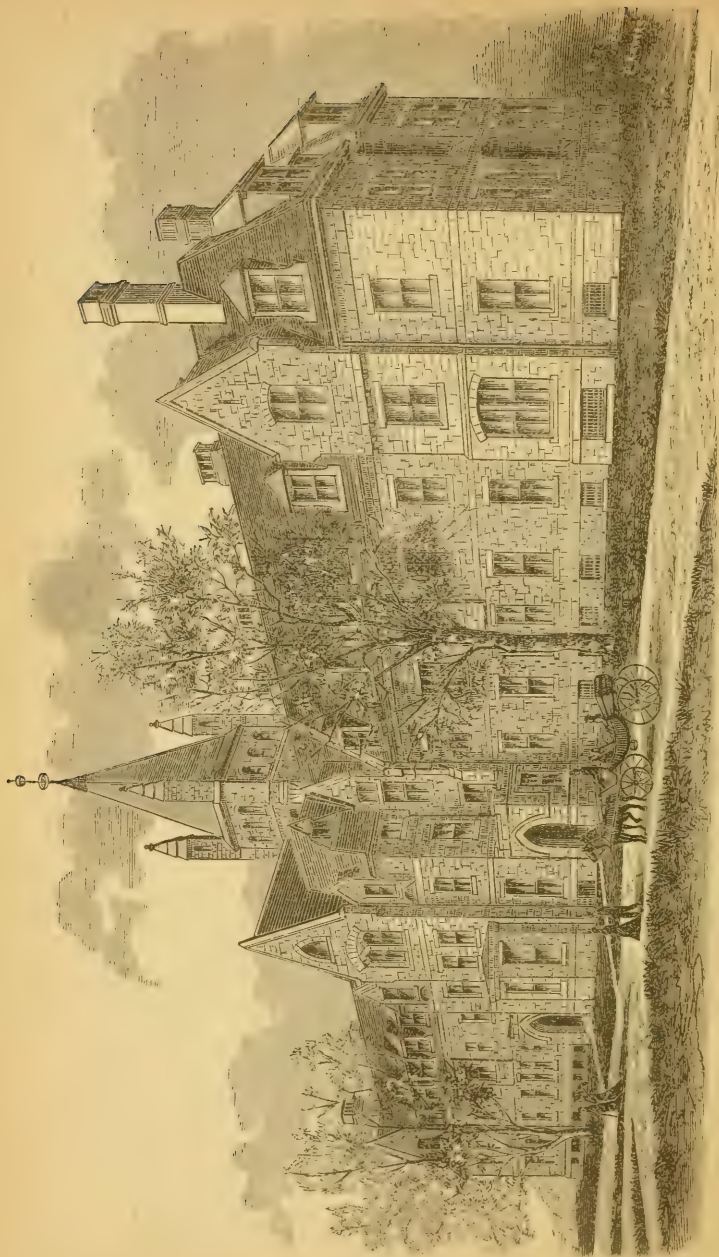
A  
CATALOGUE  
OF THE  
*Officers and Students*  
OF  
HAVERFORD COLLEGE,  
FOR THE  
ACADEMICAL YEAR  
1877-78.



PHILADELPHIA:  
COLLINS, PRINTER, 705 JAYNE STREET.  
1878.







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# Corporation.

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*Treasurer.*

DAVID SCULL, JR.,  
125 Market Street, Philadelphia.

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*Secretary of the Board.*

EDWARD BETTLE, JR.

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HUGH D. VAIL,	EDWARD L. SCULL,
JAMES WHITALL,	EDWARD BETTLE, JR.,
	WILLIAM G. RHOADS.

## Faculty and Officers of Instruction.

---

THOMAS CHASE, A.M.,

PRESIDENT,

AND PROFESSOR OF PHILOLOGY AND LITERATURE.

SAMUEL ALSOP, JR., A.M.,

SUPERINTENDENT,

AND PROFESSOR OF PHYSICS AND ASTRONOMY.

JOHN H. DILLINGHAM, A.M.,

PROFESSOR OF MORAL AND POLITICAL SCIENCE.

PLINY E. CHASE, LL.D.,

PROFESSOR OF PHILOSOPHY AND LOGIC.

ISAAC SHARPLESS, S.B.,

PROFESSOR OF MATHEMATICS AND CHEMISTRY.

J. FRANKLIN DAVIS, A.B.,

ASSISTANT SUPERINTENDENT,

AND ASSISTANT PROFESSOR OF PHILOLOGY.

EDWARD D. COPE, A.M.,

LECTURER ON ZOOLOGY.

JOSEPH THOMAS, LL.D.,

LECTURER ON HISTORY.

## SENIOR CLASS.

## CLASSICAL SECTION.

Baily, Henry	Newport,	Pa.
Baily, Albert Lang	Philadelphia,	Pa.
Carey, Francis King	Baltimore,	Md.
Comfort, Edward Thomas	Germantown,	Pa.
Crosman, Charles Sumner	Lynn,	Mass.
Hill, Samuel H.	Minneapolis,	Minn.
Reynolds, Lindley M. H.	Bush Hill,	N. C.
Smiley, Daniel, Jr.	Vassalboro,	Me.
Taylor, Henry Longstreet	Cincinnati,	Ohio.
Thomas, J. M. Whitall	Baltimore,	Md.
White, George Wilson	Belvidere,	N. C.

