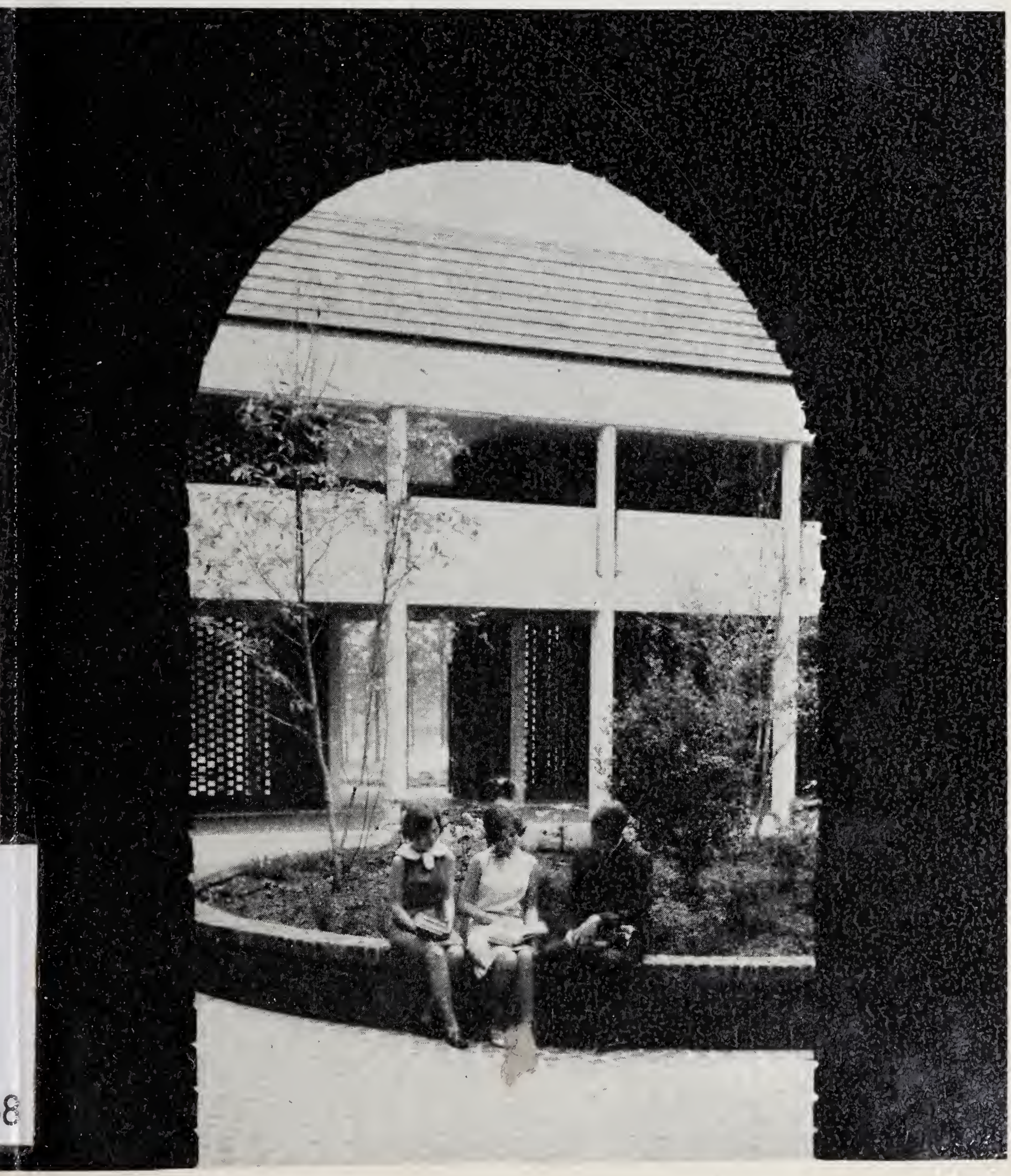
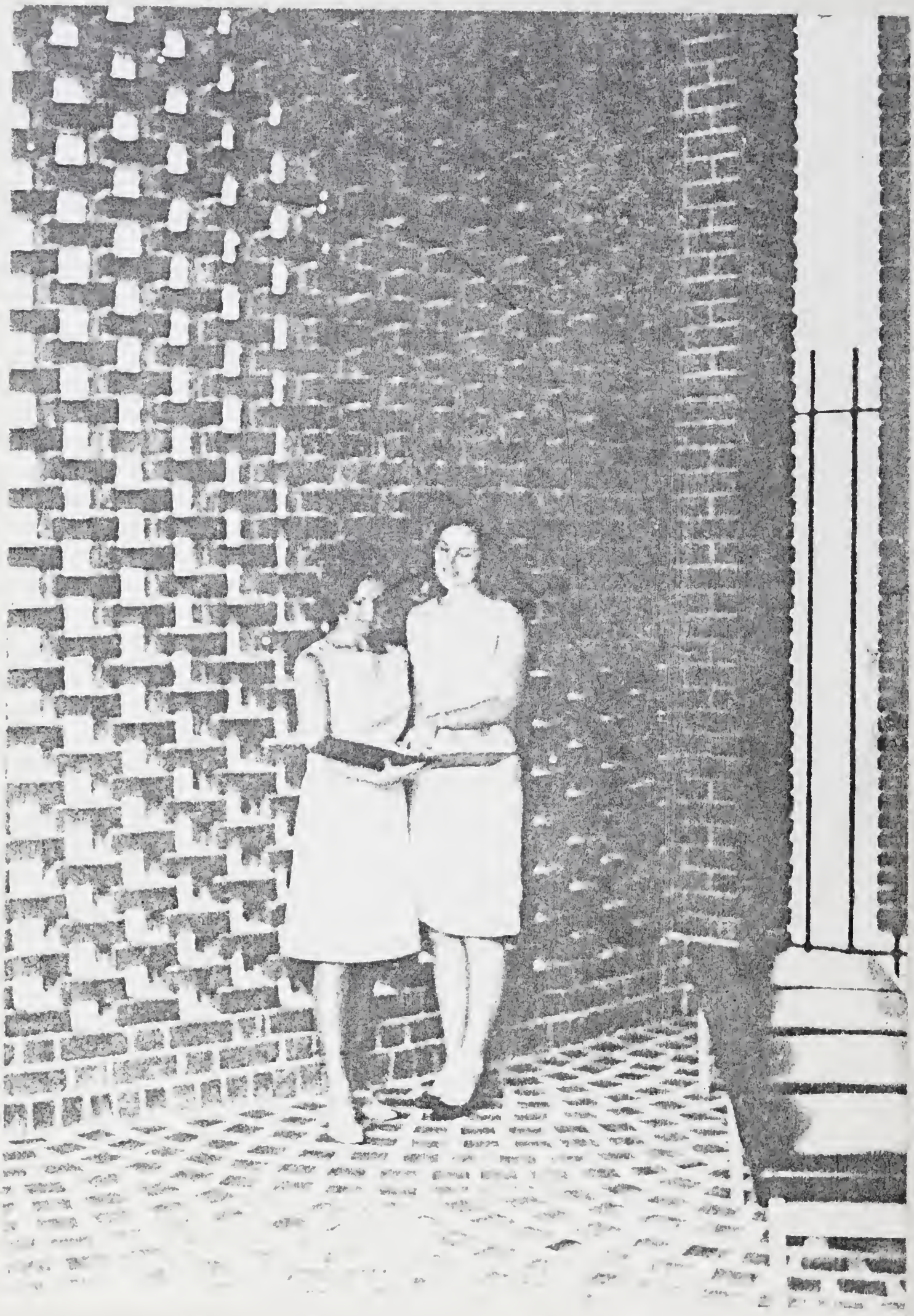
Sandhills Community College

CATALOG 1967-1968





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CATALOG 1967-1968

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ACADEMIC CALENDAR
1967 - 1968

SUMMER QUARTER, 1967

Dates: Full term for technical and trade students June 5 - August 17

First summer term for college transfer and business students June 5 - July 14

Second summer term for college transfer and business students July 17 - August 25

FALL QUARTER, 1967

September 20-22, Wed. thru Fri.	Orientation of new students
September 25, Monday	Registration of new and returning students
September 26, Tuesday	Classes begin
October 9, Monday	Drop-add period ends
October 27, Friday	Parents Day
November 22, Wednesday	Last day of classes before Thanksgiving holidays
November 23-26, Thurs. thru Sun.	Thanksgiving holidays
November 27, Monday	Classes resume
December 4, Monday	Founders Day
December 6, Wednesday	Last day of classes
December 7-12, Thurs. thru Tues.	Final examinations
December 15, Friday	Registration for winter quarter
December 18-Jan. 1	Christmas holidays

WINTER QUARTER, 1968

January 2, Tuesday	First day of classes
January 15, Monday	End of drop-add period
March 11, Monday	Last day of classes
March 12-15, Tues. thru Fri.	Final examinations

SPRING QUARTER, 1968

March 19, Tuesday	Registration
March 20, Wednesday	First day of classes
April 2, Tuesday	End of drop-add period
April 10, Wednesday	Last day of classes before Easter holidays
April 11-15, Thurs. thru Mon.	Easter holidays
April 16, Tuesday	Classes resume
April 26, Friday	Spring Festival
May 31, Friday	Last day of classes
June 3-6, Mon. thru Thurs.	Final examinations
June 7, Friday	Commencement

SUMMER QUARTER, 1968

Dates: Full term for technical and trade students: June 11 - August 23

First summer session for college transfer and business students: June 11 - July 19

Second summer session for college transfer and business students: July 23 - August 28

SANDHILLS COMMUNITY COLLEGE

BOARD OF TRUSTEES

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Robbins, N. C.

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Aberdeen, N. C.

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Lakeview, N. C.

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Southern Pines, N. C.

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Robbins, N. C.

ADMINISTRATION

DR. RAYMOND A. STONE ..... *President*

DR. RICHARD S. RAY ..... *Dean*

W. E. COVINGTON ..... *Business Manager*

EDWARD W. DURANT, JR. ..... *Director of Planning and Development*

S. G. CHAPPELL ..... *Director of Student Personnel Services*

HENRY I. RAHN, JR. ..... *Director of Technical and Vocational Education*

D. L. FURCHES ..... *Director of Adult Education and Community Services*

FACULTY

ADAMS, WAYNE, JR. .... *Assistant Director of Adult Education*
B.S., M.S., U.N.C. at Raleigh

AIKEN, MRS. MARIANNE S. ..... *English*
B.A., Sophie Newcomb College; M.A., U.N.C. at Greensboro and Chapel Hill

ALLEN, MRS. LOUISE S. ..... *Business*
B.S., High Point College; M.Ed., U.N.C. at Greensboro

ANDERSON, BRAYOM, JR. (1965-67) ... *Director, Developmental Studies*
B.S., M.A., East Carolina College

ANDREW, MURRAY M. ..... *Mathematics*
B.S., M.Ed., U.N.C. at Chapel Hill

AVERITT, THOMAS ..... *Business*
B.S., U.N.C. at Chapel Hill; C.P.A.

BANAGHAN, WILLIAM F. (1964-66) ..... *Dean of Instruction*
A.B., M.A., San Diego State College; Ph.D., Purdue University

BAREFIELD, WILLIAM C. ..... *Mechanical Engineering*
B.S., Auburn University; M.S., Lowell Textile Institute

BOWMAN, CHARLES, JR. (1965-67) ..... *History*
B.A., M.A., U.N.C. at Chapel Hill

BREEZE, MRS. MARY (1964-65) ..... *Coordinator, Fundamentals Learning Laboratory*
A.B., U.N.C. at Greensboro

BROWN, HERMAN (1965-67) ..... *English*
A.B., M.A., University of South Carolina

BRYANT, ARTHUR E. ..... *Physics*
B.S., M.A., U.N.C. at Raleigh

CAPEHART, J. L. ..... *Guidance Counselor*
B.S., M.A., East Carolina College

CARPENTER, JOHN ..... *Electronics*
United States Armed Forces Institute, General Electric Training School

CARR, DAWSON V. ..... *Mathematics*
B.S., M.A.T., U.N.C. at Chapel Hill

CHAPPELL, S. G. ..... *Director, Student Personnel Services*
A.B., M.A., U.N.C. at Chapel Hill

CLARK, MARY RUTH ..... *Business*
B.S.S.A., M.Ed., U.N.C. at Greensboro

COFFEY, VERLIN O. ..... *Foreign Languages*
B.A., M.Ed., University of South Carolina

COLE, MRS. BARBARA H. ..... *English*
A.B., M.A., U.N.C. at Greensboro

CONNOLLY, VINCENT H. ..... *Business*
B.A., Rutgers University

COOPER, LENOX G., JR. ..... *Librarian*
A.B., M.S., U.N.C. at Chapel Hill

COVINGTON, W. E. ..... *Business Manager*
B.S., United States Military Academy

CREWS, W. B., JR. (1965) ..... *Business*
B.A., U.N.C. at Chapel Hill; LLB, Wake Forest College

DAVIS, MRS. DAWN (1966-67) ..... *Business*
B.S., Appalachian State Teachers College

DAVIS, LESTER ..... *Biology*
B.S., M.A., Appalachian State Teachers College

DUNCAN, HASKELL ..... *Religion*
A.B., Catawba College; B.D., Southeastern Baptist Theological Seminary

DURANT, EDWARD W., JR. ... *Director, Planning & Development*
B.S., The Citadel; M.A., Duke University

FITCH, MRS. HAZEL ..... *Coordinator, Fundamentals*
B.A., Furman University *Learning Laboratory*

FURCHES, D. L. ..... *Director, Adult Education & Community Services*
A.B., U.N.C. at Chapel Hill; M.Ed., John Hopkins University

HASTINGS, MRS. JEANNE ..... *Art*
A.B., San Jose State College

HATCHER, JOHN R. ..... *French*
B.A., The Citadel, M.A. Appalachian State Teachers College

HENSLEY, LAWRENCE RAY ..... *Auto Mechanics*
Naval Air Technical Training Center

HODGKINS, MRS. N. L., JR. (1965-66) ..... *Music*
B.S., Appalachian State Teachers College

JEFFREYS, MRS. JUDITH M. (1967) ..... *Business*
B.S.. East Carolina College

JOHNSON, EDNA E. ..... *Nursing*
B.S., University of Minnesota

LANG, CARL ..... *Director, Audiovisual Services*
B.S., M.S., Stout State University *Mechanical Engineering*

LASLETT, MRS. ELIZABETH D. (1966) ..... *English*
A.B., Smith College; M.A.T., Yale University

MANKO, KENNETH M. ..... *Business*
B.S., M.Ed. University of Pittsburgh

MAYNOR, WALTZ (1965-67) ..... *Mathematics*
B.S., Pembroke State College; M.A., Appalachian State Teachers College

MCCASKILL, HARLAN ..... *Coordinator, Fundamentals*
B.S., East Carolina College *Learning Laboratory*

MCCUTCHEON, MRS. ANN F. ..... *Registrar*
B.A., Mary Washington College

MCCUTCHEON, JOSEPH (1965-66) ..... *Business*
B.S., Washington & Lee University

MCGRAW, MRS. MARY DRUE ..... *Librarian*
A.B., Berea College; A.B., Emory University

MCKEITHEN, JERE, JR. (1965-66) ..... *Business Education*
A.B., St. Andrews Presbyterian College

MCMILLAN, ARCHIBALD ..... *English*
B.A., Wake Forest College; B.D., Th.M., Southern Baptist Theological Seminary

McPHAUL, MRS. JANE ..... *Guidance Counselor*
A.B., Flora McDonald College; M.Ed., U.N.C. at Chapel Hill

MILLIGAN, SUSAN M. (1965-66) ..... *Music*
A.B., Coker College

MOORE, DONALD (1965-66) ..... *Art*
B.S., M.Ed., U.N.C. at Chapel Hill

NEWCOMER, JOHN P. (1965-1967) ..... *Physics*
A.B., Berea College; M.A., George Peabody College for Teachers;
M.S., University of Tennessee

NEWTON, MRS. JEAN ..... *Nursing*
A.B., Greenville College, Greenville, Ill. Diploma in Nursing,
University of Cincinnati

NORTH, RAYMOND E. ..... *Business*
B.C.S., Baltimore College of Commerce; C.P.A.

NYE, PHARES (1966) ..... *Mechanical Engineering*
B.S., M.S., North Carolina State University

O'CONNOR, SISTER MARY OF VICTORY ..... *Nursing*
B.S., M.S., Boston College

O'NEIL, JUDITH M. ..... *English*
B.A., Florida State University; M.Ed., Duke University

PARSONS, SCOTT ..... *Mathematics*
B.S., M.A., East Carolina College

PETRULLO, HELEN B. (1966-67) ..... *English*
B.A., University of Alabama; M.A., Ph.D., Syracuse University

PITTMAN, ERNEST (1965-67) ..... *Auto Body Repair*
Presbyterian Junior College

POLK, CHARLES H. ..... *Psychology & Sociology*
B.S., M. A., Stephen F. Austin State College

RAHN, HENRY I., JR. ..... *Director, Technical & Vocational Education*
B.S., Georgia Southern College; M.I.A., North Carolina State University

RAWLS, LOYD (1965-67) ..... *Auto Mechanics*
United States Army Training School

RAY, RICHARD S. ..... *Dean*
B.A., M.Ed., D.Ed., U.N.C. at Chapel Hill

REID, JAMES G., JR. ..... *Physical Education*
B.S., M.A., Appalachian State Teachers College

RODGERS, MRS. ALLEEN ..... *Area Coordinator, Hospitality*
East Carolina College

ROGAN, MRS. ANTOINETTE ..... *Nursing*
B.S., Ed.M., Teachers College, Columbia University

SCHEIDLER, HENRY A. ..... *Mechanics*
Connecticut State Trade School

SCHENDLER, MRS. REGINA S. (1965-66) ... *Chairman, Associate Degree Nursing Program*
B.S., New York University; M.A., Teachers College, Columbia University

SCHULZ, JOHN C. ..... *Auto Mechanics*
M.E., Bremen State Institute of Technology

SMITH, ANITA G. ..... *Chairman; Associate Degree Nursing Program*
B.S., M.A., M.Ed., Teachers College, Columbia University

SMITH, MANROE ..... *Mathematics*
B.S., M.A., East Carolina College

SOLOMAN, MRS. LILLIE (1965-66) ..... *Business*
B.S.C., M.A., North Carolina College at Durham

SPEAS, FRANCES ..... *Music*
B.M., Salem College; M.M., Syracuse University

SPEAS, MRS. IONA (1967) ..... *Associate Librarian*
Westhampton College

SPENCER, ERIS (1966-67) ..... *Power Sewing*
Art Institute of Pittsboro; U.N.C. at Chapel Hill

STONE, RAYMOND A. ..... *President*
B.S., Wake Forest College; M.Ed., D.Ed., U.N.C. at Chapel Hill

THORNBURG, H. L. ..... *Chemistry*
B.S., University of Tennessee; M.S., Marshall University

TUFTS, MARGARET ..... *English*
A.B., Agnes Scott College; M.A., U.N.C. at Chapel Hill

TYSON, WILLIE KATE (1966) ..... *Librarian*
B.A., Florida State University; B.S., Peabody Library School

UNDERHILL, SUE H. ..... *Reading*
A.B., U.N.C. at Greensboro; M.A., George Peabody College for Teachers

WATSON, WILLIAM E. ..... *English*
A.B., Elon College; M.Ed., Duke University

WATTS, EUGENE A. ..... *Business*
B.S., The Citadel; M.B.A., Texas Christian University

WHELAN, DONALD (1965-66) ..... *Biology*
B.S., M.A., Appalachian State Teachers College

WIGGINS, MRS. LOIS R. (1966-67) ..... *Nursing*
B.S., State University of New York at Buffalo;
M.A., New York University

WIGGINS, M. WINSTON ..... *Physical Education*
B.S., Wake Forest College; M.Ed., University of North Carolina at Chapel Hill

WYATT, MICAJAH R. ..... *History & Foreign Languages*
B.A., Westminster College; M.A., University of North Carolina at Chapel Hill

STAFF

INZA ABERNATHY ..... *Secretary to the President*

MRS. MARY MCDONALD ..... *Secretary to the Dean and the Director of Planning and Development*

MRS. PATRICIA BULLARD ... *Secretary to the Business Manager*

MRS. ANN POLK ..... *Secretary to the Program Directors*

MRS. HELEN APPLE ..... *Secretary to the Director of Student Personnel Services*

MRS. NANCY MATTHEWS ..... *Secretary to the Faculty*

MRS. TERESA WOOD ..... *Library Secretary*

MRS. IMOGEN POOLE ..... *Bookkeeper*

MRS. JEAN HARRIS ..... *Receptionist*

MRS. LEONE KOSTER ..... *Director of the News Bureau*

MARVIN WILLIAMS ..... *Supervisor of Buildings & Grounds*

ROY SMITH ..... *Assistant Supervisor of Buildings & Grounds*

MRS. SUZANNE COOPER (1964-67) ..... *Secretary*

MRS. MARY FITCHETT (1966) ..... *Secretary*

MYRTLE MCCASKILL (1965-66) ..... *Secretary*

MRS. SHIRLEY STRADLEY (1965-66) ..... *Secretary*

MRS. EDITH STUTTS (1967) ..... *Receptionist*

HISTORY OF THE COLLEGE

Sandhills Community College was created as the result of legislation passed by the 1963 General Assembly of North Carolina. The legislation established a system of community colleges administered by a Department of Community Colleges under the direction of the State Board of Education.

