4-1973

General Catalog - The School Year 1973-1974

Prairie View Agricultural And Mechanical College

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The College is accredited by the Texas Education Agency, the Southern Association of Colleges and Schools, and the Association of Texas Colleges and Universities. The teacher education programs are accredited by the National Council for Teacher Education for the preparation of elementary teachers, secondary teachers, administrators, and special services personnel.

Prairie View A&M College is an equal educational opportunity institution; its students, faculty, and staff members are selected without regard to their race, color, creed, sex, or national origin, consistent with the Assurance of Compliance with Title VI of the Civil Rights Act of 1964.

Entered as second-class mail matter, at the post office at Hempstead, Texas. Issued at Prairie View A&M College Branch, four times yearly.
MEMBERSHIPS

American Association of Collegiate Registrars and Admissions Officers
American College Public Relations Association
American Council on Education
American Society for Engineering Education
Association of Administrators of Home Economics
Association of Social Science Teachers
Association of State Universities and Land-Grant Colleges
Association of Texas Colleges and Universities
Association of Texas Graduate Schools
Central Association of College and University Business Officers
College and University Personnel Association
Council on Social Work Education
Engineering Council for Professional Development
National Association of Collegiate Deans and Registrars
National Association of Educational Buyers
National Commission on Accrediting
National Council for the Accreditation of Teacher Education
National Council on Teachers of English
National League for Nurses
Southern Association of Colleges and Schools
Southern Association of College and University Business Officers
Texas Association of Collegiate Registrars and Admission Officers
Texas Association of State Senior College and University Business Officers
The American Association of Colleges for Teacher Education
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# ACADEMIC CALENDAR

## 1973-74

### FIRST SEMESTER, 1973-74

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<th>OCTOBER</th>
<th>NOVEMBER</th>
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<td>5 6 7 8 9 10 11</td>
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<td>7 8 9 10 11 12 13</td>
<td>4 5 6 7 8 9 10</td>
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<td>12 13 14 15 16 17 18</td>
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<td>14 15 16 17 18 19 20</td>
<td>11 12 13 14 15 16 17</td>
<td>9 10 11 12 13 14 15</td>
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- **August**: 30-31 All Day
- **September**: 1-2 All Day, 4-5 All Day, 6 7:30 a.m., 18 Noon
- **October**: 25-26 All Day, 21 12:30 (Noon), 26 7:30 a.m.
- **November**: 24-26 All Day, 22 5:00 p.m.
- **December**: 19-22 All Day, 22 5:00 p.m.

### SECOND SEMESTER, 1973-74

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<tr>
<th>JANUARY</th>
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<th>MARCH</th>
<th>APRIL</th>
<th>MAY</th>
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<td>11 12 13 14 15 16 17 18 19 20</td>
<td>5 6 7 8 9 10 11 12 13 14 15</td>
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</table>

- **January**: 3-5 All-Day, 7-9 All-Day, 10 7:30 a.m., 13 All-Day, 19 8:00 a.m.-Noon, 20-28 All-Day
- **February**: 12-28 All-Day
- **March**: 11 7:30 a.m., 15 7:30 a.m., 28 All-Day
- **April**: 5 11:00 a.m., 6-18 All-Day, 20-28 All-Day
- **May**: 5 11:00 a.m., 12:00 (Noon), 18 12:00 (Noon), 20-21 All-Day

- **January**: Orientation for New Students, Continuation of Orientation, Registration, Classes Begin; Late Registration Fee Begins, Registration Closes; Last Day for Changing Program, Mid-Semester Tests, Thanksgiving Recess Begins, Classes Resume, Final Examination, Close of First Semester
- **February**: Faculty Conference, Registration, Classes Begin; Late Registration Fee Begins, Orientation for New Students, Registration Closes; Last Day for Program Change, Mid-Semester Tests, Spring Recess, Classes Resume, Easter Recess Begins, Classes Resume, Parent’s Day, Commencement, Final Examinations, Second Semester Closes, Year-End Break
### First Term

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<td>July</td>
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### Second Term

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<thead>
<tr>
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<tr>
<td>July</td>
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The Texas A&M University System

Composed of Texas A&M University and all colleges, agencies and services under the supervision of the Board of Directors of Texas A&M University System including:

Texas A&M University
Texas Agricultural Experiment Station
Texas Agricultural Extension Service
Texas Engineering Experiment Station
Texas Engineering Extension Service
Texas Maritime Academy
Texas Transportation Institute
Texas Forest Service
Prairie View A. and M. College
Tarleton State College

Board of Directors

CLYDE H. WELLS ........................................................................................................... Granbury
S. B. WHITTENBURG .................................................................................................... Amarillo
FORD D. ALBRITTON, JR. ............................................................................................ Bryan
H. C. BELL, JR. .............................................................................................................. Austin
RICHARD A. GOODSON ............................................................................................... Dallas
WILLIAM LEWIE, JR. ................................................................................................... Waco
L. F. PETERSON ............................................................................................................ Fort Worth
JOE H. REYNOLDS ........................................................................................................ Houston
MRS. WILMER SMITH ................................................................................................. Wilson

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A. R. LUEDECKE .......................................................................................................... Executive Vice President
ROBERT G. CHERRY .................................................................................................. Assistant to the President
W. C. FREEMAN .......................................................................................................... Vice President and Comptroller
JOHN C. CALHOUN, JR. .............................................................................................. Vice President for Programs
J. O. ADAMS ................................................................................................ ............... Director, Facilities Planning and Construction
Administrative Officers

ALVIN I. THOMAS, President of The College
CLAUDE L. WILSON, Vice-President For Physical Planning and Engineering
IVORY V. NELSON, Vice-President for Research and Special Programs
GEORGE R. RAGLAND, Acting Dean of The College
HORACE D. MURDOCK, Business Manager
VERNON R. BLACK, Dean of Student Life
J. W. ECHOLS, Dean, Graduate School
JOHN CALVIN WILLIAMS, Associate Dean, School of Agriculture
W. W. CLEM, Dean, School of Arts and Sciences
AUSTIN E. GREAX, Dean, School of Engineering
MISS FLOSSIE M. BYRD, Dean, School of Home Economics
SAMUEL R. COLLINS, Dean, School of Industrial Education and Technology
MRS. JEWELLEN MANGAROO, Dean, School of Nursing
HUBERT D. SMITH, Administrative Assistant to the President
HARRY HENDRICKS, Director, Teacher Education
JONEL L. BROWN, Director, Continuing Education
FRANK FRANCIS, Director, W. R. Banks Library
GEORGE H. STAFFORD, Director, Admissions
CURTIS A. THOMAS, Registrar
CURTIS A. WOOD, Director, Information
MRS. R. BLAND EVANS, Dean of Women
JILES DANIELS, Commandant, Army Reserve Officers Training Corps
R. R. TAYLOR, Commanding Officer, Navy Reserve Officer Training Corps

Other Administrative Officers

JACOB L. BOYER, Director, Food Service
MARY A. CLARK, Associate Director of Admissions
HARRY FAGGETT, Director, Freshman Studies
B. W. HOOPER, Director of College Development
A. D. JAMES, Director, Student Financial Aids
BRUTUS JACKSON, Director, Career Planning and Placement
ARLIE E. LEBEAUX, Superintendent, Maintenance Department
EMORY R. OWENS, Medical Director
HAROLD PERKINS, Superintendent, Building and Grounds
GENERAL INFORMATION

ADMISSION

GENERAL ADMISSION REQUIREMENTS

Prairie View A&M College accepts applications for admission without regard to race, color, national origin or religious commitment. All communications in regard to the college should be addressed to the Director of Admissions, Prairie View A&M College, Prairie View, Texas 77445.