## SCIENTIFIC SECTION.

Eldridge, Jonathan	Goshenville,	Pa.
Forsythe, Edward	Chadd's Ford,	Pa.
Frazier, Cyrus Piggott, A. B. (Trin. Coll., N. C.)	Bush Hill,	N. C.
Haines, Robert B., Jr.	Cheltenham,	Pa.
Stokes, Henry Newlin	Moorestown,	N. J.



## JUNIOR CLASS.

Beezley, James	Earlham,	Iowa.
Bispham, Samuel, Jr.	Philadelphia,	Pa.
Gibbons, Edward	Wilmington,	Del.
Gifford, John Henry	West Falmouth,	Mass.
Henderson, Francis	Germantown,	Pa.
Lowry, William C.	Philadelphia,	Pa.
Newkirk, John Bacon	Greenwich,	N. J.
Sheppard, John E.	Greenwich,	N. J.

## SOPHOMORE CLASS.

## CLASSICAL SECTION.

Brede, Charles Frederic	Salem,	Iowa.
Cope, Francis Hazen	Germantown,	Pa.
Cox, Charles Elwood	Lawrence,	Kan.
Edwards, Josiah Pennington	Spiceland,	Ind.
Lynch, James Lewis	Longwood,	Mo.
Mason, Samuel, Jr.	Germantown,	Pa.
Perry, William Francis	Wakefield,	R. I.
Rhoads, Joseph, Jr.	Wilmington,	Del.
Whitall, John M.	Germantown,	Pa.
White, Thomas Newby	Belvidere,	N. C.

## SCIENTIFIC SECTION.

Corbit, Alexander P.	Odessa,	Del.
Hill, Mahlon Patterson	Mt. Pleasant,	Ohio.
Updegraff, William Ross	Mt. Pleasant,	Ohio.

## FRESHMAN CLASS.

## CLASSICAL SECTION.

Blair, William Allen	High Point,	N. C.
Carey, A. Morris	Baltimore,	Md.
Chase, William Cromwell	Haverford College,	Pa.
Edwards, Levi Talbott	Spiceland,	Ind.
Hartshorne, Edward Yarnall	Philadelphia,	Pa.
Harvey, Lawson Monroe	Indianapolis,	Ind.
Johnson, Isaac Thorne	Wilmington,	Ohio.
Moore, Jesse Hollowell	Goldsboro',	N. C.
Price, Walter	Philadelphia,	Pa.
Whitall, Thomas Wistar	Germantown,	Pa.
Winslow, Thomas Newby	Belvidere,	N. C.
Winston, John Clark	Richmond,	Va.

## SCIENTIFIC SECTION.

Collins, William Henry	Poughkeepsie,	N. Y.
Cook, Joseph Horace	Philadelphia,	Pa.
Jenkins, Charles Williams	Germantown,	Pa.
Marshburn, William Valentine	Snow Camp,	N. C.
Phillips, John Lougeay	Pittsburg,	Pa.

Shipley, Walter Penn	Germantown,	Pa.
Smith, Albanus Longstreth	Hestonville, Phila.	Pa.
White, Walter	Belvidere,	N. C.
Vail, George Requa	Los Angeles,	Cal.
Vail, John Randolph	Los Angeles,	Cal.

## SUMMARY.

Seniors . . . . .	16
Juniors . . . . .	8
Sophomores . . . . .	13
Freshmen . . . . .	22
Total . . . . .	<u>59</u>

## Calendar.

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College Year, 1877-78, began with the beginning of the Autumn Term, 1877 . . . . .	9th Mo. 5.
Winter Recess began . . . . .	12th Mo. 20.
Winter Term began,* 1878 . . . . .	1st Mo. 3.
Second Half-year begins . . . . .	1st Mo. 30.
Mid-year Examinations begin . . . . .	1st Mo. 30.
Oration before the Loganian Society . . . . .	4th Mo. 9.
Junior Exercises . . . . .	4th Mo. 10.
Spring Recess begins . . . . .	4th Mo. 10.
Spring Term begins* . . . . .	4th Mo. 24.
Public Meeting of the Loganian Society . . . . .	6th Mo. 24.
Address before the Alumni . . . . .	6th Mo. 25.
Address to the Graduating Class . . . . .	6th Mo. 26.
Commencement Day . . . . .	6th Mo. 26.
Examinations for Admission . . . . .	6th Mo. 26.

### VACATION OF TEN WEEKS.

Examinations for Admission . . . . .	9th Mo. 3.
College Year, 1878-79, begins* . . . . .	9th Mo. 4.
Winter Recess begins . . . . .	12th Mo. 21.
Winter Term begins,* 1879 . . . . .	1st Mo. 6.
Spring Recess begins . . . . .	4th Mo. 16.
Commencement Day, 1879 . . . . .	6th Mo. 25.

\* The first recitations are due promptly at *half past nine o'clock* at the beginning of each Term. No absences from them are excused, unless clearly unavoidable

## Requisites and Terms for Admission.

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CANDIDATES for admission to the Freshman Class in the Classical Course, will be examined as to their proficiency in the following requisites:—

*Classics.*—A familiar knowledge of the paradigms, and of the leading rules in Syntax, in Latin and Greek Grammar, to be tested, in part, by writing easy sentences in Latin and Greek; acquaintance with Prosody, to be proved by scanning verses from Virgil; and ability to give, after an hour's study—with the aid of a Lexicon—a literal translation of a passage *not before read* by the candidate, both in Latin and Greek prose or verse, equal in amount to fifty hexameter lines, and to apply the proper rules of Syntax to the constructions in that passage.