Shortly after the passage of the act a group of prominent Moore County citizens, under the leadership of H. Clifton Blue of Aberdeen, petitioned the State Board of Education to establish a community college in Moore County. After approval of the petition, the citizens of Moore County voted in favor of a one-million-dollar bond issue for capital construction and a tax increase for maintenance of facilities.

In December 1963 Dr. Raymond A. Stone was selected to be the first president of the new college. Dr. Stone opened the College office on January 1, 1964. In March of that year ground was broken for construction, the site determined as the result of a generous gift of one hundred and eighty acres of land by Mrs. Mary Luman Meyer of Pinehurst and Chicago.

By summer of 1965 the faculty had begun to assemble for the classes scheduled to begin with the fall quarter. It was necessary to hold the first classes in temporary facilities in the town of Southern Pines. On October 1, 1965 a student body numbering nearly four hundred attended a Convocation held just before the first day of classes. At the beginning of the spring quarter of 1966, the first of the new buildings was ready to be occupied; much of the instructional program was moved to the permanent campus at that time. The two other main buildings were completed by the end of the summer, 1966; when the fall quarter began, nearly all activities of the College were occupying permanent facilities. Formal dedication of the buildings and the inauguration of Raymond A. Stone as first president of Sandhills Community College were held early in December, 1966.

At the present time the College is providing outstanding educational opportunities for nearly six hundred and fifty curriculum students from more than thirty counties of the State. In addition, hundreds of students are enrolled in a wide variety of adult education and extension courses held on campus and at various centers in Moore, Montgomery, and Hoke counties. All of the buildings are in full use; with the completion of the physical education fields and landscaping during the spring and summer of 1967, the initial building phase will be complete.

It is anticipated that the College will enroll more than eight hundred full time curriculum students in 1967-68. This, combined with ever-enlarging services being provided through adult education and extension programs, is causing the administration to look toward a larger faculty and more extensive facilities. A fine arts-adult education building and a physical education building are being planned.

The faculty and staff of Sandhills Community College anticipate years of service to the citizens of the Sandhills and of North Carolina. A bright and meaningful future awaits those who desire to participate in the development of the institution as students, faculty members or as benefactors.

GENERAL INFORMATION

LIFE AT THE COLLEGE

The Sandhills of North Carolina. Sandhills Community College is located in the region from which it takes its name near Southern Pines, Aberdeen, and Pinehurst. It is easily accessible from all directions by highway, rail and air. Southern Pines is on the main line of Seaboard Railway.

The Sandhills region is a diversified farming section, but in recent years the trend has been toward growing specialized crops, such as peaches, and toward raising of poultry and livestock. A large influx of light industry is in progress.

The climate is delightful year-round. The resort center of Pinehurst-Southern Pines boasts twelve 18-hole golf courses within five miles of the College, with an additional seven courses being planned. In winter and spring, five hundred trotters, pacers, and racing horses train in the area. Fox hunts, hunter trials, and gymkhanas are held almost weekly during the resort season. Very few weeks are too hot or cold for outdoor sports.

The Campus. Four modern air-conditioned buildings are completed and in full use. The main building houses the rapidly growing library, audio-visual department, audio-laboratory, business education classrooms, multi-use classrooms, the learning laboratory, a one hundred forty seat lecture hall, and administrative offices. Faculty offices and seminar rooms are located on the upper floor of the library.

The Mary Luman Meyer Building, named for a generous benefactor of the College, contains modern and completely equipped chemistry, physics, and biology laboratories. Machine shops, art laboratories, drafting classrooms, and the electronics laboratory are also located in this building.

The Student Union Building contains spacious lounges, both indoor and outdoor, and is the center for student life on the campus. A cafeteria is provided for serving full meals; light snacks are always available. The small gymnasium, locker rooms, student book store, first aid room, and counseling offices are also located in the Student Union Building.

A fourth building, the most recently completed, houses the automotive mechanics and body repair programs and the College maintenance service shops.

Landscaping of the College grounds and preparation of the athletic fields are scheduled for completion by the fall quarter,

1967. The athletic fields, which will include a football-soccer field, a cinder track, and all-weather tennis courts, will be one of the finest facilities of its kind in the region.

The architectural style of Sandhills Community College is a pleasant combination of the classical with the most modern and utilitarian design. Extravagant use of outdoor space is combined with the most efficient use of protected space. The buildings are arranged around a central court and each contains an open court of its own. The contrast between concrete in varying area and texture and native brick masonry of varied volume and tone is striking and pleasing. The inspiration for the arched windows was drawn from the academic tradition and the open corridors, terraces, and courts are suggestions of the classical cloistered halls of learning.

The Role of the Faculty. Sandhills Community College is staffed by qualified instructors and administered by professional educators who have been trained to provide the most competent education possible. Emphasis is placed on instruction rather than research. Therefore, the role of the faculty is to assist students on a group and individual basis, maximizing the use of the instructors' time in working with students.

The Role of the Student. The successful student today is one who has developed not only his intellectual abilities, but his social, spiritual, civic, and physical abilities as well. The role of the student at Sandhills Community College is to accomplish these aims by seeking to widen and increase his viewpoint and understanding through social and intellectual interchange with faculty, fellow students, and other educational experiences. Sandhills Community College stands ready to challenge the students to fulfill this role.

Student Housing. Sandhills Community College was established to provide education for students within commuting distance; therefore, funds for dormitory facilities were not included in initial appropriations.

The Student Personnel Office maintains a list of approved housing for students who find it necessary or desirable to reside in the area of the College while attending school. This is a selected list from local residents who will rent rooms or apartments to students of Sandhills Community College. Financial arrangements for rooms or apartments are on an individual basis between student and landlord.

Student Activities. A student at Sandhills may seek to enrich his leisure time activities and develop broader social skills through the activities provided on the campus. In so doing he might contribute more effectively to society.

Student organizations available to the student include Student Government Association, Student Newspaper, and Spartans Pep Club, whose responsibility it is to assist in the intercollegiate athletics of the college.

Clubs of varying interests are found on campus, also. These include the following:

Chorus	Nurses Club	YDC
Drama	Pep Club	YRC
Fine Arts	Sandpipers	Religious Organizations

Cultural enrichment abounds for students in the Sandhills area. The Sandhills Music Association brings outstanding artists during the season; the Village Chapel, Pinehurst, offers instrumental and vocal recitals throughout the year. Students are invited to participate in the Sandhills Community Chorus which presents selections from Handel's Messiah at Christmas. Theater-in-the-Pines is the community theater of Southern Pines and in cooperation with the Sandpipers of the college presents several plays for the enjoyment of the community and the students. Available also, in a wider geographic range, are the Morehead Planetarium in Chapel Hill, the North Carolina Museum of Art and the Museum of Natural History in Raleigh. The Research Triangle, combining the facilities of industry and education, is within a short driving distance.

Social activities on the campus are a direct responsibility of the Student Government Association. These include such activities as dances, receptions, student participation in Founder's Day Celebration and in Parent's Day. The activities calendar is the responsibility of the Student Government Association in conjunction with the Planning and Development Officer.

The student lounge is an area provided by the college to encourage student associations in an informal manner. Here too, the faculty members are available for informal discussions with students and others interested in sharing ideas of the day. Adjacent to the student lounge are the cafeteria and the dining area.

Student Government. The student government is formed to give students an opportunity to govern their own life. They are

given responsibilities and experience in conducting legislative processes, coordinating student activities, and representing student interests to the administration.

Automobiles. Students are required to register their cars for parking privileges. The registration of cars will be filed in the Student Personnel Office. A nominal fee will be charged for parking privileges.

Guidance Services. The guidance of students at Sandhills Community College is met with a coordination of three approaches.

(1) *Counselors*—The college has available professionally trained counselors who will assist students in educational, vocational and personal concerns. The counselors are available to students, faculty and the community at large.

(2) *Faculty Advisors*—Every student after enrolling is assigned an advisor who will assist the student in planning his courses and in adjusting to the problems of college life. The faculty advisor will meet with his advisees on a group or individual basis. The student is required to meet with his advisor during each quarter. Faculty advisors are encouraged to refer their students to the counseling center when it is felt that more intensive attention is needed.

(3) *Orientation Program*—Every student is required to take an orientation course. This course is designed to introduce an over-view of the services of the college and to encourage students in adjusting to college life. The course places heavy emphasis on study skills and educational planning and career development in order to give the student a more realistic picture of the years ahead.

Through these three coordinated approaches the college strives to enable each student take the next productive step ahead.

Learning Resources. The learning resource centers at Sandhills College include four areas, each serving specific and unique functions:

The Library. The library provides invaluable services to the student body and faculty in comfortable and pleasant surroundings. Students can study in individual study carrels from the collection of nearly 20,000 volumes. A completely new and up-to-date reference section combined with important volumes in the general and special areas is housed in open stacks,

readily accessible to students. The professionally trained library staff is always available for consultation on reference questions or book selection. The library is open from 8:00 a.m. to 10:00 p.m. Monday through Thursday and from 8:00 a.m. to 5:00 p.m. on Friday.

The Audiovisual Center. Sandhills Community College has a Director of Audiovisual Services with offices located on the second floor of the Administration Building. The Audiovisual Center maintains a Materials Center containing a library of 16 mm sound, motion picture films, filmstrips, phono records, tape recordings, and other instructional materials. The Center is open from 8:00 a.m. to 10:00 p.m. Monday through Friday. Students and faculty are welcome to use the materials at any time.

The Audio Laboratory. Sandhills Community College is answering the problems of an increasing number of students and the demand for higher quality in education by instituting changes in the traditional educational patterns and the use of a wide variety of resources in the new Learning Center. Based on the belief that the students need a place specifically designed for independent study, Sandhills Community College provides students with private study carrels, complete with a bookshelf, table and a dial-access information retrieval station. The dial-access system provides the students with access to any one of 32 taped programs (changed every week). Any number of students from one to thirty can have simultaneous access to any one of the scheduled programs. There are also 100 additional taped programs available for individual random access by the student. Plans are being prepared to expand to 118 carrels and 64 programs to be made available to students in the near future.

Fundamentals Learning Laboratory. In the "Learning Lab" students may prepare themselves for the high school equivalency examination, improve skills used in their job, gain educational improvement in subjects of their own choosing, or remedy academic deficiencies prior to entering one of the regular college programs. There are more than fifty courses available in programmed form. Students may attend at times convenient to them, and stay as long as they like. The Lab is normally open from 8:00 a.m. to 10:00 p.m., Monday through Thursday, and 8:00 a.m. to 5:00 p.m. on Friday. A coordinator is available in the Lab during these hours.

POLICIES AND PRACTICES

Admission to the College. Sandhills Community College maintains an "open door" admissions policy for all applicants who are high school graduates or are eighteen years old or older. Selective placement of individual students in the different curricula within the College is determined by officials of the institution, within guidelines established by the State Board of Education for each curriculum and course offered.

All entering students will be required to submit application forms, high school transcripts, and medical records as a part of the admissions process. In addition, entering students will be required to take a battery of standardized tests before final admittance to a particular college program. As a result of these tests, the student may be required to take supplementary course work if he shows weaknesses in preparation for his chosen program.

Students will be interviewed by the counseling staff and programs discussed. Students identified as developmental students will have additional interviews with the developmental staff. Borderline and qualified nursing candidates will have additional interviews with nursing staff. All students will be informed that further placement tests will be administered during orientation week.

Students will be sent a letter verifying the program for which they have been accepted. Students in the developmental program will be told that when they have completed the developmental program they may apply for a degree or diploma program.

Registration. The first days of each quarter are given over to the registration of students and their assignment of classes. After a student is counseled by his faculty advisor in the choice of his course of study and is registered for specific classes by the Registrar, he concludes the registration process by payment of fees to the Business Office. A late registration fee of $2.00 will be charged to those students who register after registration day.

Maximum Hours of Credit Work. As a general rule, a student may not register for more than sixteen credit hours of work during a given quarter without written permission of the Dean. This rule applies without exception to students enrolled in the college transfer program.

It is a policy of this institution to permit certain technical or trade students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden their training.

When in any quarter the total weekly contact hours listed are fewer than twenty-five hours in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request and with the approval of the institution for additional instructional hours to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.

Classification of Students. For purposes of clarity, the following student classifications have been specified:

Full-time student—the student enrolled in twelve or more hours of credit courses.

Part-time student—the student enrolled in fewer than twelve hours of credit courses.

Freshman—the student who has completed with a passing grade less than forty-five quarter hours in credit courses.

Sophomore—the student who has completed with a passing grade forty-five or more quarter hours of credit courses.

Tuition and Fees. In accordance with the basic concept of comprehensive community colleges, all fees are nominal and are held to absolute minimums. Tuition per quarter is as follows:

A.	College Parallel full-time students (in-state)	
	14 quarter hours or more	$42.00
	Part-time students (in-state) per quarter hour	3.00
B.	Vocational, Technical, and Developmental full-time students (in-state)	
	13 quarter hours or more	32.00
	Part-time students (in-state) per quarter hour	2.50
C.	Out-of-state student fees are determined at a rate of 2½ times those for in-state students.	
D.	Additional fees for curriculum students:	
	1. Student activity fee (student government, social activities, student publications)	5.00
	2. Physical education uniform fee	
	Men	2.50
	Women	3.50
E.	Extension and Adult Education fees are determined by the course.	

Fees are payable at time of registration.

Refunds. Tuition refund for students shall not be made unless the student is, in the judgment of the institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds (2/3) of the student's tuition may be refunded if the student withdraws within ten (10) calendar days after the first day of classes as published in the school calendar. Tuition refunds will not be considered after that time. Tuition refunds will not be considered for tuitions of five dollars ($5.00) or less, except that if a course or curriculum fails to materialize, all the students' tuitions shall be refunded.

In order to comply with federal regulations in institutions not regionally accredited, the State Board of Education authorized modification of the tuition refund policy so that veterans or war orphans receiving benefits under U. S. Code, Title 38, can be refunded the pro rata portion of the tuition fee not used up at the time of withdrawal of such students.

Financial Assistance. Financial assistance is available to qualifying students. For information concerning loans and the work-study program, students are directed to the Director of Student Personnel. Each applicant must be a regular student and be pursuing a course leading to graduation.

Individuals and groups have made available limited funds for students in the nursing program. All of the scholarships are awarded on the basis of need. Some are restricted to Moore County students and some to graduates of specific high schools.

Industries have donated funds to be used in the college financial aid program. Much of this is used for "matching funds" to acquire additional Federal money.

Federal Assistance—Three programs involve Federal funds.

1. College work-study provides qualified students with a maximum of fifteen hours per week of work.
2. Economic opportunity grants are made to qualified students.
3. Defense educational loans may be made to qualified students to help defray cost of their education at Sandhills Community College.

The College will be delighted to receive any funds which groups or individuals may want to contribute to the financial aid program.

Degrees Granted. Sandhills Community College offers the following types of curricula and instruction:

Associate-in-Arts Degree

A two-year program in the liberal arts providing transfer credit to senior colleges and universities.

Associate-in-Applied-Science Degree

A two-year program in a business, nursing, or other technical curricula providing general education and skill-training adequate for entry into specific vocations.

Diploma

One-year programs in vocational curricula providing skill and training adequate for entry into specific vocations.

Certificate of Completion

Recognition given to students who complete certain short courses in specific subject areas.

Degree Requirements. The basic requirement for the Associate-in-Arts or the Associate-in-Applied Science degrees is the completion of ninety-six quarter hours of college transfer or technical level courses, which include required courses for the program in which the student is enrolled. In order to be eligible for a degree, the student must have achieved an overall quality point ratio of 1.0 ("C" average). Consult the College Transfer Curriculum section of this catalog for specific course requirements for the Associate-in-Arts Degree and the Technical Curriculum section for course requirements in the several programs leading to the Associate-in-Applied Science Degree.

Change of Course. Course changes can be made by the student with the consent of the faculty advisor. *Such changes become effective only when recorded in the office of the Registrar.* No one may be enrolled in a new course later than one week after the beginning of the quarter.

If a student wishes to drop a class, he may do so without penalty (1) provided the action is taken within two weeks after the beginning of class and (2) provided the consent of the faculty advisor has been obtained.

To drop a course, the student must present to the Registrar's office a drop/add form which has been signed by the instructor of the class and the student's faculty advisor. The signature of the faculty advisor indicates his approval of the action.

To add a course, the student must obtain from his faculty advisor a signed drop/add form which must then be taken to the Registrar's office. If the course has not been closed, the student

will receive a class admissions card which will be presented to the instructor of the course on the first day the student attends class.

Any student who officially drops a course more than two weeks after classes begin for the quarter will be assigned a grade of DP or DF depending on whether the student is passing or failing. The student must bring the drop/add form signed by the faculty advisor and the instructor of the course dropped to the Registrar's office; otherwise, the grade will be recorded as F. If the grade is DP, the hours are not counted in figuring quality point ratio. If the grade is DF, the hours are counted. Courses dropped at any time without permission are recorded as F and the hours are counted.

Withdrawal from College. A student who wishes to withdraw from the College for any reason must obtain permission from the Director of Student Personnel and sign a withdrawal card in the Registrar's office. Students who withdraw prior to two weeks from the end of the quarter will receive a grade of W. If a student withdraws officially at any time during the last two weeks of the quarter, he will receive a grade of WP or WF, according to the quality of the work in the class. A grade of F will be recorded for any student who withdraws without permission. In order to be readmitted the following quarter after withdrawal, the student must submit a letter of justification to the Committee on Admissions and Placement.

Courses Repeated for Credit. When a course is repeated, all grades are counted in determining the student's quality point ratio. Only the last hours earned will be counted in hours earned for the degree.

Grading. The following system of grading is used at Sandhills Community College:

A (excellent) is the highest grade given; it is reserved for those students whose work is of a markedly superior quality.

B (good) is the grade given for work which, while not notably superior, is clearly above average.

C (fair) is the grade given for satisfactory work done by the average student.

D (passing) is the grade given for work which, while not altogether satisfactory, is good enough to entitle the student to receive credit for the course.

F (failing) is the grade given for failure and indicates that no credit can be received for the course. A student will receive an automatic grade of F if he drops or withdraws unofficially at any time or for overcutting.

I (incomplete) is the grade given when the examination or some other assigned project has not been completed by the end of a class. This grade becomes an F if the deficiency is not removed by the end of the following quarter.

W (withdrawn) is the grade given when the student has received official permission to drop out of school before the last two weeks of the quarter.

WP (withdrew passing) is the grade assigned to courses from which the student withdraws passing during the last two weeks of the quarter.

WF (withdrew failing) is the grade assigned to courses from which the student withdraws failing during the last two weeks of the quarter.

DP (dropped passing) is the grade assigned to a course dropped with a passing grade more than two weeks after registration; hours are not counted.

DF (dropped failing) is the grade assigned to a course dropped more than two weeks after registration; the hours are counted.

Academic Regulations and Policies. In order to safeguard the quality of work necessary for degree programs, guidelines have been established which will enable students to determine progress in their work: Progress will be determined by maintaining a satisfactory quality point ratio as the student attempts course work. The faculty has developed a scale of minimum quality point ratios required of students based on total hours attempted. For example, after the student has attempted twenty hours of work, he must have a quality point ratio of .40; for forty-five hours attempted, the quality point ratio must be .84; for seventy-eight hours or more, the quality point ratio must be 1.00.

Quality point ratio is determined by dividing the total number of quality points earned by the number of hours attempted. The average is expressed in ratio. A ratio of 1.00 indicates that the student has an average of "C," 2.00 indicates an average of "B," 3.00 indicates an average of "A." Letter grades are assigned the following equivalents in quality points:

A — 3 quality points per quarter hour.
B — 2 quality points per quarter hour.
C — 1 quality point per quarter hour.
D — 0 quality points—course credit.
F — 0 grade points or credit.

A candidate will receive his degree or diploma when he has satisfactorily completed the course requirements for his program and has an "overall" "C" average (1.00) on all work attempted.