LOCATION

Prairie View A. and M. College is located in Waller County, forty-six miles northwest of Houston. Buses discharge passengers at the Prairie View Station. Taxi Service is available to and from the station.

PURPOSE

Three separate and distinct functions of Prairie View A. and M. College are clearly set forth in State and Federal acts for its establishment and support.

Firstly, it is a college for the preparation and training of teachers.

Secondly, it is a four-year college offering liberal arts and scientific curricula.

Thirdly, it is a Texas Land Grant College providing opportunities for training in Agriculture, Home Economics, Engineering and related branches of learning.

In addition, the institution offers training in health and education so that it may give to the state professionally trained nurses and provide opportunities for observation and practice to newly graduated students of medical colleges.

Prairie View A. and M. College attempts to serve the citizens of Texas at the points of their greatest needs and endeavors to bring the students' training into closer relationship with life's occupations.

The central theme of the philosophy of the institution is that education must have the objective of making a worthwhile life and respectable living.

PHILOSOPHY AND OBJECTIVES

Historically the philosophy of Prairie View A. and M. College has been to assist each student in living a worthwhile life and making a worthwhile living.

This philosophy is accomplished through the following aims and objectives of the College:

1. To develop responsible citizens who will contribute to the democratic life.
2. To develop a community of scholars.
3. To provide an environment where students may achieve the optional personal and social development.
4. To provide for the maximum intellectual development of the student.
5. To provide each student with saleable skills in a vocation or group of vocations.
6. To assist each student to become a leader in his generation.
7. To assist each student to make the best use of his resources in college and later life.
8. To assist each student in becoming an over-achiever.
9. To develop in each student a moral concern for others and a concept of service to others.
10. To have the entire campus (including residence halls) serve as a center of learning as well as a center of wholesome democratic living.
INSTRUCTIONAL ORGANIZATION

The institution is organized for instruction into seven major divisions as follows:

- The School of Agriculture
- The School of Arts and Sciences
- The School of Engineering
- The School of Home Economics
- The School of Industrial Education and Technology
- The School of Nursing
- The Graduate School

HISTORY

The Fifteenth Legislature of the State of Texas met in the year 1876. One of the acts of that Legislature provided for the establishment of "An Agricultural and Mechanical College" for Negro citizens to be located in Waller County. L. M. Minor was elected first teacher of the school (Alta Vista Agricultural College). He served in this capacity from 1878 to 1879. In the last year of his principalship a legislative act provided for reorganization of the college and made funds available for the training of public school teachers therein. The teaching of Military Tactics was initiated in compliance with the Legislative act of 1876.

The second principal, E. H. Anderson, served from 1879 to 1884; and L. C. Anderson, the third principal, held the position for the next twelve years. The gray stone Administration building, whose architectural design was widely admired, was erected in 1889, and the Old Agricultural Building was erected in 1890. During L. C. Anderson's administration, the 20th Legislature agreed to an "Agricultural and Mechanical Department" to be attached to the Normal; the Hatch Act brought the college a branch Experiment Station.

For the next nineteen years, E. L. Blackshear served "Prairie View Normal" as principal. During his administration, significant growth was made in the curriculum and the plant. In 1899 the name was changed to "Prairie View State Normal and Industrial College," and the new name indicated the enlargement of the curriculum. A four-year college course was authorized by the State Legislature in session 1901. Among additions to the plant were two dormitories for men, Foster Hall (1909) and Luckie Hall (1909); a dormitory for women, Crawford Hall (1912); and a combination Auditorium-Dining Hall building (1911).

I. M. Terrell, the fifth principal, held the position during the war years 1915-1918. Despite the world conflict, the school plant expanded widely to accommodate mechanic and household arts; a Household Arts building, the Power and Ice Plant, and the Laundry were erected in 1916; and in 1918 Spence Building for the Division of Agriculture was erected. The close of World War I brought the activation of a recognized Reserve Officers Training Corps to the campus. The Cooperative Extension Service was also launched at this time.

The sixth principal of Prairie View was J. G. Osborne, whose tenure lasted from 1918 to 1925. Six buildings were added to the College in 1924 and 1925; the Veterinary Hospital, the Science Building, the College Exchange, the Elementary Training School, a Home Economics Practice Cottage, and a Music Conservatory. The Nursing Division was founded in 1918.

In 1926, W. R. Banks became the seventh principal of Prairie View. He served until August 31, 1947, at which time he became Principal Emeritus. He held the position longer than any of his predecessors, and Prairie View developed along several lines in his period. The physical plant doubled its size by adding six buildings valued at more than $100,000.00 each. The Dining Hall and the Hospital, three apartment houses for men teachers, three dormitories for women, a greenhouse, an incubator house, a classroom building, a new Auditorium-Gymnasium, a new Mechanic Arts building, and over sixty cottages for families were additions to the physical plant.
One of the significant studies of the period was an exhaustive examination of the objectives and purposes of Prairie View in 1933-34. Out of this study emerged Principal Bank's most often quoted statement: "Prairie View College must serve the State of Texas at the points of her greatest needs." The establishment of the Prairie View Conference on Education in 1931 is an important event in the history of the College. In the years that the Conference has met, Prairie View has been host to educators, ministers, doctors, business men and women, housewives, social workers, and farmers.

In the establishment of the Division of Graduate Study in 1937 Prairie View College added another page to its expanding history.

In 1936 the first buildings were constructed to house the N.Y.A. resident center, and a new chapter in Vocational Training for youth was opened. The project was enlarged and made a training center for Negro men in critical occupations for support of the war effort. The men filled positions as welders, mechanics, pipe fitters, machine operators, and moulders in shipyards, foundries, and machine shops all over the nation. The project terminated in July 1943. The facilities are now used for vocational trade courses.

In July 1943, a training unit of the Army Specialized Training Program was established with a maximum strength of 200 trainees enrolled in BE-1 Curriculum.

In 1943, when the Forty-eighth Legislature met in January, it appropriated $160,000.00 for the erection of a Library Building. This amount was supplemented by $20,000.00 for equipment and books.

The name of the college, Prairie View Normal and Industrial College, was changed to Prairie View University in 1945, by an act of the 49th Legislature.

The Forty-ninth Legislature passed the bill permitting Prairie View University to offer, as the need arises, all courses offered at the University of Texas.

On September 1, 1946, Dr. E. B. Evans became the eighth principal of Prairie View.

The Fiftieth Legislature of the State of Texas, by Act signed by the Governor on February 27, 1947, changed the name of the school from Prairie View University to Prairie View Agricultural and Mechanical College of Texas. The Act provides that courses be offered in agriculture, the mechanic arts, engineering and the natural sciences connected therewith, together with any other courses authorized at Prairie View at the time of the passage of this Act, all of which shall be equivalent to those offered at the Agricultural and Mechanical College of Texas.

In March, 1947, the old Academic Building which housed the principal administrative offices, was destroyed by fire. The Fiftieth Texas Legislature, which was then in session, made an emergency appropriation of $300,000.00 for the erection of the present Administration Building which was completed in March 1949.

The title of the Principal was changed to Dean by the Board of Directors and became effective during the 1947-48 school year. On September 1, 1948, the title of Dean was changed to President and on December 3, 1948, E. B. Evans, the eighth Principal was inaugurated as the first President of Prairie View Agricultural and Mechanical College of Texas.