Candidates are recommended to read the books of a preparatory course in Greek and Latin which are ordinarily prescribed in the requisitions for admission to American colleges; but this course may be varied at the discretion of teachers, provided the candidate is found to possess a sufficient knowledge of both languages to enable him to pursue, with facility and advantage, the studies of the Freshman year.

*Mathematics.*—Arithmetic, including the Metric System, Algebra, as far as Quadratic Equations, and some introductory knowledge in Geometry, gained from the first two books in Playfair's Euclid, or their equivalents.

*English.*—Spelling, Grammar, English Composition, Geography, and the History of the United States. (The examinations in these subjects will be regarded as of no less weight than those in classics and mathematics.)

Candidates for admission to the Freshman Class in the SCIENTIFIC COURSE will pass the same examination as candidates for the Classical Course, except in the Greek language.

Satisfactory examination-papers written under proper supervision at first-class schools, and forwarded to us by the teachers, will be accepted so far as they cover the same ground as our own requisitions.

Students not candidates for a Degree may, at the discretion of the Faculty, be admitted to pursue special courses, for proficiency in which certificates may be granted; but this permission shall be given only to students of sufficient age, ability, and diligence to ensure their success.

Candidates found fully prepared for admission to the Freshman Class, and also in all the regular studies of the Freshman year, may be admitted to the Sophomore Class.

A rule of the Corporation directs that "The College shall be open for the admission of the sons of Friends, and of others who are willing that their children should be educated in conformity with the principles of our religious Society."

Each candidate must forward, together with his application, a certificate of good moral character from his last teacher; and students from other colleges must present also certificates of honorable dismissal in good standing.

No student is admitted for a period less than one year.

APPLICATIONS FOR ADMISSION must be made to the President, THOMAS CHASE, Haverford College P. O., Montgomery Co., Pa. Candidates will present themselves at the College, for examination by the Faculty, *at 2 o'clock on Commence-*

*ment-day, or at 9 o'clock on the morning previous to the beginning of the college term at which they desire to enter.*

The price of Board and Tuition is \$425.00 per annum, payable one-half at the beginning, and one-half at the middle of the College year. Washing is charged at the rate of 75 cents per dozen.

For day-students, who dine at the College, the annual charge is \$250.00.



## Courses of Instruction.

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### CLASSICAL COURSE.

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#### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John. 1 hour a week.
2. *Mathematics.* Euclid's Geometry.—Alsop's Algebra.—Loomis's Plane Trigonometry. 4 hours a week.
3. *Greek.* Selections from Greek Historians.—Homer.—Review of Greek Grammar.—Exercises in writing Greek. 3 hours a week.
4. *Latin.* Livy (Chase).—Horace (Chase).—Review of Latin Grammar.—Exercises in writing Latin. 4 hours a week.
5. *English Literature.* Cleveland's Compendium.—Hart's Rhetoric.—Compositions.
6. *History.* Smith's History of Greece.—Liddell's History of Rome.
7. *Physical Geography.* Guyot's Earth and Man.
8. *Zoology.* Tenney's.
9. *Botany.* Wood or Gray. Subjects 5, 6, 7, 8, and 9, 4 hours a week.
10. *Drawing.* White's Art Studies. 1 hour a week.

## SOPHOMORE CLASS.

1. *Scripture.* English New Testament. 1 hour a week.
2. *Mathematics.* Loomis's Trigonometry and Surveying, with Field Practice.—Loomis's Spherical Trigonometry. 3 hours a week.
3. *Greek.* The Iliad or Odyssey of Homer.—Plato's Apology and Crito.—The Prometheus of Æschylus.—Exercises in writing Greek. 3 hours a week.
4. *Latin.* Horace (Chase).—The Germania and Agricola of Tacitus.—Exercises in writing Latin. 3 hours a week the first half year, 2 hours the second.
5. *Ethics and Christian Evidences.* Dymond's Essays on Morality.—Paley's Evidences of Christianity.
6. *Political Economy.* Wayland and Thompson.
7. *History.* Liddell's History of Rome.—Modern History. Subjects 5, 6, and 7, 3 hours a week.
8. *Physics.* Norton's Natural Philosophy.—Lectures. 3 hours a week the first half year.
9. *Chemistry.* Eliot and Storer's Chemistry.—Lectures. 3 hours a week the second half year.
10. *Geology.* Dana's Text-book. 1 hour a week the second half year.
11. *Drawing.* White's Art Studies. 1 hour a week.

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 JUNIOR CLASS.

## REQUIRED STUDIES.

1. *Scripture.* Greek Testament (Westcott and Hort, or Tischendorf's 8th edition). 1 hour a week.
2. *Mathematics.* Loomis's Analytical Geometry. 3 hours a week the first half year.

3. *Astronomy.* Descriptive Astronomy (Herschel and Loomis). 3 hours a week the second half year.
4. *Greek.* Thucydides.—The Antigone of Sophocles.—Exercises in writing Greek. 2 hours a week.
5. *Latin.* Cicero's Tusculan Disputations and Somnium Scipionis (Chase).—The Captives of Plautus—Chase's Selections from Juvenal.—Exercises in writing Latin. 2 hours a week.
6. *French.* Knapp's Grammar.—Fénelon's *Télémaque*.—*Histoire de Charles XII.*—Exercises. 2 hours a week. (Students sufficiently advanced may recite in French with the Senior Class.)
7. *Geology.* Dana's Text-book (finished).
8. *Rhetoric.* Whately's Rhetoric.
9. *Logic.* Whately and Hamilton.
10. *Psychology.* Haven's Mental Philosophy (begun). Subjects 7 to 10, 2 hours a week the first half year, 3 hours the second.
11. *Political Science.* Kent's Commentaries on the Law of Nations, and American and Municipal Law.—Constitution of the United States.—Forensics.
12. *Anglo-Saxon.* Subjects 11 and 12, 2 hours a week the first half year, 1 hour the second.
13. *Elocution.* Rehearsals for Public Exhibition.