A student may be denied permission to continue his program if his work is deemed deficient by the Admissions and Placement Committee.

Probation and Suspension Policies. The faculty Admissions and Placement Committee will review students' records at the end of each quarter. Students whose records reflect academic progress which does not meet the standard of the quality point gradation scale will be subject to one of the following rulings by the Admissions and Placement Committee:

1. *The student is to be placed on academic probation* which will require him to maintain a "C" average on all work attempted until he reaches the required quality point ratio score. Students who fail to remove probation will be referred back to the Admissions and Placement Committee for a suspension ruling. While on academic probation students are not permitted to participate in extra-curricular activities.

2. *The student is to be suspended from the College* (a) without privilege of being readmitted or (b) may be readmitted after one quarter or more of suspension. After consultation with the counseling staff, the student may be enrolled in a different curricular program by the committee as an alternative to suspension.

All students are encouraged to periodically consult with their faculty advisors concerning academic progress.

Advanced Placement. Advanced placement is offered to those students who because of their demonstrated abilities are qualified to accelerate their studies. To obtain advanced placement at least three options are available: (1) The student may take a proficiency examination in any subject when he believes he already has mastery of the course material; application for such an examination must be made to the Dean of Instruction. (2) Advanced placement and credit is given for a grade of 3

or better on the subject matter proficiency tests of the CEEB's Advanced Placement Program. (3) The entering student may be selected for an advanced section in English, mathematics and other subjects on the basis of his previous academic record and a high performance on the College's testing program. Students who qualify for advanced placement in one or more Freshman courses must begin at the next highest level. Quarter hours credit without grade for the omitted course or courses is assigned upon completion of the advanced course with a grade of "C" or higher. Students passing with less than a "C" will be relieved of the requirement of the omitted course without credit.

Guided Independent Study. Students wishing to take college courses listed in this catalog through independent study may do so by securing the approval of the instructor of the course prior to registration. The student must submit an agreement containing work to be accomplished during the quarter, including test requirements, term papers, and required reading and/or laboratory work. A copy of the agreement must be forwarded to the Dean for final approval. To obtain credit for work attempted through independent study, the student must complete all requirements of the agreement and must hold conferences with the instructor at least once weekly.

The regular grading system applies to all independent study. Grades earned have the same status as those required through regular class attendance.

Student Honors and Awards. Sandhills Community College recognizes student academic achievement by identifying students who qualify for the Dean's List and those who qualify as Honor Graduates.

Dean's List—A student may achieve the distinction of being placed on the Dean's List by earning a "B" average or better or by achieving a 2.0 quality point ratio on twelve or more quarter hours work. The student can have no grade less than "C" on any course taken. The Dean's List will be published following the report of quarterly grades.

Honor Graduates—A student may achieve Honor Graduate recognition during graduation exercises by maintaining a 2.5 quality point ratio on all work attempted during the two-year period he is enrolled at Sandhills College.

Final Examinations and Tests. Examinations should provide an opportunity for the student to express his mastery of the subject matter of the course. They serve as a means of reviewing

and organizing the course for the student. Examinations include problems which require the student to make application of the material he has learned in the course.

Final examinations, term papers, or special projects are usually required in all courses. Instructors keep examinations on file for one quarter following the examination.

A general schedule, announced several weeks before the end of each quarter, will set times for examinations. A student absent from an examination will be given a course grade of Incomplete which will become an F unless an official excuse and permission to take a special examination are secured from the Dean. Special examinations for officially excused absences must be taken by the end of the following quarter.

Instructors may give mid-quarter or other announced tests as they deem necessary. A student who is absent from an announced test for justifiable reasons will be allowed to take a make-up test at a time mutually convenient to him and the instructor.

Attendance. Students are expected to attend all classes. It is recognized, however, that absence from class sometimes becomes necessary for reasons of illness or personal emergency. Instructors may grant students excused absences when the students can show proof of illness or some personal emergency such as death in the family. A student will be automatically dropped from a course when the instructor has recorded three or more unexcused absences for the student. In such cases, the instructor will immediately notify the Dean by submitting the "Notification of Class Dismissal" form. The student may be reinstated in the class as a result of a conference with the Dean in which information has been presented justifying the absences.

Students dismissed from classes for unexcused absences will receive the grade of DF on their permanent record.

Student Conduct. Sandhills Community College expects all students to conduct themselves with honor and to maintain high standards of responsible citizenship. Any student whose behavior is such as to attract unfavorable attention to himself or to Sandhills Community College may expect disciplinary action. This action may be reprimand, probation, restricted privileges, or suspension, depending upon the seriousness of the offense.

Citizens, visitors, faculty, and students are justly proud of the beauty of Sandhills Community College. The student's pride in the College can be shown by:

Care of College Property

1. Books and magazines should not be cut or torn. Marking and scratching of furniture and walls will not be condoned. Care should be exercised about putting feet upon furniture and improperly sitting upon tables and arms of chairs.

2. Paper cups, bottles, food, and other types of litter should be placed in trash cans. Considerate and responsible students help keep the campus clean by picking up litter and placing it in receptacles.

3. Food and drink should normally be consumed in the dining room. Food and drink are not permitted in the student lounge. Outdoor seating is provided for picnic-style eating. Place refuse in receptacles.

4. Students are expected to place paper goods in receptacles and return dishes to the dish washing area after eating in the College dining room.

5. Posters and signs may not be placed upon doors, wooden panels, and glass surfaces. Generally, posters may be placed upon concrete columns and bulletin boards. When in doubt, obtain permission from the Director of Planning and Development.

6. Posting anywhere on campus of commercial advertisements of non-College activities is prohibited.

Personal Behavior

1. Sandhills Community College is opposed to the use of alcoholic beverages by students. Drinking or possession of intoxicating beverages on campus will not be tolerated. Students are not permitted on the campus under the influence of alcoholic beverages. Self-discipline and mature judgment are expected.

2. Gambling, cheating, stealing or the use of profanity and vulgarity on the campus will not be tolerated.

3. Smoking is permitted in the student lounge, dining area, and exterior corridors. Smoking is not permitted in enclosed hallways, classrooms, and library. Smokers are expected to use ash bins and ash trays for cigarette butts.

4. Automobiles. All automobiles driven to the College must be registered with the Student Personnel Office. Please observe restricted and assigned parking areas. Limit speed to 20 miles per hour on campus.

5. Off campus, students are expected to conduct themselves as responsible citizens in the community.

These regulations have been approved by the Student Government, Faculty, and Administration of Sandhills Community College.

Violators of the preceding regulations may be referred to the Judicial Council. The Council is composed of students and faculty advisors. Punishment for serious offenses will be recommended to the President.

COLLEGE TRANSFER PROGRAM

THE COLLEGE TRANSFER PROGRAM

General Information. The college transfer program is designed to provide course work which is transferable to senior institutions. A community college advisory committee, including representatives of state-supported colleges, has worked with the Department of Community Colleges and Sandhills Community College to assist in the development of curricula acceptable to senior institutions. Courses (for which a student makes a grade of "C" or better) should transfer to the institution which the student plans to attend during the junior and senior years if they are applicable to the curriculum in which he enrolls. The student should be able to transfer to the senior institution with junior status after completing two years of credit work at Sandhills.

The college counseling staff and faculty advisors work closely with the student in course selection. It is the responsibility of the student, however, to familiarize himself with the requirements of the senior institution to which he intends to transfer.

The Associate-in-Arts Degree. Students enrolled in college transfer curricula are awarded the Associate-in-Arts Degree upon satisfactory completion of ninety six quarter hours of work including the general education course requirements and physical education. The ninety six credit hours of work must be completed with an overall quality point ratio of 1.0 or better.

General Education Requirements for the Associate-in-Arts Degree. Associate-in-Arts Degree candidates must complete the following general education courses:

		Quarter Hours
English	.....	14
110, 111, 112	English Composition	(9)
or		
201	British Literature I	(5)

Mathematics		5 or 6
105, 106	Basic Concepts of Mathematics I, II	(6)
or		
110	College Algebra	(5)
Social Sciences		10
History 110, 111	Western Civilization I, II	
or		
History 151, 152	United States History I, II	
(or a combination of the above)		
Natural Sciences		12
(three courses in laboratory science)		
Physical Education		8
Physical Education 150	Personal and Community Hygiene	(5)
*Activity Courses		(3)
Humanities		8
(Art, Drama, Foreign Languages, Literature, Music, Philosophy, Religion, or Speech)		
	Total Required	57 or 58 hours
	General Education Electives	38 hours
	Total Required	95 or 96 hours

Physically disabled students or veterans of military service are exempted from the physical education activity cause requirement.

Suggested Courses of Study Leading to the Associate in Arts Degree

The following pages outline curriculum guides for students seeking either a two-year terminal liberal arts education or those planning to transfer to a senior college or university. The outlines suggest a sequence in which the various courses may be taken. Students may select their own courses and sequences; however, courses are often scheduled each quarter based on the sequence in the suggested guides. It is strongly suggested that students consult the catalog of the institution to which they intend to transfer to determine the entrance and degree requirements of that institution.

Students at Sandhills can complete the first two years in architecture, art, business, dentistry, education, engineering, forestry, law, liberal arts, mathematics, medicine, nursing, pharmacy, religion, and science. Other less common programs can be developed from the course offerings.

Foreign language requirements should be fulfilled according to the requirements of the senior college to which the student plans to transfer. All foreign language requirements other than foreign language majors should be *completed before* the student leaves the junior college.

LIBERAL ARTS OR PRE-LAW

This program is designed for students who (1) have definite plans to transfer to a liberal arts college or university for the third and fourth year but have not yet selected definite major areas of study, (2) desire to receive a comprehensive two-year general education without definite plans for completing a baccalaureate degree.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
MAT 105 or 110	3-5
Foreign Language	5
HIS 110	5
	16-18

2nd Quarter	
ENG 111	3
MAT 106 or 120	3-5
Foreign Language	5
HIS 111	5
	16-18

3rd Quarter	
ENG 112	3
MAT 107 (or elective)	3-5
PED 150	5
Foreign Language	5
	16-18

SECOND YEAR

4th Quarter	Hours
ENG 201	5
Science	4
Foreign Language	5
PED Activity	1
	15

5th Quarter	
Science	4
Humanities Elective	3-5
MUS 101	5
PED Activity	1
	13-15

6th Quarter	
Science	4
Humanities elective	3-5
ART 101	3
PED Activity	1
Social Science elective	5
	16-18

BUSINESS ADMINISTRATION PROGRAM

The business administration program is designed for the student who wishes to transfer to a senior institution for a major in business administration. This curriculum is subject to change, depending on the institution to which the student plans to transfer.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
MAT 110	5
or	
MAT 105	(3)
Foreign Language	5
	16-18
2nd Quarter	
ENG 111	3
MAT 120 or	5
MAT 106	(3)
HIS 111	5
Foreign Language	5
	16-18
3rd Quarter	
ENG 112	3
(MAT 107)	(3)
ECO 201	5
PED Activity	1
Humanities elective	3-5
	14-15

SECOND YEAR

4th Quarter	Hours
ENG 201	5
Science	4
Humanities Elective	3
PED 150	5
PED Activity	1
	18
5th Quarter	
Science	4
BUS 120	6
PED Activity	1
BUS 101	5
	16
6th Quarter	
Science	4
BUS 121	6
POL 201	5
PED Activity	1
	16

BUSINESS EDUCATION PROGRAM

This program is designed for the student who intends to teach business education in the public schools. In addition to the courses listed, one year of advanced dictation is strongly recommended.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
HIS	5
BUS 102	3
BUS 106	3
PED Activity	1
	15
2nd Quarter	
ENG 111	3
HIST	5
BUS 103	3
BUS 107	3
PED Activity	1
	15
3rd Quarter	
ENG 112	3
MATH 110 or PED 150	5
BUS 104	3
BUS 108	3
PED Activity	1
	15

SECOND YEAR

4th Quarter	Hours
ENG 201	5
BIO 110	4
PED 150	
or	
MATH 105	3-5
ECO 201	5
	17-19
5th Quarter	
BIO 111	4
MATH 106	3
ECON 202	5
BUS 120	6
	18
6th Quarter	
BIO 112	4
MATH 107	3
BUS 121	6
Elective	3-5
	16-18

AGRICULTURE PROGRAM

This program is designed for the student who intends to major in one of the agricultural sciences at a senior institution. In addition to the courses listed, the student may need to take advanced courses in sciences (BIO 201, BIO 206, CHM 205) in order to enter a senior college or university with junior status.

FIRST YEAR

1st Quarter	Hours
MATH 110	5
ENG 110	3
BIO 110	4
POL SCI 201	5
PED Activity	1
	18

2nd Quarter	Hours
ENG 111	3
MATH 120	5
BIO 111	4
HIST	5
PED Activity	1
	18

3rd Quarter	Hours
ENG 112	3
MATH 150	5
BIO 112	4
HIST	5
PED Activity	1
	18

SECOND YEAR

4th Quarter	Hours
ENG 201	5
CHEM 110	4
SOC 201	5
PED 150	5
	19

5th Quarter	Hours
PSY 201	5
CHEM 111	4
HIST 151	5
	14

6th Quarter	Hours
ECON 201	5
CHEM 112	4
Electives	6
	15

ENGINEERING PROGRAM

This program may need to be modified dependent upon the background of the student and the institution to which the student plans to transfer. The quarter in which the courses may be offered is subject to modification, including possible attendance during the summer quarter.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
MATH 110	5
CHEM 110	4
ENR 101	3
PED Activity	1
	16

SECOND YEAR

4th Quarter	Hours
ENG 201	5
MATH 201	5
PHY 201	4
PED Activity	1
	15

2nd Quarter	Hours
ENG 111	3
MATH 120	5
CHEM 111	4
EGR 102	3
PED Activity	1
	16

3rd Quarter	Hours
ENG 112	3
MATH 150	5
CHEM 112	4
HIST 110	5
PED Activity	1
	18

5th Quarter	Hours
HIS 111	5
MAT 202	5
PHY 202	4
PED Activity	1
	15

6th Quarter	Hours
PED 150	5
MAT 203	5
PHY 203	4
ECO 201	5
PED Activity	1
	20

ELEMENTARY EDUCATION PROGRAM

This program should be planned on an individual basis to meet requirements of the institution to which the student plans to transfer.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
MAT 105	3
SCI	4
HIS	5
PED Activity	1
	16

2nd Quarter	Hours
ENG 111	3
MAT 106	3
SCI	4
HIS	5
PED Activity	1
	16

3rd Quarter	Hours
ENG 112	3
MAT 107	3
SCI	4
PED 150	5
PED Activity	1
	16

SECOND YEAR

4th Quarter	Hours
ENG 201	5
POL 201	5
Electives	6
	16

5th Quarter	Hours
ENG 202	5
PSY 201	5
Electives	6
	16

6th Quarter	Hours
HIS	5
Electives	11
	16

FORESTRY PROGRAM

This program is subject to modification, depending on the senior institution to which the student plans to transfer. Additional courses which may be needed are BIO 110-111-112 and CHE 205.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
MAT 110	5
CHM 110	4
EGR 101	3
PED Activity	1
	16

2nd Quarter	Hours
ENG 111	3
MAT 120	5
CHM 111	4
ECO 201	5
PED Activity	1
	18

3rd Quarter	Hours
ENG 112	3
MAT 150	5
CHM 112	4
PED 150	5
PED Activity	1
	18

SECOND YEAR

4th Quarter	Hours
ENG 201	5
PHY 201	4
MAT 201	5
Elective	3
	17

5th Quarter	Hours
PHY 202	4
HIS 110	5
POL 201	5
Elective	3
	17

6th Quarter	Hours
PHY 203	4
HIS 111	5
Electives	6
	15

SECONDARY EDUCATION PROGRAM

The various secondary education programs should be planned on an individual basis taking into consideration the area in which the student intends to teach and the institution to which he intends to transfer.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
SCI	4
MAT 110	5
Foreign Language or Elective	3-5
PED Activity	1
	16-18

2nd Quarter	Hours
ENG 111	3
SCI	4
HIS	5
Foreign Language or Elective	3-5
PED Activity	1
	16-18

3rd Quarter	Hours
ENG 112	3
SCI	4
HIS	5
Foreign Language or Elective	3-5
PED Activity	1
	16-18

SECOND YEAR

4th Quarter	Hours
ENG 201	5
PSY 201	5
POL 201	5
	15

5th Quarter	Hours
ENG 202	5
PED 150	5
HIS 151	5
	15

6th Quarter	Hours
HIS 152	5
SPH 101	5
Elective	5
	15

SCIENCE PROGRAMS

(Pre-medicine, pre-dentistry, pre-nursing, pre-pharmacy, pre-science)

Students who plan to study medicine, dentistry, pharmacy, nursing, or veterinary medicine should consult the counseling staff or their advisor to develop a planned program. The amount of work to be completed at Sandhills prior to transfer may vary with individual students. Additional science and mathematics courses may be needed.

FIRST YEAR

1st Quarter	Hours
ENG 110	3
MAT 110	5
SCIENCE	4
Foreign Language	5
PED Activity	1
	18

2nd Quarter	Hours
ENG 111	3
MAT 120	5
SCIENCE	4
Foreign Language	5
PED Activity	1
	18

3rd Quarter	Hours
ENG 112	3
SCIENCE	4
HIS 110	5
MAT 150	5
PED Activity	1
	18

SECOND YEAR

4th Quarter	Hours
ENG 201	5
SCIENCE	4
HIS 111	5
Elective	3
	17

5th Quarter	Hours
ENG 202	5
SCIENCE	4
PED 150	3
Elective	3
	17

6th Quarter	Hours
PSY 201	5
SCIENCE	4
Elective	3
	12

COLLEGE TRANSFER COURSE DESCRIPTIONS

College Transfer Course Numbering System

Course designations consist of a three-letter prefix and a number that indicate the curriculum and the level of the course. Freshman level college transfer courses are indicated by numbers ranging between 100-200; sophomore level college transfer courses, 200-300. On the same line, following the prefix and number, appear the course title, the number of lecture and laboratory hours per week, and the number of quarter credit hours earned by successfully completing the course. Some courses offered at the College during the year 1965-66 and 1966-67 academic years have been dropped from the curriculum; other courses have new prefixes and numbers. Courses that are no longer a part of the curriculum are indicated by an asterisk; courses that in previous academic years were identified by a different prefix and/or number show the former designations in parentheses. Courses and course prefixes without the asterisk or parentheses will be current for the 1967-68 academic year.