The Divisions of Agricultural, Arts and Sciences, Home Economics, and Mechanics Arts were changed to School of Agriculture, Arts and Sciences, Home Economics, and Engineering, effective September 1, 1950. The Directors of the respective schools were named Deans, becoming effective at the same time.

A new women's dormitory was completed in September 1950 at a cost of $350,000.00 and was named for the late Dean of Women, Miss M. E. Suarez. It houses 247 and has facilities for recreational and social entertainment. A similar building for male students, named for a former teacher, J. M. Alexander was completed in 1952. The E. B. Evans Animal Industries Building, valued at $284,000.00 was completed in 1951, and the Gibb Gilchrist Engineering Building in 1952, at a cost of $258,170.00.
Construction of still more adequate housing for the rapidly-growing student body was completed in early 1955 with additions to Suarez Hall and to Alexander Hall costing approximately $550,000.00. These additions provided space for 240 more women students and 250 more men students.

A dairy barn and utilities warehouses were completed at a cost of $32,000.00 and $15,000.00 worth of water and sewer line installations were added to the college system. Construction of an exchange store and a single faculty women and a single faculty men's dormitories were also completed in 1955. The latter has been named for George W. Buchanan, former manager of the exchange and ex-teacher of mathematics. The Faculty Women's dormitory was named for the late Lucille B. Evans, wife of President E. B. Evans. The hospital of 1939 has recently been named for J. C. Osborne, the sixth principal of the College.

A new and completely modern Home Economics building, named for Mrs. Elizabeth C. May Galloway (Elizabeth C. May building) former Dean of the School of Home Economics, was added in 1957. The old Home Arts structure was renovated into a modern Music Building.

The Board of Directors of the Texas A&M University System approved a $3,000,000.00 building and improvement program for the college in 1957. The new $1,000,000.00 Memorial Student Center was completed early in 1960 and construction on a $2,000,000.00 Science building was completed in 1961. Other construction during this period included building utilities, street extensions, storm sewers and underground electric facilities. The $1,500,000.00 Health and Physical Education Building, with a seating capacity of 5,000 was completed in 1964. In 1965 two new air-conditioned dormitories, valued at $2,500,000.00 were completed and will house 900 students (450 male and 450 female). The Spring Semester of the 1966-67 Year, construction began on a half-million dollar addition to the W. R. Banks Library.

The College was accepted for membership in the Southern Association of Colleges and Secondary School in December, 1958, and later received reendorsement and full approval of the National Council for Accreditation of Teacher Education. Improvements in offerings and facilities for Science, Mathematics and Engineering also resulted during the years from 1958 to the present time.

President E. B. Evans, who in 1959 became eligible for modified retirement, was asked by the Board of Directors to continue as President of the College. This great tribute came in the midst of many other state and national honors for Dr. Evans in recognition of outstanding service to education. His services continued until August 31, 1966, at which time he was bestowed the title, President Emeritus.

On September 1, 1966, Dr. J. M. Drew, who had served as Dean of Instruction and Dean of Graduate Studies became the second president of Prairie View Agricultural and Mechanical College. Shortly after taking office, Dr. Drew became ill and, as a result of his asking to be relieved of his office the Board of Directors asked President Emeritus Evans to serve as Acting President.

On November 22, 1966, the Board of Directors elected as the third president, Dr. Alvin I. Thomas. Prior to his elevation to the presidency, Dr. Thomas had served as Dean of the School of Industrial Education and Technology. Dr. Thomas introduced, for Prairie View A&M, the concept of the residential college. In one of his early addresses, Dr. Thomas said, "Resting on some 1440 acres of beautiful countryside—30 minutes from the largest city in the South and the 5th largest city in America, Prairie View can create an environment which will contain only those influences which will affect a student for good and we can lock out the intellectual pollution of the cities and give the students a refreshing, undistracted experience aimed at maximum personal, social and intellectual growth."

At Prairie View A&M, practically all of the students live in residential halls; because of this arrangement, the College has the ability to provide a special kind of learning situation; the residence halls, as well as the library
and the classrooms are learning centers. As a residential college, Prairie View uses all of its resources to develop the greatest number of influences which will act to develop a student in the fullest possible manner.

On May 19, 1968, the Naval ROTC Unit was established at the College, being the first new unit to be established in 22 years and the first at a predominantly Negro College.

At the request of President Thomas, the Board of Directors, in August, 1968 appointed seventy-nine persons to comprise the Centennial Council. The Council was requested to formulate a master plan for guiding the future of the College. The Council, broadly representative of the national and state geographical areas, and of various economic, ethnic, educational, social and professional backgrounds, upon, the completion of sixteen months of deliberate and serious study presented its recommendations in a published document, A Developmental Plan, 1970-80, Prairie View A&M College of Texas.

One of the early outgrowths of the Council's masterplan occurred in the Fall of 1970, when the Board of Directors sold in excess of thirteen-million dollars in bonds for the construction of two residence halls and a dining facility. The residence halls accommodating 1,500 students (750 males and 750 females) were opened for occupancy in August, 1972. The dining facility was opened the second semester of the 1972-73 academic year.

THE W. R. BANKS LIBRARY

The building housing the library, named in honor of a former chief executive of the College, has two stages of physical growth. The first section was completed in 1945 at a cost of $171,867.91. A half million dollar addition was completed in 1968.

The building has three floors and a book stack section with five levels. The library has a book capacity of 301,000 volumes, and study space for 800 students simultaneously.

The Library, being air-conditioned, is ideal for serious study, for investigation and research, and for recreational reading. Its beautiful and convenient study appointments include the Reference Room, seating 176; the Reserves Reading Room, seating 147; the Graduate Study Room, seating 52; the Current Periodicals Room, seating 42; the Special Collections Room, seating 20; and the Reading Lounge, seating 31. Artistic tastes of readers are fostered in the Art Room.

The various collections of the library contain 102,569 books, 17,782 bound magazines, 4,500 unbound journals, 67,901 uncatalogued documents, 2,749 pictures, as well as numerous films, filmstrips, maps, microcards, microfilms, phono records and slides.

The library contains an admirable and growing bibliographic apparatus including: author-title card catalogs; subject-card catalogs; kardex files containing indexes to the library's holdings in journals, newspapers, documents, etc.; printed catalogs such as those of the Library of Congress and the British Museum; periodical indexes, bibliographies (international, national, regional, local, subject, special); abstracts and abstract journals; research reporting journals; bibliographic journals; union lists of important printed materials; and, guides to various resources.

In addition to the resources of the W. R. Banks Library readers may have access to those of other libraries through inter-library loans and other cooperative arrangements. The library staff will make such arrangements upon proper request.

To secure the greatest benefit from the services made available to readers in the library each reader must become acquainted with the library rules and regulations and should seek timely guidance from the qualified members of the library staff.

The library and its facilities contributes to the academic climate of the College providing comfortable, convenient, adequate and beautiful study areas for those who must do assigned readings, for serious readers, for scholars, and for those who will read for general development and cultural advancement.
GENERAL INFORMATION

To facilitate effective use of the library on the part of its readers the staff in each service area gives consultation, informational, and directional services to those who require such services. Please feel free to request such help when it is needed.

Library Service hours are as follows:
Monday-Friday: 8 a.m.-10 a.m.
Saturday: 8:00 a.m.-5:00 p.m.
Sunday: 2:00 p.m.-10:00 p.m.

Any exceptions to these hours will be posted in the library.

EXTRA-CURRICULAR ACTIVITIES

Religious Influences

While no particular denominational influence is exerted at Prairie View A&M, the administration is thoroughly committed to the belief that religious training benefits the student, and gives support to the religious organizations on the campus with the hope that no student will leave the institution less religious than when he came.