## ELECTIVE STUDIES.

(Two hours a week to be selected.)

1. *Descriptive Geometry and Perspective.* 2 hours a week.
2. *Chemistry.* Qualitative Analysis.—Laboratory Practice. 2 hours a week the first half year.
3. *Mathematics.* Loomis's Differential and Integral Calculus. 2 hours a week the second half year.
4. *German.* Whitney's Grammar, Exercises, and Reader. 2 hours a week the second half year.

## SENIOR CLASS.

## REQUIRED STUDIES.

1. *Scripture.* Greek Testament continued. 1 hour a week.
2. *Latin; and Classical Literature.* Cicero's Letters.—Pliny's Letters.—The Ancient Pronunciation of Latin.—Latin Compositions.—History of the Literatures of Greece and Rome. Two hours a week.
3. *German.* Whitney's Grammar, Reader, and Exercises. (Required, in lieu of one of the elective studies, of those members only of the Senior Class who have not previously studied German.) 2 hours a week the second half year.
4. *Psychology.* Haven continued.—Porter's Human Intellect.—Lectures.
5. *Philology.* Whitney's Science of Language. Subjects 4 and 5, 3 hours a week the first half year.
6. *Natural and Revealed Religion.* Butler's Analogy.
7. *Christian Doctrines.* Barclay and Gurney.
8. *English.* March's Philological Study, or an equivalent.—Themes. Subjects 6, 7, and 8, 2 hours a week.
9. *History.* Hallam's Constitutional History of England.—Guizot's History of Modern Civilization.—Arnold's Lectures on Modern History. 2 hours a week.
10. *Anatomy, Physiology, and Hygiene.* 3 hours a week the second half year.
11. *Elocution and Composition.* A Public Oration at Commencement.

## ELECTIVE STUDIES.

(Three studies to be selected.)

1. *Mechanics.* Peck's Mechanics. 2 hours a week.
2. *Physics.* Acoustics.—Optics.—Heat and its Applications.—Electricity. 2 hours a week.
3. *Astronomy, etc.* Loomis's Practical Astronomy, with

- Practice in the Observatory.—Meteorology. *2 hours a week.*
4. *Classical Philology and Greek.* Demosthenes on the Crown, or an Equivalent.—Greek Lyric Poets.—Greek Composition.—Papillon's Greek and Latin Inflections.—Peile's Greek and Latin Etymology, with Curtius, Vanček, and Corssen, for reference.—Curtius's and Roby's Grammars, for reference.—Inscriptions. *2 hours a week.*
  5. *Psychology.* Jouffroy.—Berkeley.—Porter (continued). *2 hours a week the second half year.*
  6. *French.* Sainte-Beuve or Taine.—Racine.—Sauveur's *Entretiens sur la Grammaire.*—Exercises. *3 hours a week, counting as two hours.*
  7. *German.* *Der Neffe als Onkel.*—Schiller's *Wilhelm Tell.*—Review of the Grammar.—Exercises. *2 hours a week.* (Advanced German, or French, may be dropped in the second half year by students who wish to take Calculus in place of either of them.)
  8. *Differential and Integral Calculus.* *2 hours a week the second half year.*

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## SCIENTIFIC COURSE.

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### FRESHMAN CLASS.

1. *Scripture.* The Gospel according to John. *1 hour a week.*
2. *Mathematics.* Euclid's Geometry —Also's Algebra.—Loomis's Plane Trigonometry. *4 hours a week.*
3. *Latin.* Livy (Chase).—Horace (Chase).—Review of Latin Grammar.—Exercises in writing Latin. *4 hours a week.*

4. *English Literature.* Cleveland's Compendium —Hart's Rhetoric.—Compositions.
5. *History.* Greek and Roman History. Subjects 4 and 5, 2 hours a week.
6. *Physics.* Norton's Natural Philosophy —Lectures. 3 hours a week the first half year.
7. *Chemistry.* Eliot and Storer.—Lectures. 3 hours a week the second half year.
8. *Physical Geography.* Guyot's Earth and Man.
9. *Zoology.* Tenney's.
10. *Botany.* Wood or Gray. Subjects 8, 9, and 10, 2 hours a week.
11. *Drawing.* White's Art Studies. 1 hour a week.

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SOPHOMORE CLASS.

1. *Scripture.* The New Testament. 1 hour a week.
2. *Mathematics.* Loomis's Trigonometry and Surveying, with Field Practice.—Loomis's Spherical Trigonometry. 3 hours a week.
3. *Descriptive Astronomy.* Herschel and Loomis. 3 hours a week the second half year.
4. *French.* Knapp's Grammar.—Fénelon's *Télémaque*.—*Histoire de Charles XII*—Exercises. 2 hours a week. (Students sufficiently advanced may recite in French with the Junior Class )
5. *Ethics and Christian Evidences.* Dymond's Essays on Morality.—Paley's Evidences of Christianity.
6. *Political Economy.* Wayland and Thompson.
7. *History.* History of Rome.—Modern History.—Subjects 5, 6, and 7, 3 hours a week.
8. *Chemistry* Cooke's Chemical Philosophy.—Qualitative Analysis.—Laboratory Practice. 2 hours a week.
9. *Physics.* Tyndall on Heat. 2 hours a week the first half year.