ART

ART	101	**Art Appreciation** A study of the principles and elements of art; the interrelationship of the arts and their relation to the development of the individual and of cultures. Field trips to museums, dramatic productions, dance recitals, and concerts will be planned whenever possible. *Prerequisite*: None.	3	0	3
ART	102	**Art History** An historical examination of art forms and art media, developed to equip the student for intelligent discrimination in art. *Prerequisite*: ART 101.	3	0	3
ART	121	**Color and Design I** The study of color and the exploration of color through practical application to beginning design problems, both two-dimensional and three-dimensional. *Prerequisite*: None.	1	5	3
ART	122	**Color and Design II** The application of color and design theories to two-dimensional surfaces. Textile and gift wrap papers and wall-paper design are bases for the practical application of these problems. *Prerequisite*: ART 121.	1	5	3

ART	123	**Color and Design III** Advanced work in both two-dimensional and three-dimensional design with application to forms related to the crafts of pottery, mosaics, creative stitchery, jewelry, etc. *Prerequisites*: ART 121, ART 122.	1	5	3
ART	131	**Drawing and Composition I** Beginning drawing and the study of the problems of composing a picture. A wide variety of techniques including pencil, charcoal, conti, pen and ink, brush and ink, will be used. Figure drawing, still-life, and nature will be the subjects. *Prerequisite*: None.	1	3	2
ART	132	**Drawing and Composition II (Printmaking)** Using the knowledge gained in ART 131, the techniques of printing will be explored. Wood-cut, lino-cut, serigraph, monoprint, etc. *Prerequisite*: ART 131.	1	3	2
ART	133	**Drawing and Composition III (Perspective)** Advanced drawing and composition. Perspective study and continued work with figure drawing. Problems in book illustration will provide subject matter for study. *Prerequisites*: ART 131, ART 132.	1	3	2
ART	141	**Oil Painting I** Introduction to the technique of oil painting; includes the study of pictorial composition, color, and the elements and principles of art which assist the student in the development of a painting. *Prerequisite*: None.			3
ART	142	**Oil Painting II** Advanced study of the techniques involved in oil painting and an introduction to figure and portrait painting. *Prerequisite*: ART 141.	1	3	3
ART	143	**Oil Painting III** Portrait painting in oils. *Prerequisites*: ART 141, ART 142.	1	3	3

ART	151	**Watercolor and Mixed Media** A creative approach to techniques and materials. College, montage, and mosaics will provide the problems for mixed media. Traditional techniques of watercolor painting will be a part of this course. *Prerequisite*: None.	1	3	2
ART	161	**Beginning Sculpture** Study of form in clay. Clay and other media will be used. Portraiture in clay will be a part of the course experience. *Prerequisite*: None.	1	3	2
ART	171	**Ceramic Design I** Introduction to pottery making techniques including coil, slab, patch, pinch, and wheel thrown. Introduction to elementary experiments with clays and glazes, their composition and uses. *Prerequisite*: None.	1	5	3
ART	172	**Ceramic Design II** Wheelthrowing techniques will be stressed. Study and experiments with North Carolina raw materials used in ceramic wares and experiments to develop new usable compositions. *Prerequisite*: ART 171.	1	5	3
ART	173	**Ceramic Design III** Advanced throwing. Advanced clay and glaze experiments and firing processes. *Prerequisite*: ART 172.	1	5	3
ART	174	**Ceramic Design IV** Glaze and body research. Wheel, mosaic and sculpture problems. *Prerequisite*: ART 173.	1	5	3
ART	175	**Ceramic Design V** Advanced design and materials research. Wheel work and sculptural techniques. Glaze and clay body research of original nature. *Prerequisite*: ART 174.	1	5	3
ART	176	**Ceramic Design VI** Advanced design culminating in 12 pieces of original pottery and ceramic sculpture suitable for exhibit. *Prerequisite*: ART 175.	1	5	3

BUSINESS AND ECONOMICS

BUS 101 (BUS 141)	**Introduction to Business** A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. *Prerequisite*: None.	5	0	5
BUS 102 (BUS 101)	**Typewriting I** Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. *Prerequisite*: None.	1	4	3
BUS 103 (BUS 102)	**Typewriting II** Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques applied in tabulation, manuscript, correspondence, and business forms. *Prerequisite*: BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.	1	4	3
BUS 104 (BUS 103)	**Typewriting III** Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. *Prerequisite*: BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.	1	4	3
BUS 106 (BUS 111)	**Shorthand I** A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. *Prerequisite*: None.	1	4	3
BUS 107 (BUS 112)	**Shorthand II** Continued study of theory with greater emphasis on dictation and elementary transcription. *Prerequisite*: BUS 106 or the equivalent.	1	4	3

BUS 108 (BUS 113)	**Shorthand III** Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. *Prerequisite*: BUS 107.	1	4	3
BUS 110 (BUS 161)	**Office Machines** A general survey of business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. *Prerequisite*: None.	2	2	3
BUS 120 (ACC 101)	**Accounting I** Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. *Prerequisite*: Freshman Math.	5	2	6
BUS 121	**Accounting II** Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. *Prerequisite*: BUS 120.	5	2	6
ECO 201	**Economics I** A general course designed to give an understanding of the organization of economic life. Includes a study of the principles and problems involved in the production, distribution and utilization of the national income, and a consideration of relationships between government and business. *Prerequisite*: None.	5	0	5

ECO	202	**Economics II** A continuation of ECO 201. Greater depth in principles of economics, including the composition and pricing of national output, the distribution of income, international trade and finance, and current economic problems. *Prerequisite*: ECO 201.	5	0	5

ENGINEERING

EGR (DFT	101 101)	**Engineering Graphics I** Study of the graphical methods and techniques used to express, interpret and communicate engineering ideas. Attainment of basic skills and techniques of drafting; use of drafting equipment; lettering; freehand orthographic and pictorial sketching; geometrical construction; orthographic instrument drawing of principle views. *Prerequisite*: None.	2	3	3
EGR (DFT	102 102)	**Engineering Graphics II** Studies in solving special problems graphically, with emphasis on visualization of the relationship of objects in space through graphical analysis. Standards and practices of dimensioning; the mechanical drawing of complex views. Methods of reproducing, filing, and storing drawings. *Prerequisite*: EGR 101.	2	3	3

ENGLISH, DRAMA, AND SPEECH

*ENG	101	**English Composition I** Review of parts of speech, sentence structure, paragraph structure and development, outlining, and exposition. Outside reading and writing assignments. Writing assignments in part are based on outside reading of modern essays and short stories. *Prerequisite*: Satisfactory score on placement tests.	5	0	5
*ENG	102	**English Composition II** Continuation course. Extensive work in theme writing based on outside reading and class discussion of selected short stories, poems, and plays. One major research paper is required. *Prerequisite*: ENG 101.	5	0	5

ENG	110	**English Composition I**	3	0	3

Study of grammar and composition. Review of parts of speech, sentence structure, paragraph structure and development, vocabulary, note taking, outlining, exposition. Outside reading and writing assignments.

Prerequisite: Satisfactory score on English placement test.

ENG	111	**English Composition II**	3	0	3

A continuation of English 110. Introduction to the short story. Increased emphasis on the writing process.

Prerequisite: ENG 110 or approved advanced placement.

ENG	112	**English Composition III**	3	0	3

A continuation of English 111. Consideration of short stories, plays, and poetry as models of literary style. Writing in depth.

Prerequisite: ENG. 111.

ENG	201	**British Literature I**	5	0	5

A survey of British literature from the earliest period through the 18th Century, with emphasis on major writers: Chaucer, Shakespeare, Milton, Dryden, and Johnson.

Prerequisite: ENG 112 or permission of the Dean.

ENG	202	**British Literature II**	5	0	5

A survey of British literature from the Romantic Period to the present, with emphasis on major writers: Wordsworth, Keats, Tennyson, Browning, Shaw, Eliot.

Prerequisite: ENG 112 or permission of the Dean.

ENG	203	**American Literature I**	5	0	5

A study of the development of American literature through representative writers from the Colonial Period to the late 19th Century. Emphasis given to the following writers: Bradford, Taylor, Franklin, Poe, Emerson, Thoreau, Hawthorne, Whitman.

Prerequisite: ENG 112 or permission of the Dean.

ENG	204	**American Literature II**	5	0	5

A study of American literature from late 19th Century to the present, with emphasis on the following writers: Mark Twain, Dreiser, O'Neill, Frost, Hemingway, Faulkner.

Prerequisite: ENG 112 or permission of the Dean.

ENG	220	**Creative Writing** Instruction and practice in the writing of short stories, short plays, poetry, and creative essays. The immediate outcome of this course is an annual publication of student written compositions. *Prerequisite*: ENG 112.	3	0	3
DRA	210	**Introduction to The Theatre, I** Introduction to the theatre through the study of theatre history, types of drama, and play construction. Individual projects in writing, acting, directing, and design. *Prerequisite*: None.	3	0	3
DRA	211	**Introduction to The Theatre II** Emphasis on play production: acting, directing, staging methods. *Prerequisite*: DRA 210 or permission of instructor.	3	0	3
SPH	101	**Principles of Speech** A functional approach to the problem of effective speaking. The organization, composition, and delivery of speeches, with particular emphasis on application in actual speech situations. *Prerequisite*: None.	5	0	5

FOREIGN LANGUAGES

FRE	101	**Elementary French I** An introduction to French, with a modern audio-lingual approach. Up-to-date materials and methods. Emphasis first on hearing and speaking, then on reading and writing. Lab work required as a part of the course. For those with no previous French or those who do not make a satisfactory score on the French placement test. *Prerequisite*: Satisfactory score on college placement tests.	5	2	5
FRE	102	**Elementary French II** A continuation of FRE 101. *Prerequisite*: FRE 101.	5	2	5
FRE	151	**Intermediate French I** A review of the skills of hearing, speaking, reading, and writing. Audio-lingual work in class and in lab. Selected supplementary readings. *Prerequisites*: Two units of high school French and a satisfactory placement test score or FRE 101 and FRE 102.	5	2	5

FRE	152	**Intermediate French II** A continuation of French 151. *Prerequisite*: FRE 151.	5	2	5
FRE	201	**Survey of French Civilization I** The first of a two-course sequence. A study of French culture and civilization. Selected readings in French literature from the Middle Ages to the present. Parallel reading and reports. *Prerequisite*: FRE 152.	5	0	5
FRE	202	**Survey of French Civilization II** A continuation of French 201. *Prerequisite*: FRE 201.	5	0	5
SPA	101	**Elementary Spanish I** An introduction to Spanish, with a modern, audio-lingual approach. Up-to-date materials and methods. Emphasis first on hearing and speaking, then on reading and writing. Lab work required as part of the course. For those with no previous Spanish or those who do not make satisfactory score on Spanish placement tests. *Prerequisite*: Satisfactory score on college placement tests.	5	2	5
SPA	102	**Elementary Spanish II** A continuation of Spanish 101. *Prerequisite*: SA 101.	5	2	5
SPA	151	**Intermediate Spanish I** A review of the skills of hearing, speaking, reading, and writing. Audio-lingual work in class and in lab. Selected supplementary readings. *Prerequisites*: Two units of high school Spanish and a satisfactory placement test score, or SPA 101 and SPA 102.	5	2	5
SPA	152	**Intermediate Spanish II** A continuation of Spanish 151. *Prerequisite*: SPA 151.	5	2	5
SPA	201	**Survey of Spanish Civilization I** The first of a two-course sequence. A study of Spanish culture and civilization. Selected readings in the literature of Spain and Spanish American from the Middle Ages to the present. Parallel reading and reports. *Prerequisite*: SPA 152.	5	0	5

SPA	202	**Survey of Spanish Civilization II** A continuation of Spanish 201. *Prerequisite*: SPA 201.	5	0	5

MATHEMATICS

*MATH	101	**Basic Concepts of Mathematics I** Designed for liberal arts students for transfer. This course gives a modern approach into the nature of mathematics, basic concepts of logic, number systems, sets, equations, inequalities, functions and relations. *Prerequisite*: Satisfactory score on placement tests.	5	0	5
*MATH	102	**Basic Concepts of Mathematics II** A study of the rational numbers, irrational numbers, complex numbers, equations, inequalities, functions, permutations, selections, probability measurement, trigonometry and mensuration. *Prerequisite*: MATH 101.	5	0	5
MAT (T-BUS	101 145)	**Business Mathematics** A course stressing the fundamental operations and their application to business problems. Topics covered: payrolls, price marking,	5	0	5
(T-MATH	110)	interest, and discount, commission, taxes, and pertinent use of mathematics in the field of business. *Prerequisite*: None.			
MAT	105	**Basic Concepts of Mathematics I** A study of sets, relations, mappings, elementary logic, truth tables, nonmetric geometry, Euclidean geometry, and coordinate geometry. Primarily designed for liberal arts and education students. *Prerequisite*: Satisfactory score on math placement test.	3	0	3
MAT	106	**Basic Concepts of Mathematics II** A study of numeration, scales of rotation, and the complete number system: natural numbers, integers, rational, irrational, imaginary and complex numbers. *Prerequisite*: MAT 105 or approved advanced placement.	3	0	3
MAT	107	**Basic Concepts of Mathematics III** A study of equations, inequalities, functions, permutations, selections, probability, measurement, mensuration, and an introduction to trigonometry. *Prerequisite*: MAT 106.	3	0	3

MAT	110	**College Algebra**	5	0	5

Designed for pre-math, pre-science, or pre-engineering majors. Stresses those topics which are essential for college algebra; algebra of numbers, elementary set theory, function concept, linear and quadratic functions, inequalities, mathematical induction, binomial theorem, complex numbers, permutations and combinations, probability, systems of equations and matrices.

Prerequisite: Satisfactory score on math placement test.

MAT (MAT 111)	120	**College Trigonometry**	5	0	5

Develops the analytical approach in studying the trigonometric functions using rectangular and polar coordinates, periodicity and basic graphs, trigonometric identities and equations, multiple angle formulas, inverses of trigonometric functions, solutions of triangles, and complex numbers.

Prerequisite: MAT 110 or approved advanced placement.

MAT	150	**Analytical Geometry and Calculus I**	5	0	5

Includes an introduction to analytic geometry, functions, limits, derivatives, and their applications, and an introduction to integration.

Prerequisite: MAT 120.

MAT	201	**Analytical Geometry and Calculus II**	5	0	5

A course covering integration, the definite integral, exponential and logarithm function, trigonometric and inverse trigonometric functions, formal integration and applications with conic sections.

Prerequisite: MAT 150.

MAT	202	**Analytical Geometry and Calculus III**	5	0	5

Includes continuous and differentiable functions, infinite series, plane curves, vectors, polar coordinates, and three-dimensional analytic geometry.

Prerequisite: MAT 201.

MAT	203	**Analytical Geometry and Calculus IV**	5	0	5

Differential calculus of functions of several variables, multiple integration, line and surface integral, and differential equations.

Prerequisite: MAT 202.

MAT	220	**Differential Equations** A study of the solution of ordinary differential equations; first order equations, linear equations of any order, series solutions, and applications. *Prerequisite*: MAT 203.	5	0	5

MUSIC

(All courses involving a study of music literature include one hour of required use of the listening laboratory each week.)

MUS (MUS	101 110)	**Music Appreciation** A study of the basic fundamentals of music with a survey of forms, styles, and composers, giving reference to cultural background and the integration of music with the other arts. This course does not presuppose a technical knowledge of music and is designed to enhance a student's understanding, thereby helping him to become a more intelligent listener. *Prerequisite*: None.	5	1	5
*MUS	102	**Music History** A study of the historical beginnings in Western civilization through the Romantic Period. A survey of literature, styles, and composers.	5	1	5
MUS	111	**Choral Ensemble** Study of vocal techniques and performance of sacred and secular choral literature. *Prerequisite*: None.	0	2	1
MUS	150-151	**Music Theory** Basic fundamentals of music, traditional harmony, partwriting and analysis. Work is correlated with sight-singing and drill in harmonic progressions at the keyboard. *Prerequisite*: Previous instrumental or vocal instruction.	5	0	5
MUS (MUS	170 112)	**Applied Music—Piano** One-half hour private lesson weekly carrying one credit hour. Five hours of practice in preparation are required. *Prerequisite*: Previous instruction.	½	5	1

MUS 171 (MUS 112)	**Applied Music—Organ** One-half hour private lesson weekly carrying one credit hour. Five hours of practice in preparation are required. *Prerequisite*: Previous instruction.	½	5	1
MUS 172 (MUS 112)	**Applied Music—Flute** One-half hour private lesson weekly carrying one credit hour. Five hours of practice in preparation are required. *Prerequisite*: Previous instruction.	½	5	1
MUS 180 (MUS 112)	**Applied Music—Voice** One-half hour private lesson weekly carrying one credit hour. Five hours of practice in preparation are required. *Prerequisite*: Previous instruction.	½	5	1
MUS 201	**History of Music—Ancient Greeks Through the Baroque Era** A study of the historical beginnings in Western civilization. The musical styles and forms, composers, and institutions of each era are studied. *Prerequisite*: MUS 101 or approval of the Dean.	3	1	3
MUS 202	**History of Music—The Classical and Romantic Periods** Study of the classical symphony, chamber music, keyboard work, and opera as exemplified in works of Haydn, Mozart, and Beethoven, continuing through the cultural background, influencing the shift from Classicism to Romanticism. A survey of literature, styles and composers of the Romantic Era. *Prerequisite*: MUS 101 or approval of the Dean.	3	1	3
MUS 203	**Music Literature in the Twentieth Century** A study of musical development during the 20th Century beginning with works of Debussy and Mohler. Musical analysis, reading, and listening. Influence of contemporary society on music and composers. *Prerequisite*: MUS 101 or approval of the Dean.	3	1	3
MUS 250-251	**Advanced Music Theory** Continuation of MUS 150-151. *Prerequisite*: MUS 150-151.	5	0	5

PHYSICAL EDUCATION

PED or PED (Hlth	101 201 101)	**Individual Physical Education Activity** Activity in and study of the rules, strategy, history and terminology in the following activities: Archery, bowling, golf, gymnastics, horseback riding, tennis, track and field and weightlifting. *Prerequisite*: None.	0	2	1
PED or PED	102 202	**Team Physical Education Activity** Activity in and study of the rules, strategy, history, and terminology of the following activities: Flag football, soccer, softball and volleyball. *Prerequisite*: None.	0	2	1
PED	150	**Personal and Community Hygiene** Designed to present basic and community health knowledge and to develop proper health habits and attitudes in the individual and the community. A general survey of personal and community health habits and conditions, including adjustments of the college freshman. *Prerequisite*: None.	5	0	5
PED	220	**Principles of Health and Physical Education** Designed for students who expect to teach or coach. Includes the history of health education and physical education; philosophical, psychological, physiological, and sociological background for the teaching of health and physical education; basis for programs, and organization of activities. *Prerequisite*: PED 150.	5	0	5

PHILOSOPHY AND RELIGION

PHI	101	**Introduction to Philosophy** A survey of the major issues of philosophy. An examination of typical problems, such as moral freedom, the mind-body relationship, and the meaning of truth. A description of the schools of naturalism, idealism, realism, and pragmatism. *Prerequisite*: None.	5	0	5

PHI	201	**Introduction to Logic** A survey of the general principles of deductive and inductive logic and the characteristics of empirical knowledge. Emphasis on the establishment of reflective habits. *Prerequisite*: None.	5	0	5
REL	101	**Religions of the World** The great religions of mankind as related to the history of China, India, and the Near East. The study of this background and the reading of the great classics of these religions. *Prerequisite*: None.	5	0	5
REL	105	**The Religious Background of Western Civilization** A historical study of the impact of the faith of the Old Testament, Graeco-Roman religion, Teutonic religion, and Christianity upon the life and thought of the Western world. *Prerequisite*: None.	5	0	5
REL	106	**Religious Thought in the Twentieth Century** A study of recent trends in religious thought as exhibited in thinkers like Niebuhr, Maritain, Buber, Tillich, and Temple. *Prerequisite*: None.	5	0	5
REL	151	**Introduction to Old Testament Literature** The historical background of the books of the Bible, to enable students to read the Old Testament with fuller appreciation of its messages about man and God. *Prerequisite*: None.	5	0	5
REL	161	**Introduction to New Testament Literature** *Prerequisite*: None. The life, teachings, and significance of Jesus Christ and Saint Paul; emphasizes especially the study and comparison of the first three gospels. *Prerequisite*: None.	5	0	5

SCIENCE - BIOLOGY

*BIO	101	**Principles of Biology** A course designed to present the fundamental principles of biology organized around the concepts of metabolism, growth, reproduction, responsiveness, and adaptation.	4	2	5
*BIO	102	**General Zoology** A survey of the animal kingdom, from simple to complex, with study of basic structures and life processes of representative animals. *Prerequisite*: Principles of Biology—five quarter hours—three lectures and two labs weekly.	3	4	5
*BOT	103	**General Botany** A survey of the plant kingdom, with study of basic structures and functions, and principles of plant classification. *Prerequisite*: Principles of Biology—five quarter hours—three lectures and two labs weekly.	3	4	5
BIO	110	**General Biology I** This course is designed to familiarize the individual student with the basic principles of life. Emphasis is placed upon matter and energy, cell content, cell physiology and cellular reproduction, genetics, evolution and ecology. *Prerequisite*: None.	3	3	4
BIO	111	**General Biology II** This course will acquaint the student with the plant and animal kingdoms. An application of the principles acquired in BIO 110 will be utilized to give the student an appreciation of nature, the plants and animals and their relationships. *Prerequisite*: BIO 110.	3	3	4
BIO	112	**General Biology III** Continuation of Biology 111. *Prerequisite*: BIO 111.	3	3	4
BIO	201	**Botany** A survey of the plant divisions with emphasis on life histories, taxonomy, reproduction and discussion of the biologically important plant groups. *Prerequisites*: BIO 110, 111, 112.	2	4	4

BIO	205	**Invertebrate Zoology** A survey of the invertebrates stressing life histories, morphology, anatomy, ecological distribution and importance. Several major dissections of the various phyla will be included as a part of the laboratory work. *Prerequisites*: BIO 110, 111, 112.	2	4	4
BIO	206	**Vertebrate Zoology** The study of chordates from the embryo to the adult. Emphasis will be placed on structure and function of the major body systems of many chordates. Genetics will be introduced in both the lecture and laboratory. *Prerequisites*: BIO 110, 111, 112.	2	4	4
BIO	210	**Human Anatomy and Physiology I** An integrated unit covering the structure and function of the human body. Dissection of a small mammal and its comparison with man is included. *Prerequisite*: None.	3	3	4
BIO	211	**Human Anatomy and Physiology II** Continuation of Biology 210. *Prerequisite*: BIO 210.	3	3	4
BIO	230	**Microbiology** A study of microorganisms with emphasis on morphology and physiological processes and their relationship to man and his environment. Processes of detection, identification and destruction of pathogenic bacteria will be employed. *Prerequisites*: BIO 110, BIO 111, BIO 112 or BIO 210, BIO 211.	2	4	4

SCIENCE - CHEMISTRY

*CHEM	101	**General Chemistry I** An introductory course concerned with basic principles and laws governing the relationships between the different states of matter: atomic theory; chemical bonding; classification of the elements, their properties and reactions based on the periodic table. Provides laboratory experience. *Prerequisite*: Satisfactory score on mathematics placement test.	4	3	5

*CHEM	102	**General Chemistry II** A continuation of Chemistry 101, with emphasis on electrochemistry; and a survey of nuclear and organic chemistry. *Prerequisite*: CHEM 101.	4	3	5
*CHEM	103	**General Chemistry III** A study of the qualitative analysis of the common cations and anions, with emphasis on solutions, ionic equilibria, and thermochemistry. *Prerequisite*: CHEM 102.	4	3	5
CHEM	110	**General Chemistry I** An introductory course concerned with basic principles and laws governing the relationships between the different states of matter: atomic theory; chemical bonding; classification of the elements, their properties and reactions based on the Periodic Table. The laboratory experiments are designed to accent the broad principles discussed in the classroom. *Prerequisite*: None.	3	3	4
CHM	111	**General Chemistry II** A continuation of Chemistry 110. Topics include spectroscopy, electrochemistry, and a survey of nuclear and organic chemistry. *Prerequisite*: CHM 110.	3	3	4
CHM	112	**General Chemistry III** Topics include thermachemistry, metallurgy; and a study of the qualitative analysis of the common cations and anions, with emphasis on solutions and ionic equilibria. *Prerequisite*: CHM 111.	2	6	4
CHM	201	**Quantitative Analysis I** A study of the theories, techniques, and practices of quantitative analysis. Standard procedures in the fields of gravimetric and volumetric analysis discussed and performed. *Prerequisites*: CHM 110, 111, 112.	2	6	4
CHM	202	**Quantitative Analysis II** A continuation of Chemistry 201, with an introduction to use and theory of gas and to instrumental analysis. *Prerequisites*: CHM 110, 111, 112, 201.	2	6	4

CHM	205	**Elementary Organic Chemistry** An elementary treatment of organic chemistry, emphasizing classes of compounds, their nomenclature, preparation, reactions and uses. *Prerequisites*: CHM 110, 111, 112.	3	6	6

SCIENCE - PHYSICS

PHY	201	**General Physics I** The first of three quarters of a beginning course in general college physics. The first quarter will be spent on a study of mechanics, properties of matter, and heat. *Prerequisite*: None.	3	2	4
PHY	202	**General Physics II** A continuation of Physics 201; topics covered are mechanical wave motion, electricity and magnetism, and electronics. *Prerequisite*: PHY 201.	3	2	4
PHY	203	**General Physics III** A continuation of Physics 202; topics covered are atomic and nuclear physics and light. *Prerequisites*: PHY 201, 202.	3	2	4

SCIENCE - SURVEY COURSES

(These courses are primarily intended to serve as science electives for the terminal student. They may serve as an elective science course for the student transferring to a senior institution. They will satisfy the science requirements for elementary education majors at some institutions.)