Religious activities, promoted under the direction of the Dean of the Chapel include Sunday School and Morning Worship.

The following religious-oriented student groups are active on the campus:
- Baptist Student Movement
- Newman Club
- Canterbury Club
- Young Men’s Christian Association
- Church of Christ
- Young Women’s Christian Association
- Methodist Student Movement

In addition to the student groups, there is active the United Ministries, an organization composed of ministers in the College, the campus community, and from nearby towns, with the goal, “A unity of charity within a diversity of theology.”

Student Organizations

A wholesome, integrated program of student activities is provided through student organizations. Students may choose, according to individual interests, any activities which meet their desires for companionship, their needs for recognition or growth, their needs for creative effort or activities which supplement their classroom work in the many departmental or interest groups on the campus.

A. Academic

Honor Societies: Academic units of the College as a part of the program for stimulating intellectual growth have built curricula and facilities qualifying them for establishing chapters of national honor societies. The societies with the years of their charter on the campus are:
- Mu Alpha Sigma (Music) 1935
- Alpha Kappa Mu (All Disciplines) 1940
- Beta Kappa Chi (Science) 1948
- Sigma Ro Sigma (Social Sciences) 1956
- Epsilon Pi Tau (Industrial Education) 1962
- Kappa Omicron Phi (Home Economics) 1963
- Beta Beta Beta (Biology) 1968
- Phi Alpha (Social Work) 1971
- Pi Mu Epsilon (Mathematics) 1969
- Alpha Mu Gamma (Foreign Languages) 1969
- Alpha Tau Alpha (Agriculture) 1969
- Gamma Theta Upsilon (Geography) 1969
- Alpha Psi Omega (Drama) 1969
- Sigma Delta Pi (Spanish) 1970
- Kappa Delta Pi (Education) 1970
- Sigma Tau (Engineering) 1971
- Phi Delta Kappa (Education) 1971
- Phi Alpha (Social Work) 1971
Departmental Clubs. In addition to the national honor societies with chapters on the campus, all Schools and Departments sponsor one or more clubs for persons either majoring in or having an interest in the particular discipline.

B. Social

Greek Letter Societies: The following Greek Letter Societies have chapters at the College.

<table>
<thead>
<tr>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha Phi Alpha</td>
<td>Alpha Kappa Alpha</td>
</tr>
<tr>
<td>Kappa Alpha Psi</td>
<td>Delta Sigma Theta</td>
</tr>
<tr>
<td>Omega Psi Phi</td>
<td>Zeta Phi Beta</td>
</tr>
<tr>
<td>Phi Beta Sigma</td>
<td>Sigma Gamma Rho</td>
</tr>
</tbody>
</table>

Social and Cultural Clubs: Clubs combining social and cultural interests are:

<table>
<thead>
<tr>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barons of Innovation</td>
<td>Club 26</td>
</tr>
<tr>
<td>Crescendo</td>
<td>Kappa Omega Beta</td>
</tr>
<tr>
<td>Les Beaux Arts</td>
<td></td>
</tr>
</tbody>
</table>

Varsity Athletics

Prairie View A&M College is a member of the Southwestern Athletic Conference. Intercollegiate competition includes football, basketball, tennis, track and golf. The teams are nicknamed “Panthers,” and the colors of the College are purple and gold.

Intramural Recreation

An active intramural sports and recreation program is coordinated by the Director of Recreation. Intramural activities are designed to meet the needs of every student regardless of sex, skill or ability.

Touch-football, basketball, softball, volleyball, tennis, table tennis, badminton, swimming, billiards, chess, checkers, and dominoes are some of the activities offered.

Individual and team trophies are awarded for outstanding performances.
GENERAL INFORMATION

STUDENT FINANCIAL AIDS

A. D. James, Director

The Financial Aid Program at Prairie View is designed to give assurance that no deserving student of ability will be denied an opportunity for higher education because of financial need.

The Financial Aid Center Administers the following programs:
1. Student Employment
2. Student Loans (all types)
3. Student Scholarships
4. Student Financial Grants
5. Counseling and Advisement on Financial Aid

BASIC GUIDELINES FOR STUDENTS SEEKING FINANCIAL AID

1. In general, financial aid at Prairie View A&M College is based on need. The Financial Aid Office attempts to provide the student with the difference between the amount of money a student and his family can provide for his education and the cost of that education.

2. Financial Aid is related to the expenses at Prairie View. Factors such as family strength, the amount of money the student and his family can be expected to contribute for an academic year are all taken into consideration.

3. Financial Aid is intended and may be used for educational expenses only. No part of the aid provided may be sent home to cover family expenses, car notes, finance charges, medical bills, etc.

4. Financial Aid may be provided in a package in which scholarships, loans, grants and student employment may be combined.

5. Financial Aid provided will not exceed the student's need as determined by the Parents Confidential Statement.

6. Financial Aid will be constantly reviewed and adjusted as other student resources become known and available. This means that after the need award has been made, if the student receives a scholarship, Social Security benefits, Veterans benefits, etc., adjustments will be made to eliminate overmeeting the needs of the student.

7. Where appropriate, the financial aid adjustment will be made by reducing the loan first.

COLLEGE SCHOLARSHIP SERVICE

Prairie View Agricultural and Mechanical College participates in The College Scholarship Service. Its primary functions include handling the confidential statements submitted by parents in support of applications for financial aid and serving as a clearing house of information for the colleges on scholarships, loans, and other forms of student aid.

The colleges using the CSS share the belief that scholarships should be awarded to students selected on the basis of ability and promise but that the amount of the awards should vary according to the financial need of the students and their families. The questions asked in the Parents’ Confidential Statement are designed to bring out the information needed by the colleges to understand fully the family financial picture, and to make certain the financial aid can be awarded to those qualified students whose need is greatest. Entering students seeking financial assistance are required to submit a copy of the Parents’ Confidential Statement (PCS) form to the College Scholarship Service, designating Prairie View A. and M. College as a secondary school. Applications may be received by writing Prairie View A. and M. College or the College Scholarship Service, Post Office Box 176, Princeton, New Jersey 08540 or Post Office Box 1025, Berkeley, California 94704.
STUDENT EMPLOYMENT

Student employment provides an opportunity for a student to contribute in a meaningful way to the progress of the College and to his financial welfare. Down through the years, students have contributed their skills and efforts in making a better Prairie View A. and M. College through student employment. The College holds that work experience can be a real learning opportunity for the student and therefore may be considered an integral part of the student's educational experience.

Whenever feasible, students are encouraged to help defray expenses through part-time employment rather than through loans. In this way, they need not leave college with a monetary debt to repay.

LOANS

To those who qualify, there are many loans.

THE HOGG MEMORIAL and ABNER DAVIS MEMORIAL FUND are short-term emergency loans available to students currently registered in the College. They range from $5.00 to $100.00, and must be paid within sixty days or by the end of the semester in which they are made, whichever comes earlier.

NATIONAL DEFENSE EDUCATION ACT LOANS may be made to qualified students under the National Defense Education Act (Title II of Public Law 85-846). To qualify, the student must be a citizen of the United States or a person who is in the United States on permanent resident status. Preference is given to those applicants whose academic background indicates superior ability.