10. *Geology*. Dana's Text-book. 1 hour a week the second half year.
11. *Natural History, etc.* Advanced Zoology. 2 hours a week the first half year.
12. *Drawing*. Mechanical Drawing. 2 hours a week.

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### JUNIOR CLASS.

#### REQUIRED STUDIES.

1. *The Holy Scriptures*. The English Bible; or the Greek Testament (for students having a sufficient knowledge of Greek). 1 hour a week.
2. *Mathematics*. Loomis's Analytical Geometry.—Differential and Integral Calculus. 3 hours a week.
3. *Descriptive Geometry and Drawing*. Isometric Projection and Perspective. 2 hours a week.
4. *French*. Sainte-Beuve or Taine.—Racine.—Sauveur's Entretiens sur la Grammaire.—Exercises. 3 hours a week, counting as two hours.
5. *German*. Whitney's Grammar, Exercises, and Reader. 2 hours a week the second half year.
6. *Geology*. Dana's Text-book (finished).
7. *Rhetoric*. Whately's Rhetoric.
8. *Logic*. Whately and Hamilton.
9. *Psychology*. Haven's Mental Philosophy (begun). Subjects 6 to 9, 2 hours a week the first half year, 3 hours the second.
10. *Political Science*. Kent's Commentaries on the Law of Nations, and American and Municipal Law.—Constitution of the United States.—Forensics.
11. *Anglo-Saxon*. Subjects 10 and 11, 2 hours a week the first half year, 1 hour the second.
12. *Physics*. Acoustics.—Optics.—Heat and its Applications.—Electricity. 2 hours a week.
13. *Elocution*. Rehearsals for Public Exhibition.

## ELECTIVE STUDIES.

*(One study to be selected.)*

1. *Advanced Geology, and Mineralogy.* Lyell.—Dana. 2 hours a week the first half year.
2. *Elementary Greek.* Grammar and Reader.—Scientific Nomenclature. 2 hours a week the first half year.
3. *Latin.* Cicero's Tusculan Disputations, etc. 2 hours a week the first half year.

## SENIOR CLASS.

## REQUIRED STUDIES.

1. *The Holy Scriptures.* The English Bible, or Greek Testament. 1 hour a week.
2. *Mathematics.* Analytical Mechanics. 2 hours a week.
3. *Astronomy, etc.* Loomis's Practical Astronomy, with practice in the Observatory.—Meteorology. 2 hours a week.
4. *German.* Der Neffe als Onkel.—Schiller's Wilhelm Tell.—Review of the Grammar.—Exercises. 2 hours a week.
5. *Psychology.* Haven (continued).—Porter's Human Intellect.—Lectures.
6. *Philology.* Whitney's Science of Language. Subjects 5 and 6, 3 hours a week the first half year.
7. *Natural and Revealed Religion.* Butler's Analogy.
8. *Christian Doctrines.* Barclay and Gurney.
9. *English.* March's Philological Study.—Themes.
10. *History.* Guizot's History of Modern Civilization — Arnold's Lectures on Modern History. Subjects 7, 8, 9, and 10, 2 hours a week.
11. *Anatomy, Physiology, and Hygiene.* 3 hours a week the second half year.
12. *Composition and Elocution.* A Public Oration at Commencement.



## ELECTIVE STUDIES.

(Two studies to be selected)

1. *Mathematics.* Determinants.—Theory of Equations.—Quaternions. 2 hours a week.
2. *Experimental Physics.* 2 hours a week.
3. *Applied Mechanics and Constructive Engineering.* 2 hours a week.
4. *Psychology.* Jouffroy.—Berkeley.—Porter (continued).—Lectures. 2 hours a week the second half year.
5. *Greek.* Homer—History of Greek Literature. 2 hours a week.
6. *English Constitutional History.* Hallam. 2 hours a week the first half year.

## Lectures.

THE COURSES of Lectures for the year 1877-78 are as follows:—

### TO THE WHOLE COLLEGE.

<i>Man</i> . . . . .	PROFESSOR P. E. CHASE.
<i>International Law and Chris-</i>	} PROF. DILLINGHAM.
<i>tianity</i> . . . . .	
<i>The Spectroscope and its Appli-</i>	} PROFESSOR SHARPLESS.
<i>cations</i> . . . . .	
<i>English Literature.</i> . . . . .	PRESIDENT CHASE.
<i>Phonology</i> . . . . .	PROFESSOR DAVIS.

### TO THE SENIOR CLASS.

<i>Philosophical Principles</i> . . . . .	PROFESSOR P. E. CHASE.
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### TO THE JUNIOR CLASS.

<i>Inductive and Deductive Logic</i> . . . . .	PROFESSOR P. E. CHASE.
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### TO THE SOPHOMORE CLASS.

<i>Natural Philosophy</i> . . . . .	PROFESSOR ALSOP.
<i>Chemistry</i> . . . . .	PROFESSOR SHARPLESS.

## Examinations.

In determining the rank of the students, equal weight is given to the *viva voce* and the written examinations.

There are private examinations of each class, in writing, in the studies of the year, all of which must be passed satisfactorily before a student can be advanced to the next higher class, or receive, finally, the degree of Bachelor of Arts or that of Bachelor of Science. The examinations are conducted upon the following plan:—

The members of the class under examination are seated in a room by themselves, under the supervision of an officer, and a set of questions is furnished them upon some book or subject in the course, which each student is required to answer in writing, without consulting any person or book. The time of writing, for the examination in each book, is limited to three hours. The questions are upon topics and passages selected throughout the text-books, or upon matters which have been clearly illustrated in the teacher's instructions, and are calculated to test as accurately as possible the student's knowledge of the whole subject. Neatness of penmanship, *orthography*, grammar, and style of expression receive due weight in the estimation of the value of the answers.