SCI	101	**Biological Science** A course designed to emphasize the fundamental principles of biology through the study of the concepts of protoplasmic and cellular organization, growth and differentiation, genetic, and ecological control, and current and past evolution. An integrated lecture and laboratory presentation. *Prerequisite*: None.	3	2	4

SCI	102	**Physical Science Survey I** A study of the principles of chemistry and geology. Chemistry topics included are: theory and structure of the atom, chemical bonds and reactions, oxidation-reduction, organic compound. Geological principles studied are: earth materials and their history, the atmosphere, erosion and sedimentation, and vulcanism and diastrophism. An integrated lecture and laboratory presentation. *Prerequisite*: None.	3	2	4
SCI	103	**Physical Science Survey II** A study of the principles of physics and astronomy. All the major divisions of physics will be represented, namely, mechanics, properties of matter, heat, sound, electricity and magnetism, atomic and nuclear physics, and light. The more important principles and facts about the universe and our solar system will be studied, along with their applications to space science. *Prerequisite*: None.	3	2	4

SOCIAL SCIENCES

HIS	110	**Western Civilization I** An intensive survey of the forces responsible for the making of modern Europe from 1500 to 1815, with background drawn from the ancient and medieval western world. Among the forces considered: the renaissance; Reformation; Commercial, Agricultural, and Industrial Revolutions; Constitutional Government in England; Eighteenth Century Thought; Imperialism; the French Revolution; and the Congress of Vienna. *Prerequisite*: None.	5	0	5
HIS	111	**Western Civilization II** A study of the European civilization since the Congress of Vienna. Special attention given to the rise and fall of nazism and fascism, to the development of communism and capitalism, and to the cold war. *Prerequisite*: None.	5	0	5

HIS	151	**United States History I** A survey of the history of the United States from the discovery of America in 1492 to the end of the Civil War in 1865. Emphasis on the political, economic, social, and cultural developments of the Republic. *Prerequisite*: None.	5	0	5
HIS	152	**United States History II** A survey of the history of the United States from 1865 to present. Emphasis on the economic development and the rise of the United States as a world power. *Prerequisite*: None.	5	0	5
POL (POL 101)	201	**United States Government** A study of the national government of the United States. The development of the federal institutions and agencies and their relationship to each other and to the citizens of the Republic. Emphasis on basic concepts, structure, procedures, and problems. *Prerequisite*: None.	5	0	5
POL	202	**American State and Local Government** An introduction to the roles of state and local government within the federal system, including a consideration of the organization, functions, and powers of state and local units, state constitutions; and contemporary problems. *Prerequisite*: None.	5	0	5
PSY	201	**Principles of Psychology** A basic course presenting a study of behavior in terms of perception, motivation, learning, heredity, environment, emotion, and statistical concepts. *Prerequisite*: None.	5	0	5
PSY	202	**Developmental Psychology** A study of the development and behavior of the individual from conception, through childhood, adolescence, and adulthood, to old age. Emphasis on the interrelation between the biological and social influence. *Prerequisite*: PSY 101.	5	0	5

SOC	201	**Principles of Sociology** An analysis of the structure and functions of modern society. Illustrates societal conditions which influence individual and mass behavior. *Prerequisite*: None.	5	0	5

THE DEVELOPMENTAL STUDIES PROGRAM

The Developmental Studies Program is designed for students with weaknesses in one or more academic areas such as English, reading, or mathematics. It has been found that students who are weak in these key subjects have little chance of success in pursuing technical or college-level curricula without some remedial work. This program strives to provide experiences which will enable the student to work successfully in the technical, trade, or college transfer programs.

Non-credit courses in English, reading improvement, and mathematics are offered to students enrolled in developmental studies. The program is organized to allow each student to advance at his own rate through organized classes, individual instruction, laboratory experiences, and programmed materials. The program strives to strengthen students' cultural knowledge and appreciation through trips to museums, plays, art exhibits and other experiences.

Through individual and group guidance the student is helped to develop adequate study skills, is stimulated to analyze his own talents and interests in terms of occupational goals, and finds out about the learning resources available to him at the College.

Completion of the developmental studies program requires one to have four quarters, depending on original placement, progress, and the curriculum program the student plans to enter. In any case students are obligated to accept the judgement of the College staff regarding placement in developmental courses.

ENG 030 **English I** 5 hrs. per week

A course in the basic fundamentals of English including sentence structure, punctuation, verbs and subjects. Emphasis will also be on increasing audio and visual acuity.

ENG 031 **English II** 5 hrs. per week

A course in the mechanics of English as well as an introduction to composition. Content deals with parts of speech, punctuation, capitalization, spelling, phrases and clauses, and subject-verb agreement.

ENG 032 **Pre-College English** 5 hrs. per week

A course designed for the development of written communication. Writing of meaningful and logical sentences, paragraphs and themes are emphasized in this course. Included in this course is four hours of instruction in listening to improve registry and retention of spoken information.

ENG 042 **Reading Improvement I** 3 hrs. per week

A course in vocabulary study and comprehension of paragraphs. Emphasis is given to phonetic analysis for spelling and recognition and structural analysis and deviation for spelling, recognition and usage. Study of main topics and supporting facts in paragraphs are also stressed.

ENG 043 **Reading Improvement II** 3 hrs. per week

A course in vocabulary study, comprehension of paragraphs, study aids, critical reading, and the development of speed in reading.

ENG 044 **Reading Improvement III** 3 hrs. per week

A course in critical reading, creative thinking, appreciation, word usage for creating varied effects, advanced speed skills and study skills for specific content subjects.

ENG 060 **Stenoscript ABC Shorthand** 5 hrs. per week

A course in speedwriting to increase note-taking ability.

MAT 020 **Structure of Arithmetic** 5 hrs. per week

A course designed to help the student gain and improve basic computational skills. A greater understanding of the nature of "number" and "operation" is also a major objective.

MAT 022 **Elementary Algebra** 5 hrs. per week

A course designed to provide the student with a basic understanding of the fundamentals of elementary algebra and its application.

MAT 023 **Geometry** 5 hrs. per week

A course for students without geometry backgrounds designed to develop and understand the fundamentals of plane geometry.

MAT 025 **Pre-College Algebra** 5 hrs. per week

A course designed to introduce students to college algebra, its functions and applications.

ORI 010 **Developmental Survey** 2 hrs. per week

A course designed to orient the student to college life and prepare the student for a successful learning experience. The survey will also assist the student to make an accurate assessment of himself in relation to a variety of educational and occupational possibilities and the selection of new goals if necessary.

TECHNICAL PROGRAMS

TECHNICAL PROGRAMS

Technological development has resulted in a new complexity and increased sophistication of jobs at all levels in business, industry, agriculture and public service. Teamwork is credited with making possible the technological progress and high level of productivity and efficiency achieved by industry in the past decade. Technicians and other semi-professional workers are the key members of these teams. Technician jobs are increasing at a faster rate than any other occupational group.

Sandhills Community College provides the opportunity for high school graduates, who do not plan to enter a four year college program, to continue their education by taking a two year college level technician program. Broadly defined, technical occupations are those which require a high degree of specialized knowledge, a broad understanding of operational procedures and the ability to supervise the work of others. The technical programs at Sandhills Community College are designed to prepare students for employment in a number of basic jobs in an occupational field.

Descriptions of the Technical Program

The technical programs are planned to prepare students to earn a living as technical personnel in either business, industry, government, the health occupations field, or as an owner-manager of their own establishments. General education subjects are necessary adjuncts to these occupational programs. Technicians must be able to communicate effectively and understand their role in society.

The technical program courses are not intended to be transferred later to senior colleges. The courses are primarily designed to develop occupational competency of the technicians. The curricula are not designed to lead toward a baccalaureate degree. Upon successful completion of a technical curriculum, the candidate is awarded an Associate in Applied Science Degree.

Programs of Study

Agricultural Technology

Ornamental Horticulture (anticipated beginning date: September, 1968)

Business Technology

Accounting
Business Administration
Court Reporting (anticipated beginning date: September, 1968)
Secretarial—Executive, Legal, Medical

Engineering Technology

Mechanical Drafting & Design (program phased out in 1966)

Health Technology

Associate Degree Nursing Program

Admission to a Program

The technology programs are open to any high school graduate or person 18 years of age or over who shows promise of successfully completing the program. Students with deficiencies in subjects basic to the program may be required to do supplementary study at the College.

Students in technical programs follow the same admissions procedure as do all other students working toward a degree. Special requirements for particular programs can be found in the program descriptions.

Estimated Expenses *for Technical Students.*

Tuition Per Quarter

Full-time Students:		
Residents of North Carolina		32.00
Non-Residents of North Carolina		80.00
Part-time Students:		
Residents of North Carolina	$2.50/credit hour	
Non-Residents of North Carolina	$6.25/credit hour	

Books and Supplies

Estimated annual expenditures for full-time students:	100.00
Student Activity Fee	5.00

Total estimated expenses for tuition, books, tools and supplies per year:

Residents of North Carolina	$196 to $230
Non-Residents of North Carolina	$490 to $575

Additional annual expenses for nursing students:

Nursing lab fee	$ 5.00
Malpractice insurance	6.00
	11.00

Single Expense:

Uniforms	70.00
	$81.00

Requirements for the Associate in Applied Science Degree

Associate in Applied Science Degree candidates must complete 96 quarter hours of work including the general education requirements or their equivalent, and all other requirements of the curriculum in which the student is enrolled. The student will be required to meet the same grade point standard required of other full-time students at Sandhills Community College. The student must complete a minimum of 45 quarter hours of work at Sandhills Community College, including the last 15 or more quarter hours, to be granted the Associate in Applied Science Degree.

The general education requirements for all Associate in Applied Science Degree candidates are: English (9 quarter hours), Humanities (3 quarter hours), and Social Sciences (10 quarter hours).

ORNAMENTAL HORTICULTURE TECHNOLOGY

Ornamental Horticulture has experienced accelerated development in recent years. Expanding public and private building construction along with an increasing public emphasis on the use of plant materials for beautifying homes, commercial concerns, and public facilities has resulted in unprecedented demand for ornamental plants. Consequently opportunities in the fields of ornamental horticulture are more numerous than ever. The nursery and related industries need trained personnel, individuals with specific abilities and knowledge in the field.

The Ornamental Horticulture Technology curriculum is designed to help students acquire knowledge, understandings, and skills in the production, use, distribution, and maintenance of ornamental plant materials.

Among the numerous employment opportunities for which the graduate of this curriculum should qualify are nursery and greenhouse foreman, planting and maintenance supervisor, and golf course and park maintenance supervisor.

The graduate will have developed abilities and understandings in the reproduction, planting, cultivation, and maintenance of a variety of ornamental plants that are essential for jobs in the ornamental horticulture area. Current plans call for initiating this program in the fall quarter, 1968.

ORNAMENTAL HORTICULTURE CURRICULUM

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
T-ENG	101	Grammar	3	0	3
	or				
ENG	110	English Composition I	3	0	3
T-AGR	170	Plant Science	5	2	6
MAT	101	Business Mathematics	5	0	5
T-AGR	150	General Horticulture	3	0	3
			16	2	17
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
	or				
ENG	111	English Composition II	3	0	0
T-CHM	101	Chemistry	4	2	5
T-AGR	185	Soil Science and Fertilizers	5	2	6
T-AGR	151	Plant Materials	2	2	3
			14	6	17
THIRD QUARTER					
T-ENG	103	Report Writing	3	0	3
	or				
ENG	112	English Composition III	3	0	0
T-AGR	153	Greenhouse Management	2	2	3
T-AGR	152	Plant Materials	2	2	3
T-AGR	154	Ornamental Plant Pests	3	2	4
T-AGR	155	Arboriculture	3	2	4
			13	8	17
FOURTH QUARTER					
T-SPH	204	Oral Communication	3	0	3
T-BUS	232	Sales Development	3	0	3
BUS	101	Introduction to Business	5	0	5
T-AGR	251	Landscape Planning	2	4	4
T-AGR	254	Plant Propagation	3	2	4
			16	6	19

			Course Hours Per Week		Quarter Hours Credit
FIFTH QUARTER			Class	Lab.	
T-AGR	252	Landscape Gardening	3	2	4
T-BUS	235	Business Management	3	0	3
T-AGR	201	Agricultural Chemicals	5	2	6
		Social Science Elective	3	0	3
		Elective			4
			14	4	20
SIXTH QUARTER					
T-AGR	257	Nursery Practices	3	2	4
T-AGR	258	Turf Practices	2	2	3
		Social Science Elective	3	0	3
		Elective			8
			8	4	18
		Total Hours in Courses			96
		Electives (Maximum)			12
		Total			108

BUSINESS TECHNOLOGY

Sandhills Community College conducts three two year programs in business technology: Accounting, business administration, and secretarial. Each of these programs is described in detail on the pages that follow. All of the business programs have provision for elective courses. Students with previously-acquired skills in typing and shorthand may be exempted from taking BUS 102 and BUS 103, Typewriting, and BUS 106, Shorthand.

ACCOUNTING

Because of the tremendous business and industrial expansion in all parts of the country, accounting is one of the fastest growing employment fields in America today, and the job outlook for good accountants seems bright for many years to come.

The duties and responsibilities of an accountant vary somewhat in different firms. Some of the things an accountant might do are to record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

The graduate of the Accounting curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerk, payroll clerk, accounting machine operator, auditor, and cost accountant. This training plus further experience should prepare them to become office managers, accounting supervisors, and to fill other responsible positions in a business film.

ACCOUNTING CURRICULUM

			Course Hours Per Week		Quarter Hours
FIRST QUARTER			**Class**	**Lab.**	**Credit**
T-ENG	101	Grammar	3	0	3
	or				
*ENG	110	English Composition I	3	0	3
BUS	102	Typewriting (or Elective)	1	4	3
MAT	101	Business Mathematics	5	0	5
BUS	101	Introduction to Business	5	0	5
			14	4	16
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
	or				
*ENG	111	English Composition II	3	0	3
BUS	120	Accounting I	5	2	6
ECO	201	Economics I	5	0	5
T-BUS	115	Business Law I	3	0	3
			16	2	17
THIRD QUARTER					
ECO	202	Economics II	5	0	5
BUS	110				
	or	Office Machines	2	2	3
*ENG	112	English Composition III	3	0	3
BUS	121	Accounting II	5	2	6
T-BUS	116	Business Law II	3	0	3
			15	4	17
FOURTH QUARTER					
T-SPH	204	Oral Communication	3	0	3
T-BUS	123	Business Finance I	3	0	3
T-BUS	222	Accounting III	5	2	6
T-EDP	104	Introduction to Data Processing	3	2	4
			14	2	16

*Student may elect to take the three quarter sequence of college-transfer English.

			Course Hours Per Week		Quarter Hours Credit
FIFTH QUARTER			**Class**	**Lab.**	
T-ENG	206	Business Communication	5	0	5
T-BUS	124	Business Finance II	3	0	3
T-BUS	223	Accounting IV	5	2	6
T-BUS	225	Cost Accounting	3	2	4
			16	4	18
SIXTH QUARTER					
POL	201	United States Government	5	0	5
T-BUS	229	Taxes	3	2	4
T-BUS	269	Auditing	3	2	4
BUS	110	Office Machines or Elective	3-5	0	3-5
			16	4	16-18

BUSINESS ADMINISTRATION

With the increasing population and industrial development in North Carolina, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration curriculum is designed to prepare the student in many phases of administrative work that might be encountered in the average business.

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in business such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

BUSINESS ADMINISTRATION CURRICULUM

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
T-ENG	101	Grammar	3	0	3
	or				
*ENG	110	English Composition I	3	0	3
BUS	102	Typewriting (or Elective)	1	4	3
MAT	101	Business Mathematics	5	0	5
BUS	101	Introduction to Business	5	0	5
			14	4	16
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
	or				
*ENG	111	English Composition II	3	0	3
BUS	120	Accounting I	5	2	6
ECO	201	Economics I	5	0	5
T-BUS	115	Business Law I	3	0	3
			16	2	17
THIRD QUARTER					
*ENG	112	English Composition III or	3	0	3
BUS	110	Office Machines	2	2	3
	or				
T-BUS	116	Business Law II	3	0	3
BUS	121	Accounting II	5	2	6
ECO	202	Economics II	5	0	5
			15	4	17
FOURTH QUARTER					
T-SPH	204	Oral Communication	3	0	3
T-BUS	123	Business Finance I	3	0	3
T-BUS	232	Sales Development	3	0	3
T-EDP	104	Introduction to Data Processing	3	2	4
T-BUS	239	Marketing	5	0	5
			17	2	18

*Student may elect to take the three quarter sequence of college transfer English.

			Course Hours Per Week		Quarter Hours Credit
FIFTH QUARTER			Class	Lab.	
T-ENG	206	Business Communication	5	0	5
T-BUS	243	Advertising	3	2	4
T-BUS	124	Business Finance II	3	0	3
		Social Science (Elective)	5	0	5
			16	2	17
SIXTH QUARTER					
T-BUS	229	Taxes	3	2	4
POL	201	United States Government	5	0	5
T-BUS	272	Principles of Supervision	3	0	3
T-BUS	271	Office Managament	3	0	3
BUS	110	Office Machines I	2	2	3
		or	or	or	or
		Elective	3	0	3
			16-17	2	18

SECRETARIAL

The demand for better qualified secretaries in business and in the professions is becoming more acute. The purpose of this curriculum is to provide a program that will give specialized training in the accepted procedures required by business, medical, and the legal professions.

The secretarial curriculum is designed to offer students the necessary skills in typing, dictation, transcription, and terminology for employment in their chosen occupation. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and interpersonal relationships.