Loans for undergraduate students are limited to $1,000.00 a year; the maximum which may be borrowed is $5,000.00. These loans carry three percent interest, which begins one year after the student ceases to be a full-time student; repayment must be completed within ten years. Postponement of a repayment for up to three years, without interest, may be allowed if the student enters the armed forces. If the student goes into teaching in the public schools, or in institutions of higher education, as much as 50 per cent of the debt may be cancelled, at a rate of 10 per cent of principal and interest for each year of teaching up to a five-year limit. If a borrower dies or becomes permanently disabled, the loan and interest may be cancelled.

NURSING STUDENT LOAN PROGRAM. The Nursing Student Loan Program is authorized by Part B of the Nurse Training Act of 1964. The purpose of this program is to increase the opportunities for the training of nurses through stimulating and assisting in the establishment of loan funds in professional schools of nursing from which low interest loans may be made to students in need thereof to pursue their courses of study.

To be eligible for a loan, the applicant must be a citizen or national of the United States, or must have such immigration status and personal plans as to justify the conclusion that she is in the United States for other than a temporary purpose and intends to become a permanent resident of the United States.

ACADEMIC STATUS

1. One must be a full-time student enrolled in a school having a Loan Fund established under the Nursing Student Loan Program, or she must have been accepted for enrollment as a full-time student.
2. One must be engaged in pursuing a course of study leading to a baccalaureate or associate degree in nursing.
3. One must be in good standing and capable of maintaining such standing.

The maximum amount available to an individual borrower in an academic year or its equivalent is $1,000.00.
UNITED STUDENT AID FUNDS (USAF) LOANS are available to students through their local hometown banks on the recommendation of the College. This operates as the guaranteed loan program in Texas if the student is not in extreme need. Undergraduate students may borrow up to $1,000.00. Students who attend an extra term during a given twelve month period may borrow up to $1,500.00 per year. Graduate students may borrow $1,500.00 each academic year. An undergraduate student may borrow up to $5,000.00 maximum. A graduate student may borrow up to $7,500.00.

The interest rate is seven per cent. Interest will be paid to the lender by the Federal Government while the student is in school, and three per cent interest will be paid while the student is repaying the loan, and provided the family income is $15,000.00 or less.

A student need not begin repayment until the first day of the tenth month after he leaves school.

HINSON HAZLEWOOD COLLEGE STUDENT LOAN. The College participates in the Hinson Hazlewood College Student Loan plan. Under this plan, the Coordinating Board, Texas College and University System, administers a student loan program authorized by the laws of the State of Texas.

To qualify for this program, a student must be a resident of Texas, must establish that he has insufficient resources to finance his college education; must be recommended by two reputable persons in his community.

A student may borrow a sum which is limited to the difference between the financial resources available to him and the amount necessary to pay his reasonable expenses as a student at the institution.

Loans are normally made for one academic year at a time, except in those cases where a student will only need to borrow for one semester. The total loan made to an undergraduate student may not exceed $5,000.

Repayment of the loan is postponed until four months from the date the student ceases to carry at least one-half the full-time academic work load.

The interest rate for this loan is 7 per cent. Interest will be paid to the lender by the Federal Government while the student is in school and provided the family income is $15,000.00 or less.

A meeting of the Coordinating Board regarding the Hinson/Hazlewood College Student Loan (formerly Texas Opportunity Plan Loan) resulted in the stipulation of two additional requirements to be met by all applicants.

1. Each applicant must secure a co-signer for his loan. The co-signer must be an adult who is employed full time and who has good credit ratings. The co-signer must understand that he is liable for the repayment of the loan in case of default by the borrower.

2. A pre-loan interview is required before the institution approves an initial loan to any student. The applicant must appear in person for this interview which shall be conducted by the institutional loan officer.

A meeting of the Coordinating Board regarding the Hinson/Hazlewood College Student Loan (formerly Texas Opportunity Plan Loan) resulted in the stipulation of two additional requirements to be met by all applicants.

THE CHARLES T. AND KATIE B. BRACKINS SCHOLARSHIP GRANT

The College has a scholarship agreement with an Advisory Board of the Mercantile National Bank of Dallas whereby Mrs. Eloise M. Willis, grantor, makes funds available in the amount of two $500.00 loans per year in honor of the late Charles T. and Katie B. Brackins, respected and beloved citizens of the City of Dallas. The Advisory Board chooses the recipients from those candidates who can qualify for its consideration. A primary prerequisite is that the applicant must be a graduate of a school of the Dallas Independent School District. Inquiries in regard to the grant may be directed to the Dallas
HIGH SCHOOL PRINCIPAL OF LINCOLN HIGH SCHOOL, WASHINGTON TECHNICAL HIGH SCHOOL, MADISON HIGH SCHOOL, OR TO THE DIRECTOR OF FINANCIAL AIDS AT PRAIRIE VIEW A&M COLLEGE, PRAIRIE VIEW, TEXAS 77445.

SCHOLARSHIPS

Scholarships are awarded on the basis of a student's academic achievement. They are meant to recognize, encourage and assist young men and women who demonstrate leadership potential in a chosen field of study. Financial need generally is not a factor in making these awards, although the amount of the stipend assigned to each winner will vary with the financial circumstances of the recipient.

Funds for these awards are made available through endowments contributed by concerned individuals and organizations. Each scholarship awarded usually bears the name of these benefactors.

MARY GIBBS JONES, JESSIE H. JONES, AND A. JEANETTE JONES SCHOLARSHIP PRIZES

Mr. and Mrs. Jesse H. Jones of Houston, Texas, made available to the College monies for a scholarship fund in Home Economics (Mary Gibb Jones), for a scholarship fund in Agriculture (Jesse H. Jones) and the A. Jeanette Jones scholarship funds both in Nursing and in Fine Arts (Music). The funds are administered by Houston Endowment, Inc., of Houston, Texas.

All inquiries and applications for these scholarships should be addressed to the Director of Student Financial Aids, Prairie View A&M College, Prairie View, Texas 77445.

L. E. COLEMAN SCHOLARSHIP

The Texas State Association and Beauty Culturists' League has established an annual scholarship at the college in the name of the late Mrs. L. E. Coleman of Dallas, Texas, for applicants who can meet the following criteria:

1. High school graduate and licensed Cosmetologist.
2. Graduate in upper 10% of high school graduating class.
3. Satisfactory score in a competitive standardized test administered at the college to all applicants previously approved by the Texas State Association and Beauty Culturists' League Scholarship Committee.

In order to secure consideration and instructions each applicant must furnish her high school transcript and three letters of recommendations to the Scholarship Committee.

c/o Mrs. Mary A. Clark
Associate Director of Admissions
Prairie View A&M College
Prairie View, Texas

Funds for the scholarship vary from year to year because they are derived from interest accruing from a grant given the College by the Beautician's Association.

STATE OF TEXAS SCHOLARSHIPS

Prairie View A. and M. College is authorized to give to the ranking graduate of each of the four-year accredited high schools of Texas a scholarship equal in value to the costs of tuition fees and laboratory fees for a period equivalent to one year (two semesters), provided:

1. The student's initial enrollment is in Prairie View A. and M. College, and
2. The student maintains a satisfactory scholastic and conduct record.

The scholarship has a minimum value of $100.00, plus the cost of laboratory fees for the year.
GENERAL INFORMATION

STATE ORPHANAGES SCHOLARSHIPS

The State of Texas exempts citizens of Texas who are high school graduates of the State orphanages of Texas from all required fees, including fees for correspondence courses. Applicants should request this exemption of the Registrar.

GRANTS

Prairie View A. and M. College will make Educational Opportunity Grants available to a limited number of undergraduate students with exceptional financial need who require these grants to enable them to attend college. Funds of this program have been made available through a Congressional appropriation and the number of grants will be determined by the total amount of money made available to the College.