A student's answers must be sufficiently meritorious to receive a mark of at least six, on a scale of ten, in the examination upon each book, and an average of six and two-thirds on all the books combined, before he can be advanced to the next higher class, or receive a diploma as a graduate. *But no student is entitled to such advancement, whatever his numbers or rank, unless, in the private judgment of all his instructors and caretakers, he has been faithful in his daily studies, and satisfactory in his character and conduct.*

The *viva voce* examinations are made in the daily recitations. Each recitation during the course is marked on a scale in which ten indicates the highest excellence. From the aggregate of marks received for recitations, themes, etc., deductions are made for irregularities and misdemeanors; and the sum of credit marks remaining, reduced to an average on the scale of ten, is combined with the average obtained in the written examinations, to determine a student's rank.

*Special* written examinations are occasionally held, to test the proficiency of students.

## Degree of Master.

BACHELORS OF ARTS of three years' standing may take the degree of Master of Arts, and BACHELORS OF SCIENCE of three years' standing may take the degree of Master of Science, on submitting to the Executive Committee satisfactory evidence of continued good moral character, and passing an Examination on some literary or scientific Course of Study, which shall receive the approbation of the Faculty and Managers. As it is designed that these degrees shall represent real and solid attainments in scholarship, the results of the Examination are considered by both Boards, and must exhibit sufficient research, thought, and ability, to attest substantial desert on the part of the applicant.

The following are stated as adequate Courses of Study to be presented by candidates for the Second Degree:—

- I. The Pauline Epistles in Greek (with Winer's or Buttmann's N. T. Grammar, Grimm's Lexicon, and Scrivener's Introduction).
- II. The whole of Thucydides.
- III. Seven Tragedies of Æschylus, Sophocles, or Euripides.
- IV. Cicero's Tusculan Disputations (five books), De Natura Deorum, and De Officiis.
- V. The whole of Tacitus.
- VI. Schiller's History of the Thirty Years' War, and Wallenstein (all the parts), in the original German.
- VII. The Nicomachean Ethics of Aristotle (in the original), and Jouffroy's Introduction to Ethics.
- VIII. The History and Principles of Moral Science, and the Ethics of Christianity.
- IX. Thermodynamics.
- X. Theoretical Astronomy (Watson and Gauss).
- XI. Rankine's Applied Mechanics, or Rankine's Civil Engineering.
- XII. Freeman's History of the Norman Conquest, Green's larger

History of England, and Hallam's and May's Constitutional Histories.

XIII. Comparative Philology (Bopp, Max Müller, Whitney, Corssen, Curtius, Schleicher, Leo Meyer).

Notice of application for examination must be given two months before Commencement. The examinations will be held the first week in the Sixth month. The fee for the Diploma is Twenty Dollars, to be paid, in all cases, before Commencement-day.

In lieu of examinations, Theses (if sufficiently elaborate and well-studied) may be received until 1879.

Candidates who are examined may also (if they desire) hand in Dissertations on topics, in their field of study, which they have elaborately investigated.

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## Alumni Prize for Composition and Oratory.

THE ASSOCIATION of the Alumni, in the year 1875, instituted an ANNUAL PRIZE of a Gold Medal for excellence in Composition and Oratory. The competition is confined to members of the Senior and Junior Classes, and is made on the last sixth-day of the Fifth month, before judges appointed by a committee of the Alumni. The successful competitor will deliver his oration publicly on the evening of Alumni Day, the President of the Association handing him the Prize.

The rules of the Association provide that no oration shall occupy in delivery more than fifteen minutes. It is understood also that, "while due regard is given to the subject-matter of the oration, the judges, in making their award, are to consider the prize as offered to encourage more especially the attainment of excellence in elocution."

The prize was awarded last year to FRANCIS KING CAREY, of the class of 1878, for his oration on "The Future of a Great Experiment."

## Alumni Prize

### FOR AN ESSAY SUGGESTING IMPROVED METHODS IN INTERNATIONAL LAW.

The Association of the Alumni offers a prize of \$250, or £50, for the best Essay setting forth "*The most Practicable Plan for Promoting the Speedy Substitution of Judicial, for Violent Methods of Settling International Disputes.*"

The Essays, each accompanied by a sealed envelope containing the name and address of the author, are to be submitted before the end of the year 1878, to the Adjudicators, who will report the result of their adjudication at the Annual Meeting of the Alumni, occurring in the ensuing summer.

The Essays must not exceed in length 100 pages of 300 words each. Those written in any other language must be translated into English before presentation, and both the original and the translation presented to the Committee.

The Association reserves the privilege of retaining all the Essays that compete for the prize. Essays may be forwarded to any member of the following Committee of Adjudicators: Francis T. King, 76 Cathedral St., Baltimore, Md.; James Whitall, 410 Race St., Philadelphia, Penna.; John B. Garrett, 131 N. 18th St., Philadelphia, Penna.

## Library.

LIBRARIAN, Prof. SAMUEL ALSOP, Jr.; COMMITTEE in charge of the Library, Richard Wood, *Chairman*; Benjamin V. Marsh, Philip C. Garrett, Charles Roberts, Edward Bettle, Jr., Edward L. Scull.