Executive Secretary

The graduate executive secretary should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or as a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls,

and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses, such as insurance companies, banks, marketing institutions, and financial firms.

Legal Secretary

The graduate legal secretary should have a knowledge of legal terminology, skill in dictation, and accurate transcription of legal records, reports, and documents. The duties of a legal secretary may consist of taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. A variety of secretarial positions in lawyers' offices and federal and state government offices are open to the graduate legal secretary.

Medical Secretary

The graduate medical secretary should have a knowledge of medical terminology, skill in dictation and accurate transcription of medical records, reports, and letters. The duties of a medical secretary may consist of taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. Open to the graduate are a variety of secretarial positions such as those in physicians' offices, private and public hospitals, federal and state health programs, and the drug and pharmaceutical industry.

SECRETARIAL CURRICULUM—Executive, Legal, Medical

			Course Hours Per Week		Quarter Hours
FIRST QUARTER			**Class**	**Lab.**	**Credit**
T-ENG	101	English: Grammar	3	0	3
		or			
*ENG	110	English Composition I	3	0	3
MAT	101	Business Mathematics	5	0	5
BUS	101	Introduction to Business	5	0	5
BUS	106	[1]Shorthand I (or Elective)	1	4	3
			14	4	16
		AND			
T-BUS	102	[2]Typewriting I	1	4	3
			15	8	19

SECOND QUARTER			Course Hours Per Week Class	Lab.	Quarter Hours Credit
T-ENG	102	English: Composition	3	0	3
		or			
*ENG	111	English Composition II	3	0	3
BUS	103	[1]Typewriting II (or Elective)	1	4	3
BUS	107	Shorthand II	1	4	3
BUS	120	Accounting I	5	2	6
			10	10	15
THIRD QUARTER					
BUS	104	Typewriting III	1	4	3
BUS	108	Shorthand III	1	4	3
BUS	110	Office Machines I	2	2	3
		or			
*ENG	112	English Composition III	3	0	3
		Elective	3-5	0	3-5
			8-11	8-10	12-14

*Student may elect to take the three quarter sequence of college transfer English.

[1]By demonstrated proficiency, a student may begin the following course in typewriting or shorthand. Waiver of a course allows the substitution of an additional elective to the student's program.
[2]Required for students deficient in typewriting skills.

FOURTH QUARTER			Course Hours Per Week Class	Lab.	Quarter Hours Credit
T-SPH	204	Oral Communication	3	0	3
T-BUS	206	[3]Dictation & Transcription I	3	2	4
T-BUS	205	Advanced Typewriting	1	4	3
T-BUS	211	Office Machines II	2	2	3
T-EDP	104	Introduction to Data Processing	3	2	4
			12	10	17
FIFTH QUARTER					
T-ENG	206	Business Communication	5	0	5
T-BUS	207	[3]Dictation & Transcription II	3	2	4
ECO	201	Economics I	5	0	5
T-BUS	115	Business Law I	3	0	3
			16	2	17
SIXTH QUARTER					
T-BUS	208	Dictation & [3]Transcription III	3	2	4
T-BUS	271	Office Management	3	0	3
T-BUS	214	Secretarial Procedures	5	0	5
		Social Science (Elective)	5	0	5
			16	2	17

[3]For an Executive, Legal or Medical Secretary, these courses will be directed to the area of specialty and will have an E, an L or an M postfix respectively.

COURT REPORTING

In North Carolina there is an ever increasing need for trained men and women for positions as court reporter and/or conference-convention reporter. The purpose of the Court Reporting Curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the profession, and to enable persons to become proficient soon after accepting employment.

The curriculum is designed to offer students the necessary skills in typing, Stenograph shorthand, dictation, transcription, and terminology for employment as a court reporter and/or conference reporter.

The graduate of the Court Reporter Curriculum should find opportunity for immediate employment, rapid advancement, and a good income. The duties of a court reporter may consist of: recording examination, testimony, judicial opinions, judge's charge to jury, judgment or sentence of court, and other proceedings in a court of law.

The duties of a conference-convention reporter may consist of: recording proceedings of conferences, conventions, board meetings, and informal business or committee meetings. The graduate may be employed by a reporting firm, or be employed on a free-lance basis.

The College will begin accepting students for this program during the 1967-68 academic year. The specialized courses in the curriculum will first be offered during the fall quarter, 1968.

COURT REPORTING CURRICULUM

			Course Hours Per Week		Quarter Hours
FIRST QUARTER			**Class**	**Lab.**	**Credit**
T-ENG	101	Grammar	3	0	3
or					
*ENG	110	English Composition I	3	0	3
T-BUS	126	Machine Shorthand	5	6	7
T-BUS	185	Vocabulary Building	3	0	3
T-BUS	114	Law	3	0	3
			14	6	16
		AND			
**BUS	102	Typewriting I	1	4	3
			15	10	19

SECOND QUARTER

T-ENG	102	Composition	3	0	3
or					
*ENG	111	English Composition II	3	0	3
**BUS	103	Typewriting II (or Elective)	1	4	3
T-BUS	127	Machine Shorthand	5	6	7
T-BUS	183L	Terminology and Vocabulary (Legal)	3	0	3
T-BUS	251	Court Procedure	3	0	3
			15	10	19

THIRD QUARTER

*ENG	112	English Composition III	3	0	3
T-SPH	204	Oral Communication	3	0	3
BUS	104	Typewriting III	1	4	3
T-BUS	128	Machine Shorthand	5	6	7
T-BUS	183M	Terminology and Vocabulary (Medical)	3	0	3
T-BUS	252	Court Procedure	3	0	3
			15	10	19

**Required for students deficient in typewriting skills.
*Students may elect to take the three quarter sequence of college transfer English.

		Course Hours Per Week		Quarter Hours
FOURTH QUARTER		**Class**	**Lab.**	**Credit**
T-BUS 201	Machine Shorthand	5	6	7
T-BUS 202M	Dictation and Transcription (Medical)	3	2	4
T-BUS 205	Advanced Typewriting	1	4	3
T-BUS 284M	Terminology and Vocabulary (Medical)	3	0	3
		12	12	17

FIFTH QUARTER

T-BUS 203L	Dictation and Transcription (Legal)	3	2	4
	Social Science Elective	3	0	3
T-ENG 206	Business Communications	5	0	5
	Elective	3	0	3
		14	2	15

SIXTH QUARTER

	Social Science Elective	3	0	3
T-BUS 204L	Dictation and Transcription (Legal)	3	2	4
T-BUS 253	Court Reporting	0	10	5
	Elective	3	0	3
		9	12	15

DRAFTING AND DESIGN—MECHANICAL

This curriculum has been designed to train persons to obtain employment and to enable the individual student to develop a high proficiency after employment in the industry. Because technicians associate with administrative personnel, scientists, engineers, and skilled workmen, courses in general education have been included. Courses containing essential information from related areas, such as mathematics, physics, and mechanics are also necessary and have been included to provide the student with an academic foundation for his training.

Mechanical drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models and items for production use.

These technicians perform many aspects of drafting in a specialized field, such as the developing of the drawing of a section, sub-assembly or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They assist in the design of units and controls from specifications by utilizing drawings of existing units and reports on functional performance. They may draw components in industrial fields based on engineers' original design concepts or specific ideas. Also, they may be assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians with experience in this classification may often supervise the preparation of working drawings.

These technicians are employed in many types of manufacturing, fabrication, research, development and service industries. Substantial numbers also are employed in communications, transportation, public utilities, consulting engineering firms, and federal, state, and local governments.

DRAFTING AND DESIGN CURRICULUM

FIRST QUARTER			Course Hours Per Week: Class	Course Hours Per Week: Lab.	Quarter Hours Credit
T-ENG	101	English: Grammar	3	0	3
or					
*ENG	110	English Composition I	3	0	3
T-MAT	101	Technical Mathematics	5	0	5
T-PHY	101	Physics: Properties of Matter	3	2	4
T-DFT	101	Technical Drafting I	0	6	2
T-MEC	101	Machine Processes I	0	6	2
			11	14	16

SECOND QUARTER

T-ENG	102	English: Composition	3	0	3
or					
*ENG	111	English Composition II	3	0	3
T-MAT	102	Technical Mathematics II	5	0	5
T-PHY	102	Physics: Work, Energy, Power	3	2	4
T-DFT	102	Technical Drafting II	0	6	2
T-MEC	102	Machine Processes II	0	6	2
			11	14	16

THIRD QUARTER

T-ENG	103	Report Writing	3	0	3
or					
*ENG	112	English Composition III	3	0	3
T-MAT	103	Technical Mathematics III	5	0	5
T-PHY	103	Physics: Electricity	3	2	4
T-PHY	106	Applied Mechanics	5	0	5
T-DFT	103	Technical Drafting III	0	6	2
			16	8	19

*Students may elect to take the three quarter sequence of college transfer English.

			Course Hours Per Week		Quarter Hours
FOURTH QUARTER			**Class**	**Lab.**	**Credit**
T-SPH	204	Oral Communication	3	0	3
T-DFT	201	Technical Drafting IV	2	6	4
T-DFT	204	Descriptive Geometry	2	4	4
T-MEC	205	Strength of Materials	3	2	4
T-MEC	210	Physical Metallurgy I	3	3	4
			13	15	19

FIFTH QUARTER

		Social Science Elective	3	0	3
T-DFT	205	Design Drafting I	2	6	4
T-DFT	211	Mechanisms	3	2	4
T-MEC	211	Physical Metallurgy II	3	3	4
		Elective			4
			11	11	19

SIXTH QUARTER

		Social Science Elective	3	0	3
T-DFT	206	Design Drafting II	2	6	4
T-MEC	235	Hydraulics & Pneumatics	3	3	4
		Elective			5
		Elective			3

ASSOCIATE DEGREE NURSING PROGRAM

The great increase of knowledge affecting health practices, the population growth, and the public demand for more health care are the bases of statistics documenting the ever increasing need for nursing personnel.

The program at Sandhills Community College combines a curriculum of nursing education and general education on the campus with selected learning experiences at hospitals, doctors' offices and other community health agencies under the direction of the College nursing faculty. The curriculum provides preparation for technical nursing. Graduates will be qualified to write the Registered Nurse examination in North Carolina. The curriculum prepares the graduates to give direct patient-centered nursing care under the supervision of a professional registered nurse as beginning level practitioners.

The program encourages the students to progress to their fullest potentials as individuals, nurses, and citizens of their communities.

The associate of science degree nursing program at Sandhills has received "Reasonable Assurance of Accreditation" from the National League of Nursing and is accredited by the North Carolina State Board of Nursing.

1966-67
CURRICULUM BY QUARTERS

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
ENG	110	English Composition I	3	0	3
BIO	210	Human Anatomy & Physiology I	3	3	4
BIO	105	Science Survey	4	3	5
PED	101	Physical Education Activity	0	2	1
			10	8	13
SECOND QUARTER					
T-NUR	101	Nursing I	3	6	5
ENG	111	English Composition II	3	0	3
BIO	211	Human Anatomy & Physiology II	3	3	4
T-SPH	204	Oral Communication	3	0	3
			12	9	15

			Course Hours Per Week		Quarter Hours Credit
THIRD QUARTER			Class	Lab.	
T-NUR	102	Nursing II	3	9	6
ENG	112	English Composition III	3	0	3
BIO	230	Microbiology	3	4	5
PSY	201	Principles of Psychology	5	0	5
			14	13	19
FOURTH QUARTER					
T-NUR	103	Nursing III	3	9	6
PSY	202	Developmental Psychology	5	0	5
ELECTIVE		Humanities	3	0	3
			11	9	14
FIFTH QUARTER					
T-NUR	201	Nursing IV	5	9	8
SOC	201	Principles of Sociology	5	0	5
			10	9	13
SIXTH QUARTER					
T-NUR	202	Nursing V	5	12	9
T-NUR	203	Nursing VI	3	0	3
ELECTIVE		Humanities	3	0	3
			11	12	15
SEVENTH QUARTER					
T-NUR	204	Nursing VII	5	6	7
T-NUR	205	Nursing VIII	2	3	3
ELECTIVE			3	0	3
			10	9	13

Nursing and Science Laboratories Ratio:

3 Lab Hours = 1 q.h.c.

Electives: Six quarter hours credit required in the humanities
Three quarter hours credit free choice

General Education	55
Nursing	47
Total q.h.c.	102

1967-68
CURRICULUM BY QUARTERS

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
T-NUR	101	Nursing I	3	6	5
ENG	110	English Composition I	3	0	3
BIO	210	Human Anatomy & Physiology I	3	3	4
PSY	201	Principles of Psychology	5	0	5
PED	101	Physical Education	0	2	1
			14	11	18
SECOND QUARTER					
T-NUR	102	Nursing II	3	9	6
ENG	111	English Composition II	3	0	3
BIO	211	Human Anatomy & Physiology II	3	3	4
SOC	201	Principles of Sociology	5	0	5
			14	12	18
THIRD QUARTER					
T-NUR	103	Nursing III	3	9	6
ENG	112	English Composition III	3	0	3
BIO	230	Microbiology	2	4	4
PSY	202	Developmental Psychology	5	0	5
			13	13	18
FOURTH QUARTER					
T-NUR	201	Nursing IV	5	9	8
SPH	101	Principles of Speech	5	0	5
			10	9	13
FIFTH QUARTER					
T-NUR	202	Nursing V	5	12	9
T-NUR	203	Nursing VI	3	0	3
ELECTIVE		Humanities	5	0	5
			13	12	17
SIXTH QUARTER					
T-NUR	204	Nursing VII	5	6	7
T-NUR	205	Nursing VIII	2	3	3
ELECTIVE		Humanities	*3-5	0	3-5
			10-12	9	13-15

*3-5 credit hours depending on student

General Education	50-52
Nursing	47
Totals q.h.c.	97-99

The College reserves the right to revise this curriculum in keeping with evolving trends in associate degree nursing education.

TECHNICAL COURSE DESCRIPTIONS

Technical Course Numbering System

All technical courses are numbered from 100 to 299 and prefixed with a *T* followed by a three-letter symbol. The *T* prefix indicates that the course is in the two year technical program and is not designed for transfer credit. On the same line, following the prefix and number, appear the course title, the number of lecture and laboratory hours per week, and the number of quarter credit hours earned by successfully completing the course. Some courses offered at the College during the 1965-1966 and 1966-67 academic years have been dropped from the curriculum; other courses have new prefixes and numbers. Courses that are no longer a part of the curriculum are indicated by an asterisk; courses that in previous academic years were identified by a different prefix and/or number show the former designations in parentheses. Courses and course prefixes without the asterisk or parentheses will be current for the 1967-68 academic year.

Some courses in the technical curricula are the same as those shown in the college transfer programs. Descriptions for courses in the curricula which do not carry the "T" prefix can be found in the College Transfer section of this catalog.

COURSE DESCRIPTION—TECHNICAL

AGRICULTURE

T-AGR 150	**General Horticulture** A course dealing with horticulture principles and the application of plant science fundamentals to horticultural practices. *Prerequisite*: None.	3	0	3
T-AGR 151	**Plant Materials** Identification, adaptation and use of ornamental plants. *Prerequisites*: T-AGR 150, 170.	2	2	3
T-AGR 152	**Plant Materials** Identification, adaptation and use of ornamental plants. *Prerequisite*: T-AGR 151.	2	2	3
T-AGR 153	**Greenhouse Management** Fundamentals of and practices in greenhouse plant production; construction and management of various types of greenhouses, including the control of heat, light, ventilation and humidity. *Prerequisites*: T-AGR 150, 170.	2	2	3

T-AGR 154	**Ornamental Plant Pests** A review of the basic principles of entomology and plant pathology. Emphasis on the identification and practical methods of control of pests that attack ornamental plants—insects, diseases, weeds, and rodents. *Prerequisites*: T-AGR 150, 170.	3	2	4
T-AGR 155	**Arboriculture** Principles and practices of selection, use, establishment and care of shade and ornamental trees. *Prerequisite*: T-AGR 185.	3	2	4
T-AGR 170	**Plant Science** An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed bearing plants with application to certain commercially important plants in North Carolina. *Prerequisite*: None.	5	2	6
T-AGR 185	**Soil Science and Fertilizers** A course dealing with basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and conservation of soil fertility. *Prerequisite*: None.	5	2	6
T-AGR 201	**Agricultural Chemicals** A study of agricultural chemicals, their importance, ingredients, formulation, and application with emphasis on the effective and safe utilization of chemicals in agricultural pest control. *Prerequisite*: None.	5	2	6
T-AGR 251	**Landscape Planning** The purpose of this course is to develop an understanding of the principles and practices of landscape planning and design with application to selected landscape problems. Planning of small home grounds as well as problems of design and construction. *Prerequisite*: T-AGR 152.	2	4	4

T-AGR 252	**Landscape Gardening** Development and maintenance of landscape areas including planting, pruning, fertilization and pest control. Fundamentals of landscape economics: costs, contracts, calculating areas, volumes, and plant quantities for landscape projects. Selection and use of materials in landscape construction. *Prerequisites*: T-AGR 154, T-AGR 251.	3	2	4
T-AGR 254	**Plant Propagation** A study of the principles, methods and facilities for plant propagation. *Prerequisite*: T-AGR 152.	3	2	4
T-AGR 257	**Nursery Practices** Retail and wholesale nursery practices. Layouts, selling, handling of plant materials. Commercial nursery stock production dealing with plant growth patterns and plant responses in relation to soils, water, fertility, planting techniques and distances, top and roof pruning. Plant production cycles, rotations, and kind of treatment for economy production. *Prerequisite*: T-AGR 152.	3	2	4
T-AGR 258	**Turf Practices** A study of turf grasses including identification, seeding establishment, use and maintenance. *Prerequisite*: T-AGR 185.	2	2	3

BUSINESS

See college transfer listing for descriptions of the following courses:

BUS 101 **Introduction to Business**

BUS 102 **Typewriting I**

BUS 103 **Typewriting II**

BUS 104 **Typewriting III**

BUS 106 **Shorthand I**

BUS 107 **Shorthand II**

BUS 108 **Shorthand III**

BUS 110 **Office Machines**

BUS 120 **Accounting I**

BUS 121 **Accounting II**

T-BUS 114	**Law** An introduction to law covering topics or contracts, torts, negligence, agency, and laws in general. *Prerequisite*: None.	3	0	3
T-BUS 115 (BUS 151)	**Business Law I** A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies. *Prerequisite*: None.	3	0	3
T-BUS 116 (BUS 152)	**Business Law II** Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership - corporation, mortgages, and property rights. *Prerequisite*: BUS 115.	3	0	3
T-BUS 123	**Business Finance I** Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing. *Prerequisite*: None.	3	0	3
T-BUS 124	**Business Finance II** Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. *Prerequisite*: T-BUS 123.	3	0	3
T-BUS 126	**Machine Shorthand I** This course presents the basic principles and theory of Stenograph machine shorthand. *Prerequisite*: None.	5	6	7
T-BUS 127	**Machine Shorthand II** A continuation of T-BUS 126 with emphasis on machine operation. The development of the ability to take dictation on the Stenograph machine at the rate of 80 words per minute. *Prerequisite*: T-BUS 126.	5	6	7
T-BUS 183	**Terminology and Vocabulary I** To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. *Prerequisite*: None.	3	0	3

T-BUS 185	**Vocabulary Building** A study of specialized vocabulary for development of successful performance in court and conference reporting. Emphasis on business, engineering and technical terms. *Prerequisite*: None.	3	0	3
T-BUS 201	**Machine Shorthand III** A continuation of T-BUS 128. The development of the ability to take dictation on the Stenograph machine at a minimum of 120 words per minute on straight new matter. *Prerequisite*: T-BUS 128.	5	6	7
T-BUS 202 (T-BUS 206)	**Dictation and Transcription I** An introduction to the transcription of machine shorthand on the typewriter. The development of the ability to take dictation on straight new matter at a rate of 120-140 words per minute and to transcribe this dictation in an acceptable manner. *Prerequisite*: T-BUS 201.	3	2	4
T-BUS 203 (T-BUS 207)	**Dictation and Transcription II** A continuation of T-BUS 202. Development of ability to take dictation of straight new matter at the rate of 140-160 words per minute and to transcribe at the rate of 25 words per minute. *Prerequisite*: T-BUS 202.	3	2	4
T-BUS 204 (T-BUS 208)	**Dictation and Transcription III** A continuation of T-BUS 203. The development of ability to take dictation of straight new matter at a rate of 180-200 words per minute and transcribe at the rate of 30 words per minute. *Prerequisite*: T-BUS 203.	3	2	4
T-BUS 205	**Advanced Typewriting** Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. *Prerequisite*: T-BUS 104. Speed requirement, 50 words per minute for five minutes.	1	4	3

T-BUS 206	**Dictation and Transcription IV**	3	2	4

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.