To qualify for an Educational Opportunity Grant, a student:

1. Must be accepted for full-time enrollment at Prairie View A. and M. College, or,
2. If the student is already enrolled, he should be in good standing and in full-time attendance as an undergraduate student.
3. Must show evidence of academic or creative promise and capability of maintaining good scholastic standing.
4. Must have good citizenship record.

Students who meet these qualifications may receive Educational Opportunity Grants for each year of their attendance at Prairie View, not to exceed a maximum of four years.

EXEMPTION FOR EX-SERVICEMEN

Men and women who are citizens of Texas and who served in the armed forces in World War I, World War II, the Korean conflict, or in certain of the auxiliary services and were honorably discharged (except those who were discharged because of being over the age of thirty-eight or because of a personal request), and who are not eligible for educational benefits provided for veterans by the United States Government, are exempted from the payment of tuition under the provisions of the Hazelwood Act. Such persons must have entered the service as residents of Texas and must have been a resident for a period of not less than 12 months prior to the date of registration. For the purpose of the Hazelwood Act, the following definitions apply: World War I means the period beginning on April 6, 1917 and ending November 11, 1918; World War II means the period beginning on December 7, 1941 through December 31, 1946; and Korean conflict, June 27, 1950 through January 31, 1955. This exemption also extends to children of members in the armed forces who were killed in action or died while in the service in World War II or in the Korean conflict. To obtain this exemption, a full-sized photostat or certified copy of the discharge papers must be filed for permanent record with the Veterans Counselor.

VOCATIONAL REHABILITATION

The Texas Education Agency, through the Vocational Rehabilitation Division, offers assistance for tuition to students who have certain physical disabilities, provided the vocational objective selected by the disabled person has been approved by a representative of the Division. Application for Vocational Rehabilitation assistance should be made to the nearest rehabilitation officer or to the Director of Vocational Rehabilitation, P. O. Box 88, Capitol Station Austin, Texas.
GENERAL INFORMATION

STUDENT LIFE-REGULATIONS

Discipline and Government

It is assumed that when a student chooses to attend Prairie View it is fully understood that his primary purposes are studying and learning. The College is established chiefly for these purposes.

The Prairie View A&M Man and The Prairie View Woman have established traditions of high ideals and model behavior as members of the College and the community. Individuals and groups are expected to observe the traditions and behave in such manner as not to jeopardize the physical, social, and emotional well-being of other persons. To jeopardize the well-being of others is inconsistent with the aims and objectives of the College. Behavior which does not show a moral concern for others subjects the student to disciplinary probation, suspension, expulsion or other appropriate disciplinary measures.

The continuance of each student upon the rolls of the College, the receipt by him of academic credit, his graduation, or the conferring of any degree or the granting of any certificate, are strictly subject to the disciplinary powers of the College. The disciplinary authority of the College is vested in the President. It is his prerogative to act alone or delegate his authority to other personnel of the College.

Notification of Marital Status

Any student who makes false pretense as to his or her marital status is subject to immediate suspension for an indefinite time. This applies to any person who marries secretly while enrolled as a student or who was secretly married at the time of enrollment.

Notice From An Administrative Office

At times it becomes necessary that a student be requested to report to an administrative office for a conference. The summons may be transmitted by letter, by telephone, by notices on bulletin boards, or by other means of communication. A student who receives a summons is expected to report immediately and to do so in preference to other duties. Failure to heed such summons makes a student liable to suspension.

Student Sales and Business Endeavors

Students wishing to serve as agents for business firms or to operate a business for themselves are required to secure permission from the Director of Student Life.

Day Students

Day students are defined as those students who do not live in a College dormitory and who do not eat in the student dining hall. No student will be permitted to enroll as a day student except that:

1. His permanent residence is within commuting distance of the College.
2. All spaces in the College dormitories have been filled.
3. The individual is married and plans to live with his family within a commuting distance.

Any student who is employed in an institutional department where meals are served regularly or where prepared food is sold will not be permitted to enroll as a day student or roomer.

Hazing

State law provides that: "Any student of any State educational institution who commits the offense of hazing shall be fined not less than $25.00 nor more than $250.00 or shall be confined not less than ten days nor more than three months, or both."

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GENERAL INFORMATION

Motor Vehicle Registration And Use

I. The following groups of students are permitted to register automobiles, ownership, and use:
   A. Graduate students
   B. Commuting students
   C. Juniors with an accumulative average of 2.00
   D. Seniors with an accumulative average of 2.20

II. Freshmen and Sophomore students are not permitted to have cars on the campus.

III. Regulations which apply to all automobile users:
   A. All automobiles used must have Prairie View A. and M. College registration stickers displayed on the car. (Lower left-hand corner of windshield).
   B. All operators of automobiles should have collision insurance.
   C. All operators of automobiles must have liability insurance. (Liability must be registered with the Dean of Men).
   D. All operators of automobiles must have current Texas inspection stickers.
   E. All operators of automobiles must have valid driver license.
   F. The permission to operate an automobile does not make any policy of the College less applicable to the operator.

IV. Registration stickers may be obtained from the office of the Dean of Men. (Monday through Friday).
   A. Students pay the registration fee at the Fiscal Office along with other fees. Present the receipt for the fees paid to the Office of the Dean of Men and obtain the sticker.
   B. Faculty members and staff pay registration fees at the office of the Dean of Men and obtain stickers.

V. All vehicles owned, and/or operated, or parked on the campus at any time by students, faculty or staff must be registered in the Office of the Dean of Men, within 48 hours of the time they are brought to the campus.

BAGGAGE ARRANGEMENTS

Students are sent certain registration materials prior to being enrolled in the institution. Included in these materials are two baggage tags. These tags are to be filled out with the proper forwarding and return addresses, then attached to baggage brought or shipped to the College. This tag will serve to identify baggage when it arrives at the College, and will aid in delivery of the baggage to the dormitory.

The claim check which is supplied by the hometown ticket agent for shipped baggage should be surrendered to the Maintenance Department here at the College in order for the department to deliver baggage to the dormitory. A fee for delivery of baggage is required by the Maintenance Department and this fee is paid only to the department at the time the baggage check is given up.

Arrangements for delivery of all baggage shipped to the College should be made at the Maintenance Department Office, and should be made as soon after arrival on the campus as is practical, to insure prompt delivery of baggage to the dormitory.
## FEES FOR ALL STUDENTS

(These fees are subject to change without notice)

Payments for student accounts should be made by **cashier's check or money order** payable to the Prairie View Agricultural and Mechanical College of Texas and should be sent directly to the student. All checks, money orders and drafts are accepted subject to final payment. Change due on such items, usually not exceeding $20.00, will be given to the student unless otherwise instructed.

### PERSONAL CHECKS ARE NOT ACCEPTABLE

Maintenance fees are due and payable on the first day of each month. A delinquent fee of $1.00 plus tax, usually four cents (.04), is assessed each student whose obligations to the College are not completely settled before the close of business on the tenth of the month, and he will be required to withdraw if settlement is not made by the fifteenth of the month.