THE number of bound volumes in the Library Hall, accessible to the members of the College, is 11,025. Of these, the LIBRARY OF HAVERFORD COLLEGE contains 7410 volumes; that of the LOGANIAN SOCIETY 2315; those of other

societies 1300. Numerous American and European periodicals, scientific and literary, are taken by the Library.

By contributions of friends of the College, a fund of ten thousand dollars has been established, the income of which is devoted to the increase of the Library.

The College possesses—a gift from Friends in England—a copy of the imperial edition of the *CODEX SINAITICUS*, published by the Emperor of Russia, and Woidé's edition of the *CODEX ALEXANDRINUS*. To these have been added, by donation and purchase, the Roman edition of the *CODEX VATICANUS*, and Tischendorf's edition of the same *CODEX*. The Library thus contains copies, nearly in facsimile, of the most ancient known manuscript-authorities for the genuine text of the New Testament.

Fine copies of Walton's Polyglot and Castell's Lexicon were presented in 1876 by J. Bevan Braithwaite.

An excellent cast of the *ROSETTA STONE*, with its tri-lingual inscription, is among our palæographic treasures.

The Library is open as a reading-room several hours daily, during which the volumes in the alcoves are freely consulted.

A *CARD CATALOGUE* of the College and the Society Libraries has recently been made, and is of great service in showing at once what books, essays, or review articles these Libraries possess on any subject, and where they may be found.

## Museum, Laboratories, and Apparatus.

The large *MINERALOGICAL COLLECTION* of the late Dr. Troost, contains about 2700 specimens. The *GEOLOGICAL CABINET* comprises about 2500 specimens, and contains complete suits illustrating the Geology of New York and South Carolina, prepared for the College by the late Lardner Vanuxem.

A valuable set of elastic models made by Auzoux, of Paris, admirably exhibiting, by dissection, the actual appearance and anatomy of the minute, as well as the larger, organs of the



entire human body, and of other interesting subjects in ZOOLOGY, COMPARATIVE ANATOMY, and BOTANY; also, a collection of plaster models of FOSSIL SPECIES in Natural History, made by Professor Ward, of Rochester, have been presented to the College by Richard Wood

Arrangements will soon be made for the display of these various collections in the MUSEUM OF NATURAL HISTORY, in such a manner as to facilitate the study of them.

Extensive APPARATUS is furnished for the illustration of Natural Philosophy and Chemistry, and important additions to it are now making.

Improved accommodations will be furnished within the present year for the CHEMICAL and PHYSICAL LABORATORIES.

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## Astronomical Observatory.

THE HAVERFORD OBSERVATORY affords the students in the higher classes the means of becoming familiar with the use of astronomical instruments, and of acquiring, from actual observation, a practical acquaintance with Astronomy.

It contains an Equatorial Telescope, mounted in the Fraunhofer style, with an object-glass of  $8\frac{1}{4}$  inches aperture, and a focal length of 11 feet, and furnished with an annular micrometer, with six eye-pieces, varying in magnifying power from 60 to 900 times; a Meridian Transit Circle, of the German form, having a Telescope of 4 inches aperture, and 5 feet focus, with a circle at each end of the axis 26 inches in diameter—one reading by four verniers to two seconds of arc, the other used simply as a finder; a Prime Vertical Transit; a Solar Clock; a Sidereal Clock, with the mercurial compensation; and Bond's Magnetic Chronograph, for the instantaneous recording of observations.

The latitude of the Observatory is  $40^{\circ} 0' 36''.5$  N. : its longitude,  $5^{\text{h}} 1^{\text{m}} 12^{\text{sec}}.75$  W. from Greenwich.

## Societies.

THE LOGANIAN SOCIETY was established by the Officers and Students in 1834. The exercises in its weekly meetings are Discussions, Declamations, Original Essays, etc. The Society publishes a manuscript paper or magazine, "THE COLLEGIAN," monthly. It has in its possession a carefully selected Library of 2315 volumes, and cabinets of conchology, geology, natural history, medals, and coins. A large GYMNASIUM, also, is under its direction, and a CARPENTER'S SHOP belongs to the Society.

THE ATHENÆUM and EVERETT are literary societies of the students. Their libraries contain 1300 volumes.

## Situation of the College.

THE College has a remarkably pleasant and healthful location, in the township of Haverford, Delaware County, nine miles west of Philadelphia. It is near HAVERFORD COLLEGE STATION, on the Pennsylvania Railroad. Address HAVERFORD COLLEGE P. O., *Montgomery County, Pa.* The buildings are situated on a lawn of upwards of sixty acres, tastefully laid out, and adorned with a great variety of trees and shrubbery. The grounds of the College comprise excellent fields for cricket and base-ball.

The Old College Hall was built in the years 1832-33; the Astronomical Observatory in 1852; the Chemical Laboratory and Gymnasium in 1853; the Alumni Hall and Library in 1863-64; and Barclay Hall in 1876-77. BARCLAY HALL is a beautiful edifice of granite, 220 by 40 feet, containing private studies and dormitories for about eighty students. It is furnished with the best modern conveniences, and with everything calculated to make it a healthful, comfortable, and



agreeable residence. The dining-room, recitation-rooms, and Museum are in the Old College.

## Instruction and Discipline.

THE Courses of Instruction at Haverford, aiming at thorough and generous training, retain the standard studies proved by long experience to be most fruitful in mental culture, but give them no undue preponderance, and add to them those scientific and practical studies which have risen into prominence in recent times. Both courses are designed to give a broad, as well as thorough culture, so that the Baccalaureate degrees, whether in Arts or Science, may attest a comprehensive and truly liberal education.