Prerequisite: T-BUS 108.

T-BUS 207	**Dictation and Transcription V**	3	2	4

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenograph requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material.

Prerequisite: T-BUS 206.

T-BUS 208	**Dictation and Transcription VI**	3	2	4

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.

Prerequisite: T-BUS 207.

T-BUS 211	**Office Machines**	2	2	3

Instructions in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines.

Prerequisite: T-BUS 110.

T-BUS 214	**Secretarial Procedures**	5	0	5

Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, insurance claims, and fundamentals of indexing and filing.

Prerequisite: None.

T-BUS 222	**Accounting III** Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes, among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. *Prerequisite*: T-BUS 121.	5	2	6
T-BUS 223	**Accounting IV** Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid-in capital, retained earnings, and special analytical processes. *Prerequisite*: T-BUS 222.	5	2	6
T-BUS 225	**Cost Accounting** Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost, and standard cost principles and procedures; selling and distribution cost; budgets, and executive use of cost figures. *Prerequisite*: T-BUS 121.	3	2	4
T-BUS 229	**Taxes** Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. *Prerequisite*: T-BUS 121.	3	2	4
T-BUS 232 (T-BUS 117)	**Sales Development** A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. *Prerequisite*: None.	3	0	3
T-BUS 235 (T-BUS 135)	**Business Management** Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements. *Prerequisite*: None.	3	0	3

T-BUS 239	**Marketing** A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process. *Prerequisite*: None.	5	0	5
T-BUS 243	**Advertising** The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media. *Prerequisite*: None.	3	2	4
T-BUS 252	**Court Procedure** Continuation of court procedures with emphasis on trial procedures, appellate procedures, legal documents, deposition forms, and criminal and civil procedures. *Prerequisite*: T-BUS 251.	3	0	3
T-BUS 253	**Court Reporting** A course of actual court and/or conference reporting practice. Student will spend time in various courtroom situations, and/or conferences or convention reporting situations. *Prerequisite*: Ability to take dictation of straight new matter at the rate of 175 words per minute.	0	10	5
T-BUS 269	**Auditing** Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit, and writing the audit report. Emphasis placed on detailed audits, internal auditing, and internal control. *Prerequisite*: T-BUS 223.	3	2	4
T-BUS 271	**Office Management** Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems. *Prerequisite*: None.	3	0	3

T-BUS 272 (T-BUS 273)	**Principles of Supervision** Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the superior. Methods of supervision are stressed. *Prerequisite*: None.	3	0	3
T-BUS 284	**Terminology and Vocabulary II** Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. *Prerequisite*: T-BUS 183.	3	0	3
T-EDP 104	**Introduction to Data Processing Systems** Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses. *Prerequisite*: None.	3	2	4

CHEMISTRY

T-CHM 101	**Chemistry** Study of the physical and chemical properties of substances, chemical changes; elements, compounds, gases, chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates; electrochemistry, electrolytes, and electrolysis in their application of chemistry to industry. *Prerequisite*: T-MAT 101.	4	2	5

DRAFTING

*T-DFT 101	**Technical Drafting**	0	6	2

The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced.

Prerequisite: None.

*T-DFT 102	**Technical Drafting**	0	6	2

The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and "working drawings," approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects.

Prerequisite: T-DFT 101.

*T-DFT 103	**Technical Drafting**	0	6	2

Intersection and developments and their practical solutions. Model solutions accompanying the problems where applicable. Includes the various techniques employed to produce and render isometric and oblique drawings, isometric, dimetric and trimetric projections.

Prerequisite: T-DFT 102.

*T-DFT 201	**Technical Drafting**	2	6	4

Applications and constructions of charts, graphs, and nomographs in engineering and technical data. Screw threads, springs, keys, rivets, piping, and welding symbols, methods of representing and specifying will be covered. Basic mechanisms of motion transfer, gears and cams, will be studied and drawn with emphasis on methods of specifying, calculating, dimensions, and delineating.

Prerequisite: T-DFT 103.

*T-DFT 204	**Descriptive Geometry**	2	4	4

Graphic analysis of space problems involving points, lines, planes, connectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem.

Prerequisite: T-DFT 102, T-MAT 102.

*T-DFT 205	**Design Drafting**	2	6	4

Basic design is introduced in the study of motion transfer mechanisms as they relate to power trains. Principles of design sketching, design drawing, layout drafting, detailing from layouts, production drawings and simplified drafting practices constitute areas of study. Types and methods of specifying materials and workmanship are in integral part of the course.

Prerequisites: T-DFT 204, T-MAT 102, T-PHY 102.

*T-DFT 206	**Design Drafting**	2	6	4

Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. A written technical report, preliminary design sketches, layout drawings, detail drawings, assembly and subassembly drawings, pictorial drawings, exploded pictorial assembly, patent drawings and specifications are required as a part of the problem.

Prerequisites: T-DFT 205, T-DFT 210.

*T-DFT 211	**Mechanisms**	3	2	4

Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within link mechanism; layout methods for designing cams, belts, pulleys, gears and gear trains.

Prerequisites: T-DFT 204, T-DFT 201, T-MAT 103, T-PHY 106.

*T-DFT 212	**Jig and Fixture Design**	2	6	4

Commercial standards, principles, practices and tools of jig and fixture design. Individual project and design work to acquaint students with the types of jigs and fixtures and their design.

Prerequisites: T-DFT 205, T-DFT 211.

ELECTRONICS

T-ELN 201	**Industrial Controls**	3	2	4

Industrial controls is the study of modern methods of controlling machinery by electronic circuitry. Machinery controls and electronic mechanisms that automatically operate machines will be studied. Types of motors, generators, control signals and devices, thyratrons, gates, switches, and servomechanism circuits are major areas of study.

Prerequisite: T-PHY 103.

ENGLISH

T-ENG 101	**Grammar**	3	0	3

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

Prerequisite: None.

T-ENG 102	**Composition**	3	0	3

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition.

Prerequisite: T-ENG 101.

T-ENG 103	**Report Writing**	3	0	3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

T-ENG 206	**Business Communication**	5	0	5

Develops skills in techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry.

Prerequisite: T-ENG 102.

INDUSTRIAL SCIENCE

T-ISC 201	**Industrial Organization and Management**	3	0	3

Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting of markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations.

Prerequisite: None.

MATHEMATICS

*T-MAT 101	**Technical Mathematics**	5	0	5

The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.

Prerequisite: Satisfactory score on mathematics placement test.

*T-MAT 102	**Technical Mathematics** A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth. *Prerequisite*: T-MAT 101.	5	0	5
*T-MAT 103	**Technical Mathematics** The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations are stressed. *Prerequisite*: T-MAT 102.	5	0	5

MECHANICS

*T-MEC 101	**Machine Processes** An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the late family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming. *Prerequisite*: None.	0	6	2
*T-MEC 102	**Machine Processes** Advanced operations on lathe, drilling, boring and reaming machines. Milling machine theory and practice. Thorough study of the types of milling machines, cutters, jig and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed. *Prerequisite*: T-MEC 101.	0	6	2

*T-MEC 205	**Strength of Materials**	3	2	4

Study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying and dynamic. Analyses of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components.

Prerequisites: T-MAT 103, T-PHY 106.

*T-MEC 210	**Physical Metallurgy**	3	3	4

Introductory course in metallurgy, a basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal planes; liquid and vapor phases; phase diagrams; and alloy systems.

Prerequisite: T-PHY 101.

*T-MEC 211	**Physical Metallurgy**	3	3	4

Properties of metals and alloys, the reactions of metals, diffusion, carburizing, metal bonding and homogenization; recrystallization and grain growth, age hardening, nitriding, internal oxidation; heat treatment of steel; laboratory experiments and demonstrations.

Prerequisite: T-MEC 210.

*T-MEC 235	**Hydraulics and Pneumatics**	3	3	4

The basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electro-hydraulic servomechanisms, plumbing, filtration, accumulators and reservoirs.

Prerequisite: T-PHY 102.

NURSING

T-NUR 101	**Nursing I**	3	6	5

An introductory course in nursing encompassing health needs of the individual and providing material which is basic to all areas of nursing. A patient centered, problem solving approach is used with identification of the scientific principles from the related sciences which undergird nursing knowledge and skill. Concepts of mental health, communication skills and community health aspects are included.

Prerequisite: None.

T-NUR 102	**Nursing II**	3	9	6

The moving forward in material described under T-NUR 101. A continuation and progression of knowledges in nutrition, pharmacology, communication, etc., as well as skills which are common to all nursing care. Consideration is given to modification of patient care due to age, trauma, surgery, and chronic illness. A beginning of the study and care of the patient with condition of the skin and musculoskeletal system.

Prerequisites: BIO 210, T-NUR 101.

Corequisite: BIO 211.

T-NUR 103	**Nursing III**	3	9	6

Family centered maternal, infant and child care through adolescence is explored from a normal approach. Learning experiences are provided in a variety of settings to include health needs of, and care to, the family throughout the maternity cycle and to children from infancy through adolescence.

Prerequisites: BIO 211, T-NUR 102, PSY 201.

Corequisite: BIO 230, PSY 202.

T-NUR 201	**Nursing IV**	5	9	8

A continuation of T-NUR 103 with emphasis placed on the study and care of patients with conditions which show deviations from the normal maternity cycle and of the ill child from infancy through adolescence. Nursing care is centered in the ability to identify the nursing needs of the patient and to understand the interrelationship of emotional and physical illness.

Prerequisites: T-NUR 103, PHY 202, BIO 230, SOC 201.

T-NUR 202	**Nursing V** A study of the nursing care needs of the adult patient in a developmental approach. A sequence of planned learning experiences designed to develop understanding, knowledge, and skill in the nursing care problems that occur as life unfolds from the young adult to the aged. *Prerequisite*: T-NUR 201.	5	12	9
T-NUR 203	**Nursing VI** A course designed to give the student the opportunity to identify the organizational structure of nursing. Trends in nursing, legal aspects, occupational opportunities, etc., are explored. *Prerequisite*: T-NUR 201.	3	0	3
T-NUR 204	**Nursing VII** A study of the nursing care of the acutely ill person whose problem is primarily emotional or mental. Areas of psycopathology, mental deficiency and mental retardation will be included. Selected clinical learning experiences will reenforce the theoretical material. *Prerequisite*: T-NUR 202.	5	6	7
T-NUR 205	**Nursing VIII** A study of the nursing needs of patients with more complex nursing problems. Study of the role of the team leader, the staff nurse, and today's ancillary workers. Learning experience will include care of the patient in the intensive care situation. The team approach to nursing care will be emphasized. *Prerequisite*: T-NUR 202.	2	3	3

PHYSICS

*T-PHY 101	**Physics: Properties of Matter** A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course. *Prerequisite*: None.	3	2	4

*T-PHY 102	**Physics: Work, Energy, Power** Major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas. *Prerequisites*: T-MAT 101, T-PHY 101.	3	2	4
*T-PHY 103	**Physics: Electricity** Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course. *Prerequisites*: T-MAT 101, T-PHY 101.	3	2	4
*T-PHY 106	**Applied Mechanics** Concepts and principles of statics and dynamics. Parallel concurrent and noncurrent force systems in coplanar and noncoplanar situations. Concepts of centroids and center of gravity, moments of inertia, fundamentals of kinetics, and kinematics of velocity and motion. *Prerequisites*: T-MAT 103, T-PHY 102.	5	0	5

PSYCHOLOGY

T-PSY 206 (T-PSY 112)	**Applied Psychology** A study of the principles of psychology that will be of assistance in the understanding of interpersonal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community. *Prerequisite*: None.	3	0	3

SPEECH

T-SPH 204 (T-SPH 202)	**Oral Communication**	3	0	3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101.

VOCATIONAL PROGRAMS

VOCATIONAL PROGRAMS

The recent growth of industry, with its rapid technological advances has created a greater need for skilled craftsmen. These craftsmen must acquire the technical knowledge of the occupation and be able to perform the necessary manipulative skills to successfully meet the increasing demands required of industry.

The objectives of the vocational programs at Sandhills Community College are to prepare individuals for initial employment in recognized skilled occupations, to re-train for entering new occupations, to advance in a given occupation by updating or upgrading of skills and knowledge, to develop an understanding of the American free enterprise system, and to develop an interest in the betterment of our society.

Vocational programs require one full year of participation for students on a full-time basis. Courses will be available during the day and during the evening for students desiring to enroll on a part-time basis.

Descriptions of the Vocational Programs

The vocational programs are designed to prepare the graduate to enter and make progress in a skilled occupation. Up-to-date instructional equipment is used in classroom, laboratory, and shop activities. Included in the programs of study is instruction in related and applied general education subjects with a concentration of study in technical subjects and the development of manipulative skills.

Programs of Study

The diploma is granted upon the successful completion of one of the following one year programs:

Auto Body Repair
Automobile Mechanics
Drafting—Architectural
Drafting—Mechanical
Electronics Servicing
Machinist

The following one year diploma programs are under development and are proposed to start in the fall of 1968:

Carpentry

Electrical Installation & Maintenance

Horticulture

Masonry

Plumbing and Pipefitting

The following one quarter certificate programs are under development and are proposed to start in the fall of 1967:

Food Service

Nurse Assistant

Hospital Ward Secretary

Admission to a Program

These programs are open to any high school graduate or person 18 years of age or over who shows promise of successfully completing the program. Students with deficiencies in subjects basic to the program may be required to complete supplementary studies at the College prior to entering the program on a full-time basis.

Minimum Admission Requirements

Requirements for admission of a candidate to the regular one-year vocational program are: The candidate:

1. Must be a high school graduate or have a State approved equivalent education.

2. Must have high school credit for one unit in general mathematics. Competence may be determined by appropriate tests. A student with mathematics deficiencies may be admitted only when there is strong indication of probable success.

3. Must submit the transcripts of high school and post-high school education.

4. Must demonstrate aptitude for the specific vocational training as determined by standardized tests. These tests will aid in student selection, placement, and guidance. Institutional guidance and counseling will be available to the student throughout his education.

5. Must be in acceptable physical and mental health. A medical examination will be required.
6. Must have interview with a designated College representative for discussing enrollment plans and career goals.

Estimated Expenses for Vocational Program Students:

Tuition Per Quarter

Full-time Students		
Residents of North Carolina		32.00
Non-Residents of North Carolina		80.00
Part-time Students		
Residents of North Carolina	$2.50/credit hour	
Non-Residents of North Carolina	$6.25/credit hour	

Books and Supplies

Estimated annual expenditure for full-time students	60.00

Tools

Automobile Body Repair Tools	60.00
Automobile Mechanic Tools	110.00
Drafting Instruments	35.00
Machinists Tools	60.00

Total estimated expenses for tuition, books, tools and supplies per year:

Residents of North Carolina	$205 to $280
Non-Residents of North Carolina	$400 to $475

Requirements for the Diploma

Candidates for the diploma must successfully complete at least the following general education requirements, or their equivalent, and all other requirements in the curriculum in which he is enrolled. The student's grade point average must be 1.0 (*C* grade or better) on all work attempted at Sandhills Community College. The student must be enrolled and complete the last 15 quarter hours or more of work at Sandhills Community College, and a minimum of thirty quarter hours of work must be completed at this institution.

The student must complete the following minimum general education requirements in addition to the trade-related courses: Communicative skills (5 quarter hours), mathematics, (5 quarter hours), and social sciences, (3 quarter hours.)

In addition, students must have a set of basic hand tools for use in their laboratory instruction and to be eligible for graduation.

AUTOMOBILE BODY REPAIR

The field of automotive body repair and painting needs many more well-trained people to meet the growing demand for the special skills in this area of employment. In this program, much of the students' time in the shop is devoted to learning skills and practicing these skills on car bodies and their component parts. Every attempt is made to make these practical experiences as close as possible to actual on-the-job situations. Graduates of the Auto Body Repair Curriculum are qualified for jobs in which they remove dents in automobile bodies and fenders; take off fenders and replace them with new ones; straighten frames, doors, hoods, and deck lids; and align wheels. In their work these craftsmen operate welding equipment. They also make tests on and repair engine cooling systems. Auto body repairmen shrink stretched metal and prepare it for painting. They are called on to paint fenders and/or panels as well as to paint a complete vehicle. In addition to these duties, auto body repairmen remove, cut, fit, and install glass. They are required to remove and install interior trim; cut, sew, and install headings and seatcovers; repair and replace upholstery and fabric tops of vehicles; and rebuild springs and padding. This type of employment includes reading and interpreting blueprints, charts, instruction and service manuals, and wiring diagrams. These repairmen also prepare orders for repairs and parts as well as estimates and statements for adjusters. After gaining experience, many of these craftsmen operate their own businesses or become body shop foremen, supervisors, or managers.

AUTOMOBILE BODY REPAIR CURRICULUM

			Course Hours Per Week		Quarter Hours
FIRST QUARTER			**Class**	**Lab.**	**Credit**
AUT	1111	Auto Body Repair	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
PHY	1101	Applied Science	3	2	4
ENG	1101	Reading Improvement	2	0	2
WLD	1101	Basic Gas Welding	0	3	1
			13	17	19
SECOND QUARTER					
AUT	1112	Auto Body Repair	3	12	7
WLD	1105	Auto Body Welding	0	3	1
DFT	1101	Schematics & Diagrams: Power Mechanics	0	3	1
PHY	1102	Applied Science	3	2	4
ENG	1102	Communication Skills	3	0	3
			9	20	16

THIRD QUARTER					
AUT	1113	Metal Finishing & Painting	3	12	7
PSY	1101	Human Relations	3	0	3
AUT	1115	Trim, Glass & Radiator Repair	2	9	5
			8	12	15
FOURTH QUARTER					
AUT	1114	Body Shop Applications	3	21	10
BUS	1103	Small Business Operations	3	0	3
			6	21	13

AUTOMOTIVE MECHANICS

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Because complexity in automotive vehicles increases each year owing to scientific discovery and new engineering, this curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

Automotive mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

AUTOMOTIVE MECHANICS CURRICULUM

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
PME	1101	Internal Combustion Engines	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			13	14	18
SECOND QUARTER					
PME	1102	Engine Electrical & Fuel Systems	5	12	9
ENG	1102	Communication Skills	3	0	3
DFT	1101	Schematics & Diagrams: Power Mechanics	0	3	1
PHY	1102	Applied Science	3	2	4
			11	17	17
THIRD QUARTER					
AUT	1123	Automotive Chassis & Suspensions Systems	3	9	6
AUT	1121	Braking Systems	3	3	4
PSY	1101	Human Relations	3	0	3
AHR	1101	Automotive Air Conditioning	2	3	3
WLD	1101	Basic Gas Welding	0	3	1
			11	18	17
FOURTH QUARTER					
AUT	1124	Automotive Power Train Systems	3	9	6
AUT	1125	Automotive Servicing	3	9	6
BUS	1103	Small Business Operations	3	0	3
			9	18	15

DRAFTING—ARCHITECTURAL

This curriculum is designed to prepare students to enter the field of architectural drafting. Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon

entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. Because the draftsman associates with administrators, architects, engineers, and skilled workmen, courses to develop knowledge and skills in communication, human relations, economics and industrial organizations are provided to assist the student in developing understanding and confidence in his relations with many levels of personnel.

A draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions. He makes final sketches of the proposed drawing, checks dimensions of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. He makes any adjustments or changes necessary or desired, inks in lines and letters on pencil drawings as required, exercises manual skill in the manipulation of triangle, T-square, and other drafting tools, traces drawings in pencil or ink, and makes charts for representation of statistical data. He makes finished designs from sketches and utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

The architectural draftsman performs the general duties of a draftsman and also specializes in organizing and drawing working drawings from the designer's final preliminary sketches, the mechanical equipment, and the structural drawings.

ARCHITECTURAL DRAFTING CURRICULUM

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
DFT	1121	Drafting I	3	12	7
MAT	1102	Algebra	5	0	5
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			13	14	18
SECOND QUARTER					
DFT	1122	Drafting II	3	6	5
DFT	1125	Descriptive Geometry	2	3	3
MAT	1103	Geometry	3	0	3
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			14	11	18

THIRD QUARTER					
DFT	1141	Architectural Drafting I	3	12	7
MAT	1104	Trigonometry	3	0	3
DFT	1144	Building Materials & Methods	3	0	3
DFT	1143	Building Mechanical Equipment	3	0	3
PSY	1101	Human Relations	3	0	3
			15	12	19
FOURTH QUARTER					
DFT	1142	Architectural Drafting II	3	12	7
DFT	1145	Specifications & Contracts	3	0	3
CIV	1101	Surveying	2	3	3
BUS	1103	Small Business Operations	3	0	3
			11	15	16

DRAFTING—MECHANICAL

This curriculum is designed to prepare students to enter the field of mechanical drafting. Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science.