### STUDENT FEES

The following student fees are hereby approved (effective August 31, 1972) to remain in effect until changed by order of the Board of Directors, and all fees in conflict herewith are hereby cancelled:

### TUITION AND OTHER FEES

#### Regular Session

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Students</td>
<td>$4.00 per semester hour with a minimum of $50.00</td>
</tr>
<tr>
<td></td>
<td>For registration in absentia (but for no course) $15.00 per semester</td>
</tr>
<tr>
<td>Non-resident students</td>
<td>$40.00 per semester hour</td>
</tr>
<tr>
<td></td>
<td>Penalty for failure to pay the proper fee at the beginning of each semester shall be $5.00</td>
</tr>
<tr>
<td></td>
<td>For registration in absentia (but for no courses) $17.50 per semester</td>
</tr>
</tbody>
</table>

#### Summer Session

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Students</td>
<td>$4.00 per term hour with a minimum of $25.00 per term</td>
</tr>
<tr>
<td></td>
<td>For registration in absentia (but for no courses) $15.00 per term</td>
</tr>
<tr>
<td>Non-resident students</td>
<td>$40.00 per term hour</td>
</tr>
<tr>
<td></td>
<td>For registration in absentia (but for no courses) $17.50 per term</td>
</tr>
</tbody>
</table>

#### Audit Fee

- $10.00

#### Library Building Use Fee

- Library Building Use Fee Per Semester: $4.00
- Library Building Use Fee Per Term: $2.00

#### Building Use Fee

- Building Use Fee Per Semester: $20.00
- Building Use Fee Per Term: $10.00
GENERAL INFORMATION

Late Registration
Old students, both resident and non-resident who in either semester or term do not register on the days set apart for that purpose, shall pay an additional tuition fee of $1.00 per day each day of late registration, with a maximum of $5.00.

Degree, Certificates, Etc.
- College Diploma Fee: $5.00
- Graduate School Diploma and Graduation Fee: $10.00
- Transcript Fee (per copy after first copy): $1.00
- Trade Certificate Fee: $3.00
- Entrance Examination Fee for students from non-accredited high schools: $0.50
- Deficiency Examination Fee per course: $1.00

Student Nurses should expect expenses involving the following, and in addition to the cost of uniforms.
- State Board Examination
- Picture for State Board
- Photostat Copy of Records

Extension Courses
Extension Courses Fee, $10.00 per semester hour.

Laboratory Fees
Some courses require a laboratory fee. Laboratory courses and the fee for each is listed in the catalogue after each course description and in the class schedule. Payment is required before the student’s registration is completed.

Student Property Deposit: $10.00
This fee is refundable not earlier than ten days after graduation or withdrawal, and after certification by the Registrar. It is for possible losses, damages, and breakage during the enrollment of the student.

Room Deposit For Damage And Breakage
A deposit of $25.00 will be required to reserve a residence room. The $25.00 will be retained against damage or breakage. It will be refunded upon request within six months after graduation or permanent withdrawal from school if there are no charges against the student. Returning students will not be required to increase the deposit they have previously made.

Student Service Fee (Required)
The services covered by this fee are subscription to The Panther (student publication), membership in the Y.M.C.A. or Y.W.C.A., admission to campus athletic contests, debating contests, dramatics, general student activities, provision of orchestra music for approved entertainment, student union maintenance fee and treatment at the College Hospital except surgery, special drugs and certain X-rays.

Student Service Fee (Required)
- Student Service Fee Per Semester: $30.00
- Student Service Fee Per Term: $10.00

Music Fees
- Piano or voice (2 lessons per week) per semester: $12.00
- Organ: $5.00
- Other instruments, same as piano.
GENERAL INFORMATION

Maintenance Fee

Regular Session

Room Rent per semester:
- New Dormitories: $250.00
- Fuller and Banks: $200.00
- Alex, Buchanan, Collins, Suarez, & L. O. Evans: $175.00
- All other dormitories: $125.00

Board and Laundry Per Month
- (Board $62.50, Laundry $7.00, and Tax $2.50): $72.00
- Laundry per semester: $28.00

Graduate students, (Roomers), pay for laundry at the time of payment of room rent per semester.

Summer Session

New Dormitories room rent, board, laundry and state tax (room rent, $87.50, board $87.50, laundry $9.50, tax $3.50): $188.00
- Fuller and Banks room rent, board, laundry and state tax (room rent $70.00, board $87.50, laundry $9.50, and tax $3.50): $170.50
- Alexander, Buchanan, Collins, Suarez and L. O. Evans room rent, board, laundry, and state tax (room rent $60.00, board $87.50, laundry $9.50, and tax $3.50): $160.50
- All other Dormitories room rent, board, laundry and tax (room rent $50.00, board $87.50, laundry $9.50, and tax $3.50): $150.00

Graduate Students Only — room rent and laundry for Summer Session

New Dormitories:
- Per term of six weeks: $87.50
- Per term of three weeks: $43.75
- Per term of one week: $14.58

Fuller and Banks:
- Per term of six weeks: $70.00
- Per term of three weeks: $35.00
- Per term of one week: $11.67

Alexander, Buchanan, Collins, Suarez, L. O. Evans:
- Per term of six weeks: $60.00
- Per term of three weeks: $30.00
- Per term of one week: $10.00

All other Dormitories:
- Per term of six weeks: $50.00
- Per term of three weeks: $25.00
- Per term of one week: $8.33

Room Key Deposit, (full amount returnable if receipt is presented at the Cashier's windows): $1.00

Automobile Registration Fee, per term: $4.00

ROOM RESERVATION

A room reservation may be made by following any one of the three following procedures:

1. Payment of entrance fees plus board and laundry for the semester.
2. Payment of entrance fees.
3. Payment of the $25.00 Residence Hall Damage and Breakage Fee, accompanied by the student's official notice from the college that he has been approved for a loan or a scholarship in the amount sufficient for paying the balance of the entrance fees. IN THE EVENT THE LOAN OR SCHOLARSHIP DOES NOT COVER THE BALANCE OF THE ENTRANCE FEES, THE STUDENT IS REQUIRED TO REMIT THE DIFFERENCE.
GENERAL INFORMATION

EXPENSES AND FEES FOR 1973-74
(These fees are subject to change without notice)

FIRST SEMESTER

<table>
<thead>
<tr>
<th></th>
<th>New Dormitories</th>
<th>Fuller &amp; Banks</th>
<th>Alex. Buchanan</th>
<th>All other Dormitories</th>
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<tbody>
<tr>
<td>Tuition</td>
<td>$68.00*</td>
<td>$68.00*</td>
<td>$68.00*</td>
<td>$68.00*</td>
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<tr>
<td>(Non-Residents pay $40.00 per hr.)</td>
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<tr>
<td>Student Service Fee</td>
<td>30.00</td>
<td>30.00</td>
<td>30.00</td>
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<tr>
<td>(Required)</td>
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<td>Building Use Fee</td>
<td>20.00</td>
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<tr>
<td>Library Building Use Fee</td>
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<td>Room Rent—First Semester</td>
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<td>(Required of students who do not have $25.00 on deposit)</td>
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<td>(Required of students who do not have $10.00 on deposit)</td>
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<td>Former Students</td>
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<td>Former Students</td>
<td>$661.50</td>
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<tr>
<td>New Students</td>
<td>696.50</td>
<td>646.50</td>
<td>621.50</td>
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*Based upon a resident student taking 17 semester hours. Resident students pay $4.00 per semester hour with a minimum of $50.00.