As the students form one household, their Religious Instruction is carefully provided for. In addition to the daily readings of the Holy Scriptures, recitations in them are required of each student once a week. By exposition, and presenting collateral information, the instructors endeavor to illustrate and enforce the true meaning of the lessons. In the last two years of the course there are recitations weekly in the Greek Testament. Dymond's Ethics, Paley's Evidences, Butler's Analogy, Barclay's Apology, and Gurney's Observations, form part of the regular course of study.

In the Discipline of the College, the Officers endeavor to promote habits of order and regularity. Such restraints only are imposed as are deemed necessary to attain this end, or to secure the students from those temptations which are incident to their situation, removed as they are from the protection and preserving influences of home. In maintaining the discipline, private admonition, and appeals to the manliness and good sense of the students, and, above all, to their conscientious feeling and Christian principle, are the means most confidently relied upon.

## DEGREES GRANTED IN 1877.

At the Commencement in 1877, Degrees were granted, in course, to the following graduates:—

**BACHELORS OF ARTS.**

ISAAC W. ANDERSON,  
 FREDERIC LANG BAILY,  
 ISAAC FORSYTHE,  
 JAMES DELAPLAINE KRIDER,  
 GEORGE GLUYAS MERCER, LL. B.,  
 WILSON TOWNSEND.

**BACHELOR OF SCIENCE.**

WILLIAM FOULKE SMITH.

**MASTERS OF ARTS.**

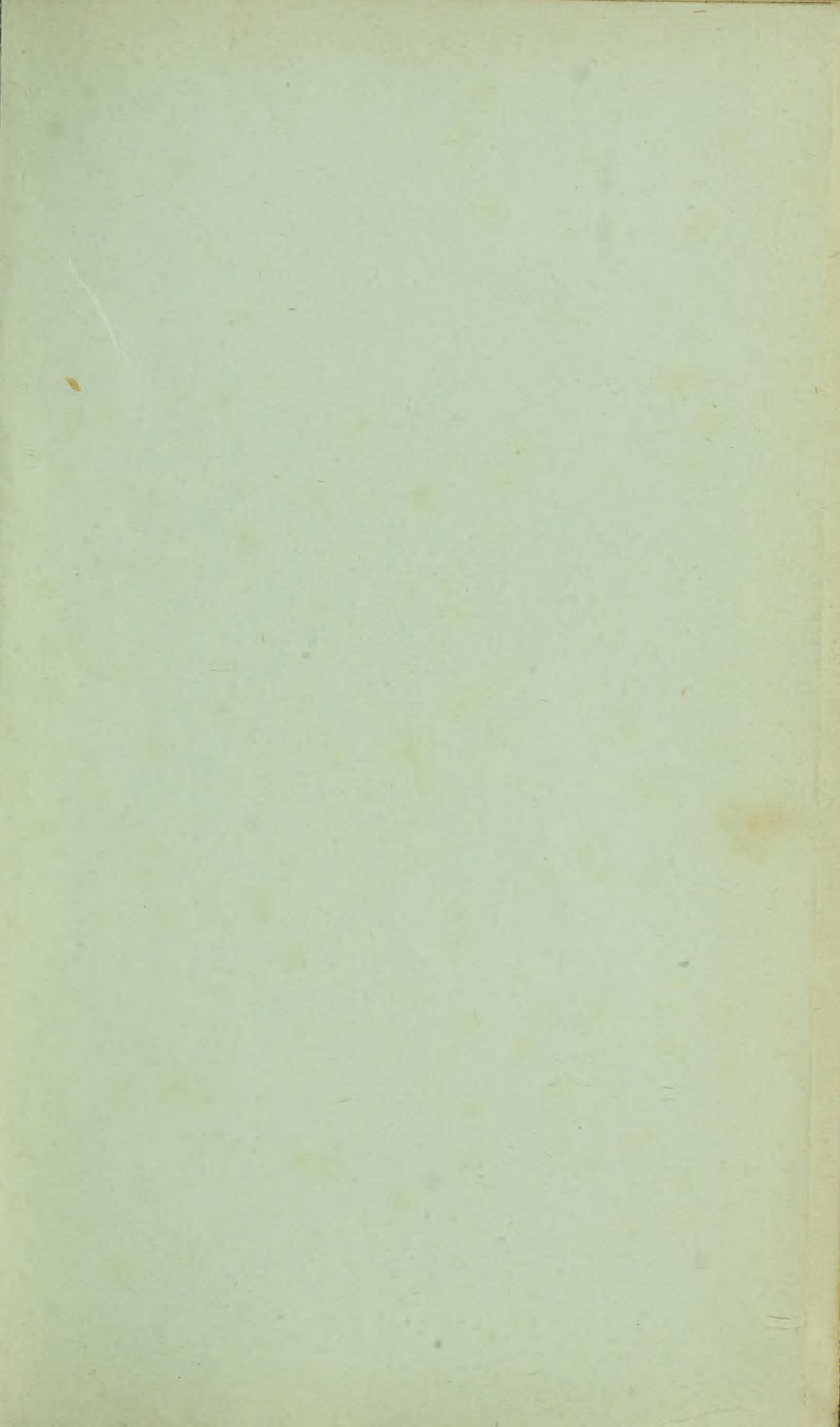
JAMES CAREY THOMAS, M.D. (Class of 1851).  
 HENRY COPE (Class of 1869).  
 CHARLES EDWARD PRATT (Class of 1870).  
 MARMADUKE COPE KIMBER (Class of 1872).

The Honorary Degree of Master of Arts was conferred upon

JOHN J. THOMAS, M.D.









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