The mechanical draftsman performs the same general duties as the architectural draftsman and also specializes in making rough drafting sketches of proposed mechanical devices, and then drawing necessary details. He prepares accurate scale drawings of parts or machines from specifications.

MECHANICAL DRAFTING CURRICULUM

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
DFT	1121	Drafting I	3	12	7
MAT	1102	Algebra	5	0	5
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			13	14	18

SECOND QUARTER					
DFT	1122	Drafting II	3	6	5
DFT	1125	Descriptive Geometry	2	3	3
MAT	1103	Geometry	3	0	3
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			14	11	18
THIRD QUARTER					
DFT	1131	Mechanical Drafting I	3	12	7
MAT	1104	Trigonometry	3	0	3
PSY	1101	Human Relations	3	0	3
MEC	1113	Shop Processes I	2	3	3
MEC	1115	Treatment of Ferrous Metals	2	3	3
			13	18	19
FOURTH QUARTER					
DFT	1132	Mechanical Drafting II	3	12	7
MEC	1114	Shop Processes II	2	3	3
MEC	1116	Treatment of Non-Ferrous Metals	2	3	3
BUS	1105	Industrial Organizations	3	0	3
			10	18	16

ELECTRONICS SERVICING

The expanded entertainment and educational facilities in the form of monochrome and color television, frequency modulated radio, high fidelity amplifiers and stereophonic sound equipment require expanded knowledge and skill of the individual who would qualify as a competent and up-to-date serviceman. This curriculum provides a training program in the basic knowledge and skills involved in the installation, maintenance and servicing of radio, television, and sound amplifier systems. A large portion of time is spent in the laboratory verifying electronic principles and developing servicing techniques.

An electronics serviceman may be required to install, maintain, and service amplitude modulated and frequency modulated home and auto radios, transistorized radios, monochrome and color television sets, inter-communication, public address and paging systems, high fidelity and stereophonic amplifiers, record players and tape recorders.

His work will require meeting the public both in the repair shop and on service calls. A serviceman who establishes his own business will also need to know how to maintain business records and inventory.

ELECTRONICS CURRICULUM

			Course Hours Per Week		Quarter Hours
FIRST QUARTER			**Class**	**Lab.**	**Credit**
MAT	1101	Fundamentals of Mathematics	5	0	5
ENG	1101	Reading Improvement	2	0	2
ELC	1112	Direct & Alternating Current	5	15	10
			12	15	17
SECOND QUARTER					
MAT	1116	Electrical Mathematics	5	0	5
ENG	1102	Communication Skills	3	0	3
ELN	1122	Vacuum Tubes & Circuits	5	9	8
ELN	1123	Amplifier Systems	2	6	4
			15	15	20
THIRD QUARTER					
ELN	1125	Radio Receiver Servicing	2	6	4
ELN	1126	Transistor Theory & Circuits	4	15	9
PSY	1101	Human Relations	3	0	3
			9	21	16
FOURTH QUARTER					
ELN	1127	Television Receiver Circuits & Servicing	10	15	15
BUS	1103	Small Business Operations	3	0	3
			13	15	18
OPTION:					
ELN	1128	Television Receiver Circuits & Servicing	5	12	9
ELN	1129	Single Side-Band Systems	3	6	6
		OR			
ELN	1130	Two-Way Mobile Maintenance	3	6	6

MACHINIST

This curriculum is designed to meet a definite need for training of machinists. Surveys recently completed in North Carolina show that many of the existing industries lack time and facilities for training enough machinists to meet present and planned needs. Expanding industries already located in our State and new industries under development invariably express the need for skilled craftsmen who have the background knowledge and potential to advance.

This program of study is designed to give learners the opportunity to acquire basic skills and the related technical information necessary to gain employment and build a profitable career in the machine shop industry in the State.

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. His training and experience enable him to plan and carry through all the operations needed in turning out a machined product and to switch readily from one kind of product to another. A machinist is able to select the proper tools and materials required for each job and to plan the cutting and finishing operations in their proper order so that he can complete the finished work according to blueprint or written specifications. He makes standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining. He often uses precision measuring instruments such as micrometers and gages to measure the accuracy of his work to thousandths of an inch.

This skilled worker must be able to set up and operate most types of machine tools. The machinist also must know the composition of metals so that he can heat and quench cutting tools and parts to improve machinability. His wide knowledge enables him to turn a block of metal into an intricate, precise part.

MACHINIST CURRICULUM

			Course Hours Per Week		Quarter Hours Credit
FIRST QUARTER			**Class**	**Lab.**	
MEC	1101	Machine Shop Theory & Practice	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
DFT	1104	Blueprint Reading: Mechanical	0	3	1
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			13	17	19

SECOND QUARTER					
MEC	1102	Machine Shop Theory & Practice	3	12	7
MAT	1103	Geometry	3	0	3
DFT	1105	Blueprint Reading: Mechanical	0	3	1
PHY	1102	Applied Science	3	2	4
ENG	1102	Communication Skills	3	0	3
			12	17	18
THIRD QUARTER					
MEC	1103	Machine Shop Theory & Practice	3	12	7
MEC	1115	Treatment of Ferrous Metals	2	3	3
DFT	1106	Blueprint Reading: Mechanical	0	3	1
MAT	1104	Trigonometry	3	0	3
PSY	1101	Human Relations	3	0	3
			11	18	17
FOURTH QUARTER					
MEC	1104	Machine Shop Theory & Practice	3	12	7
MEC	1116	Treatment of Non-Ferrous Metals	2	3	3
WLD	1101	Basic Gas Welding	0	3	1
MAT	1123	Machinist Mathematics	3	0	3
BUS	1105	Industrial Organizations	3	0	3
			11	18	17

VOCATIONAL COURSE DESCRIPTIONS

Course descriptions for vocational courses are numbered 1000 through 1999. These courses carry credit in the vocational programs only.

AIR CONDITIONING, HEATING & REFRIGERATION

AHR 1101 **Automotive Air Conditioning** 2 3 3

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

Prerequisite: PHY 1102.

AUTOMOTIVE

AUT	1111	**Auto Body Repair** Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contours of present day vehicles. Practical application of the basic principles of straightening, aligning, and painting damaged areas. *Prerequisite*: None.	3	12	7
AUT	1112	**Auto Body Repair** A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting. *Prerequisites*: AUT 1111, MAT 1101, PHY 1101, WLD 1101.	3	12	7
AUT	1113	**Metal Finishing and Painting** Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools. *Prerequisites*: AUT 1112, WLD 1105.	3	12	7
AUT	1114	**Body Shop Applications** General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and developing the final settlement with the adjuster. *Prerequisites*: AUT 1115, DFT 1101, PHY 1102.	3	21	10

AUT	1115	**Trim, Glass and Radiator Repair**	2	9	5

Methods of removing and installing interior trim; cutting, sewing, and installing headlinings, seat covers, and door trim panels; painting of trim parts and accessories. Glass removal, cutting, fitting, and installation. The student gains a thorough knowledge of the engine cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal cooling operation.

Prerequisites: AUT 1112, WLD 1105.

AUT	1121	**Braking Systems**	3	3	4

A complete study of various braking systems employed on automobiles and light-weight trucks. Emphasis is placed on how they operate, proper adjustment, and repair.

Prerequisite: PHY 1102.

AUT	1123	**Automotive Chassis and Suspension Systems**	3	9	6

Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end and alignment.

Prerequisite: PME 1102.

AUT	1124	**Automotive Power Train Systems**	3	9	6

Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair.

Prerequisites: AUT 1123, PHY 1102.

AUT	1125	**Automotive Servicing**	3	9	6

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of experiences in testing, adjusting, repairing, and replacing.

Prerequisites: AHR 1101, AUT 1121, AUT 1123.

BUSINESS

BUS	1103	**Small Business Operations** An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventory, layout of equipment and offices, methods of improving business, and employer-employee relations. *Prerequisite*: None.	3	0	3
BUS	1105	**Industrial Organizations** Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost. *Prerequisite*: None.	3	0	3

CIVIL

CIV	1101	**Surveying** Basic instrumentation and topography will be studied together with field trips and drafting room application of site surveying. *Prerequisite*: MAT 1104.	2	3	3

DRAFTING

DFT	1101	**Schematics and Diagrams: Power Mechanics** Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes. *Prerequisite*: None.	0	3	1
DFT	1104	**Blueprint Reading: Mechanical** Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes. *Prerequisite*: None.	0	3	1

DFT	1105	**Blueprint Reading: Mechanical** Further practice in interpretation of blueprints as they are used in industry; study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes. *Prerequisite*: DFT 1104.	0	3	1
DFT	1106	**Blueprint Reading: Mechanical** Advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. The interpretation of drawings of complex parts and mechanisms for features of fabrication, construction and assembly. *Prerequisite*: DFT 1105.	0	3	1
DFT	1121	**Drafting** An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, singlestroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. *Prerequisite*: None.	3	12	7
DFT	1122	**Drafting** The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard or similar materials as a proof of the solution to the problems drawn.	3	6	5

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of oblique and axonometric pictorials will be done.

Prerequisite: DFT 1121.

DFT	1125	**Descriptive Geometry**	2	3	3

Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution.

Prerequisite: DFT 1121.

DFT	1131	**Mechanical Drafting**	3	12	7

An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners: keys, rivets, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms.

Prerequisite: DFT 1122.

DFT	1132	**Mechanical Drafting**	3	12	7

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage.

Prerequisite: DFT 1131.

DFT	1141	**Architectural Drafting**	3	12	7

An introduction to architectural drafting. Further development of techniques in lettering, dimensioning, freehand sketching and instrument drawing. Drawings of construction details, using appropriate material symbols and conventions. Working drawings, including plans, elevations, sections, scale details and full size details will be prepared from preliminary sketches.

Prerequisite: DFT 1122.

DFT	1142	**Architectural Drafting**	3	12	7

Individual and group participation in the preparation of complete working drawings for a complex architectural structure. Study of drafting room organization and relationships of personnel within the architectural office.

Prerequisites: DFT 1141, DFT 1143, DFT 1144.

DFT	1143	**Building Mechanical Equipment**	3	0	3

General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings by mechanical engineers.

Prerequisite: DFT 1122.

DFT	1144	**Building Materials and Methods**	3	0	3

Materials used in the construction of architectural structures will be studied. Their economic values and limitations affected by locality, budget and codes. Field trips to construction sites and study of manufacturer's specifications for materials. Standard sizes of structural materials and modular construction techniques.

Prerequisite: None.

DFT	1145	**Specifications and Contracts**	3	0	3

The purpose and writings of specifications will be studied along with their legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties and mutual protection.

Prerequisites: DFT 1141, DFT 1143, DFT 1144.

ELECTRICITY

ELC	1112	**Direct and Alternating Current** A study of the structure of matter and the electron theory, the relationship between voltage, current, and resistance in series, parallel and series-parallel circuits. Analysis of direct current circuits by Ohm's law and Kirchhoff's law; sources of direct current potentials. Fundamental concepts of alternating current flow; a study of reactance, impedance, phase angle, power and resonance and alternating current circuit analysis. *Prerequisite*: None.	5	15	10

ELECTRONICS

ELN	1122	**Vacuum Tubes and Circuits** An introduction to vacuum tubes and their development; the theory, characteristics and operation of vacuum diodes, semiconductor diodes, rectifier circuits, filter circuits, triodes and simple voltage amplifier circuits. *Prerequisites*: ELC 1112, MAT 1115.	5	9	8
ELN	1123	**Amplifier Systems** An introduction of commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifier systems and auxiliary equipment. The operation and servicing of inter-communication amplifiers and switching circuits will also be taught. *Prerequisites*: ELC 1112, MAT 1115.	2	6	4
ELN	1125	**Radio Receiver Servicing** Principles of radio reception and practices of servicing; included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components and the alignment of AM and FM receivers. *Prerequisites*: ELN 1122, ELN 1123.	2	6	4
ELN	1126	**Transistor Theory and Circuits** Transistor theory, operation, characteristics and their application to audio and radio frequency amplifier and oscillator circuits. *Prerequisite*: ELN 1123.	4	15	9

ELN	1127	**Television Receiver Circuits and Servicing** A study of principles of television receivers, alignment of radio and intermediate frequency amplifiers, adjustment of horizontal and vertical sweep circuits will be taught. Techniques of trouble-shooting and repair of TV receivers with the proper use of associated test equipment will be stressed. Additional study of more specialized servicing techniques and oscilloscope waveform analysis will be used in the adjustment, trouble-shooting and repair of the color television circuits. *Prerequisites*: ELN 1125, ELN 1126.	10	15	15
ELN	1128	**Television Receiver Circuits and Servicing** This course, taught in conjunc- with an elective, will be a shortened version of ELN 1127. *Prerequisites*: ELN 1125, ELN 1126.	5	12	9
ELN	1129	**Single Side-band Systems** An introductory course of single side-band transmission system with carrier frequency or without and the associated balanced modulator of phasing system used to produce this type of transmission. Time will be allotted also to the necessary circuitry in the receiver to receive this type transmission. *Prerequisites*: ELN 1125, ELN 1126.	3	6	6
ELN	1130	**Two-way Mobile Maintenance** A course to acquaint the student with the theory and maintenance of fixed station and mobile station transmitters and receivers. Except for radio laws, sufficient information will be given to qualify the student to take the FCC second class radiotelephone license examination. *Prerequisites*: ELN 1125, ELN 1126.	3	6	6

ENGLISH

ENG	1101	**Reading Improvement** Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units. *Prerequisite*: None.	2	0	2
ENG	1102	**Communication Skills** Designed to promote effective communication through correct language usage in speaking and writing. *Prerequisite*: ENG 1101.	3	0	3

MATHEMATICS

MAT	1101	**Fundamentals of Mathematics** Practical number theory/analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth. *Prerequisite*: None.	5	0	5
MAT	1102	**Algebra** Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition, subtraction, substitution, graphing; exponents, logarithms, tables and interpolation. *Prerequisite*: None.	5	0	5

MAT	1103	**Geometry** Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations. *Prerequisite*: MAT 1102.	3	0	3
MAT	1104	**Trigonometry** Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems. *Prerequisites*: MAT 1102, MAT 1103.	3	0	3
MAT	1116	Electrical Mathematics A working knowledge of the powers of 10, Ohm's Law for series and parallel circuits, quadratic equations, Kirchoff's Laws, trigonometric functions, plane vectors, alternating currents, vector algebra and logarithms. *Prerequisite*: MAT 1101.	5	0	5
MAT	1123	**Machinist Mathematics** Introduces gear ratio, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions and trigonometric relations to shop problems; concludes with an introduction to compound angle problems. *Prerequisite*: MAT 1104.	3	0	3

MECHANICS

MEC	1101	**Machine Shop Theory & Practice** An introduction to the machinist trade and the potential it holds for craftsman. Deals primarily with the identification, care, and use of basic hand tools and precision measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and practice. *Prerequisite*: None.	3	12	7

MEC	1102	**Machine Shop Theory & Practice**	3	12	7

Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools and procedures thus far used and those to be stressed throughout the course.

Prerequisite: MEC 1101.

MEC	1103	**Machine Shop Theory & Practice**	3	12	7

Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worm gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder.

Prerequisites: MEC 1102.

MEC	1104	**Machine Shop Theory & Practice**	3	12	7

Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing of good work habits and attitudes acceptable to the industry.

Prerequisite: MEC 1103.

MEC	.1113	**Shop Processes**	2	2	3

Study of practices used in metalworking shops: Introduction to how materials can be utilized and to the processes of shaping, forming and fabricating metals. Demonstration of the metalworking lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear cutting machines

and finishing machines. A study of the capabilities of these machines.

Prerequisite: None.

MEC	1114	**Shop Processes**	2	2	3

Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes demonstrated and discussed. Mass-production methods studied in relationship to precision dimensional control.

Prerequisite: MEC 1113.

MEC	1115	**Treatment of Ferrous Metals**	2	3	3

Investigates the properties of ferrous metals and tests to determine their uses. Instructions will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels and cast iron will be topics for study.

Prerequisite: None.

MEC	1116	**Treatment of Non-Ferrous Metals**	2	3	3

Continuation of the study of physical metallurgy. The non-ferrous metals; bearing metals (brass, bronze, lead) light metals (aluminum and magnesium) and copper and its alloys are studied. Powder metallurgy, titanium, zirconium, indium and vanadium are included in this course.

Prerequisite: MEC 1115.

PHYSICS

PHY	1101	**Applied Science**	3	2	4

An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles.

Prerequisite: None.

PHY	1102	**Applied Science** The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power. *Prerequisite*: PHY 1101.	3	2	4

POWER MECHANICS

PME	1101	**Internal Combustion Engines** Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing. *Prerequisite*: None.	3	12	7
PME	1102	**Engine Electrical and Fuel Systems** A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels; types of fuel systems, special tools, and testing equipment for the fuel and electrical system. *Prerequisite*: PME 1101.	5	12	9

PSYCHOLOGY

PSY	1101	**Human Relations** A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation. *Prerequisite*: None.	3	0	3

WELDING

WLD 1101	**Basic Gas Welding** Welding demonstration by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work. *Prerequisite*: None.	0	3	1
WLD 1105	**Auto Body Welding** Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course. *Prerequisite*: WLD 1101.	0	3	1

ADULT EDUCATION PROGRAM

ADULT EDUCATION PROGRAM

As part of its service to the community, Sandhills Community College offers courses of instruction to the general public which have a different emphasis from those in its credit programs. For purposes of convenience, these courses are grouped under one of these headings: Adult Basic Education, Adult Education and Extension, and the Fundamentals Learning Laboratory.

Adult Basic Education

These classes, sponsored under the Economic Opportunity Act of 1964 and provided through the College, give instruction in the basic subjects of reading, writing, and arithmetic for persons with little or no formal education. It is possible for students to complete studies through the eighth grade level under this program. Classes are usually held away from the campus throughout Hoke, Montgomery and Moore counties, and a few are held at the College. Close cooperation is maintained with community development groups and public schools. The classes are free of any charge to the student. Persons eighteen years of age with less than eighth grade education may enroll either at the classroom or by contacting the College.

Adult General and Extension Classes

Adult Education and Extension classes are organized as the need arises in the community. These classes usually meet two nights per week for two or three hours, and continue for sufficient time to cover the subject or to give the desired skills. The subjects covered vary from those of general interest and self improvement, to upgrading on the job. There are usually no prerequisites, and no college credit is given. A grade of Satisfactory or Unsatisfactory is given depending on the students participation in the class. Classes may be held on campus or in a given community throughout Hoke, Montgomery and Moore counties.

The tuition will vary from course to course. In some cases there will be no cost, whereas in other situations a minimal fee will be charged. Students are required to pay for books or supplies if required. Information on any particular program can be obtained from the office of the Director of Adult Education at the College. Registration may be made in advance at the College or at the time and place the class convenes.

Some of the general subject areas are:

Extension Programs	Adult Education
Apprenticeship Training	Business Education
Business Education	Citizenship
Fire Service Training	Consumer Education
Health Occupations	Creative Arts
Hospitality Training	Exhibits
Law Enforcement Training	Family Life
MDTA Training	Health and Safety
New Industry Training	Housemaking
Supervisory Development Training	Language Arts
Technical	Lectures
Vocational	Self Supporting Classes

Fundamentals Learning Laboratory

In the "Learning Lab" students may prepare themselves for the high school equivalency examination, improve skills used in their job, gain educational improvement in subjects of their own choosing, or remedy academic deficiencies prior to entering one of the regular college programs. There are more than forty-five courses available in programmed form. Students may attend at times convenient to them, and stay as long as they like. The Lab is normally open from 8:00 a.m. to 10:00 p.m., Monday through Thursday, and 8:00 a.m. to 5:00 p.m. on Friday. A coordinator is available in the Lab during these hours.

Interested persons 18 years of age or older may register in the Learning Lab at the College at any time the Lab is open. There is no charge.

High School Equivalency Program

Persons who have dropped out of high school may obtain a High School Equivalency Certificate by completing the necessary courses in the Learning Laboratory. The Certificates are awarded by the State Board of Education after successful completion of the State Board examination.

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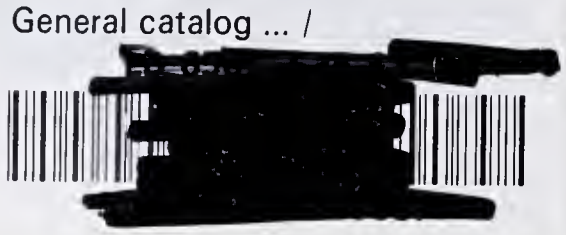

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