SECOND SEMESTER

<table>
<thead>
<tr>
<th></th>
<th>New Dormitories</th>
<th>Fuller &amp; Banks</th>
<th>Alex. Buchanan</th>
<th>All other Dormitories</th>
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<tbody>
<tr>
<td>Tuition</td>
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<tr>
<td>(Non-Residents pay $40.00 sem. hr.)</td>
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<tr>
<td>Student Service Fee</td>
<td>30.00</td>
<td>30.00</td>
<td>30.00</td>
<td>30.00</td>
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<tr>
<td>(Required)</td>
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<tr>
<td>Building Use Fee</td>
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<tr>
<td>Library Service Fee</td>
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<tr>
<td>Room Rent—Second Semester</td>
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<td>(Fees through March 8, 1974 Tax included $5.00)</td>
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GENERAL INFORMATION

Room Deposit for Damage and Breakage 25.00 25.00 25.00 25.00
(Required of students who do not have $25.00 on deposit)
Student Property Deposit 10.00 10.00 10.00 10.00
(Required of students who do not have $10.00 on deposit)

TOTAL ENTRANCE FEES
Former Students $516.00 $466.00 $441.00 $391.00
New Students 551.00 501.00 476.00 426.00
Board and Laundry 72.00 72.00 72.00 72.00
(Due March 1, 1974)
Board and Laundry 72.00 72.00 72.00 72.00
(Due April 1, 1974)

TOTAL FEES SECOND SEMESTER
Former Students $660.00 $610.00 $585.00 $535.00
New Students 695.00 645.00 620.00 570.00
Room Key Deposit, returnable 1.00 1.00 1.00 1.00

*Based upon a resident student taking 17 semester hours. Resident students pay $4.00 per semester hour with a minimum of $50.00
(Pay upon arrival to Dean of Men or Dean of Women)
Automobile Registration Fee 5.00 5.00 5.00 5.00
Persons may not enroll as day students until all dormitories are filled.
Estimated cost per semester for books and supplies, $50.00 to $90.00.

FEES FOR NURSING STUDENTS
ENROLLED IN THE HOUSTON CLINICAL AREA
PRAIRIE VIEW A. AND M. COLLEGE

<table>
<thead>
<tr>
<th></th>
<th>Roomers</th>
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<tbody>
<tr>
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<td>Clinical Center Library Fee</td>
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<td>Library Building Use Fee</td>
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<tr>
<td>Room Rent—Semester</td>
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<td>Room Deposit</td>
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<td>Identification Card</td>
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<tr>
<td>Student Property Deposit</td>
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</tbody>
</table>

TOTAL ENTRANCE FEES
Former Students $328.00 $98.00
New Students $338.00 $108.00

POLICIES REGARDING REFUNDS
It is assumed that the students or the prospective student understands the fee system, and that he has, at the time that fees are paid, made a decision to enroll at the college. Fees are not refundable except under the following conditions:

1. REQUEST FOR REFUND PRIOR TO THE REGISTRATION PERIOD
   A. If a request for refund is made prior to two weeks before the first scheduled day for registration all fees are refundable.
   B. If the request for refund is made within two weeks of registration:
      1) The room rent fee is subject to refund if the residence halls are filled to capacity at the close of the registration period.
      2) Others fees are refundable.
2. REQUEST FOR REFUND BEGINNING WITH THE FIRST DAY OF REGISTRATION.

A. Tuition
Any student withdrawing officially (a) during the first week of class work in a semester will receive a refund of four-fifths of the tuition fee; (b) during the second week of class work, three-fifths; (c) during the third week of class work, two-fifths; (d) during the fourth week of class work, one-fifth; (e) after the fourth week of class work nothing; during the first week of class work in a summer term, one-half; after the first week of class work in a summer term, nothing. No refunds will be made until ten days have elapsed from the time the fees were paid.

B. Student Property Deposit
The Student Property Deposit less charges assessed for damage to property is refundable. Student Property Deposits are subject to forfeiture and will become permanently a part of the Student Property Deposit Scholarship Fund if not called for within 4 years of the student's last attendance.

C. Board and Laundry
No deductions will be made from charges for board and laundry in case of entrance within ten days after the opening of a semester, nor will a refund be made in case of withdrawal during the last ten days of a semester or the last ten days for which payment is made.

Except for aforesaid charges for board and laundry will be refunded pro rata in case of withdrawal during a semester.

D. Housing
All rooms in college housing are reserved and rented for a full semester or term. There will be no refund of room rent. Students who fail to honor their reservations or who leave school at any time during the semester or term forfeit all or any unused portion of the room rent.

E. Residence Hall Damage and Breakage Fee
Upon permanent withdrawal from the college one is entitled to a refund of that part of the residence hall damage and breakage fee not needed to cover an assessed damage or breakage claim. It generally takes not less than 90 days to process the refund.

F. Building Use Fee
After the student has completed registration no part of the Building Use Fee is refundable.

G. I.D. Picture Fee
After the I.D. picture is taken, there will be no refund of the I.D. Picture Fee.

H. Laboratory Fees
(1) Any student withdrawing from a laboratory course during the first week of class work during any fall or spring semester shall be entitled to a 100% refund.

(2) Any student withdrawing from a laboratory course during the first two days of a summer term shall be entitled to a 100% refund.

(3) Any student withdrawing from a laboratory course after the days specified in (1) and (2) above, shall not be entitled to a refund.
GENERAL INFORMATION

I. Students Called to Active Duty Involuntarily
Any student involuntarily called to active duty with the Armed Services within the first four weeks of classwork of a regular semester, or within the first week of classwork of a summer term, shall be entitled to a 100% refund of the tuition fee, laboratory fees, student service fee, student activity fee, building use fees, and parking fees. Any student involuntarily called to active duty with the Armed Services after the first four weeks of classwork of a regular semester or after the first week of classwork of a summer term shall be entitled to a refund, on a daily prorated basis, of tuition and laboratory fees. Room, board, and laundry fees shall be refunded on a daily prorated basis. No refunds will be made until 10 days have elapsed from the time the fees were paid.

J. Student Service Fee
A student may claim a refund of the Student Service Fee in accordance with the following schedule:

1. Any student withdrawing during the first week of classwork during any fall or spring semester shall be entitled to a 100% refund.
2. Any student withdrawing during the first two days of a summer term shall be entitled to a 100% refund.
3. Students withdrawing after the dates specified in (1) and (2) above shall not be entitled to a refund.

Non-resident Student Registration Fees
In accordance with the regulations of our governing board, the following definitions, general policies and regulations will apply to non-resident students. Any variance therefrom will depend upon the facts in the individual case and the interpretation placed thereon by the admissions officer.

A. For each student who registers for four (4) or more hours in a Summer Term (of six weeks): $100.00 with a reduction of $25.00 (minimum $25.00) for each semester hour of maximum registration less than four.

B. For each student who registers for (12) or more hours in a semester of the long Session: $200.00 with a reduction of $16.00 (minimum $16.00) for each semester hour of maximum registration less than twelve.

C. For registration in absentia in any semester (but for no courses) $17.50. For registration in absentia in any term (but for no courses) $17.50.

D. The residence status of a student is determined at the time of his first registration in the College and his residence is not changed by his sojourn at the College as a student except as provided by law. This policy shall apply to both graduate and undergraduate students regardless of any scholarship, student assistantship, or graduate assistantship that may be granted to any student.

E. Pursuant to the authority granted by the Fiftieth Legislature in Chapter 218, General and Special Laws (House Bill 507) the Board of Directors hereby adopts the following non-resident regulations:

1. A non-resident student is hereby defined to be a student of less than twenty-one (21) years of age, living away from the family and whose family resides in another State, or whose family has not resided in Texas for the twelve (12) months immediately preceding the date of registration; or a student of twenty-one (21) years of age or over who resides out of the State or who has not been a resident of the State twelve (12) months subsequent to his twenty-first birthday or for the twelve (12) months immediately preceding the date of registration.

2. The term “residence” means “legal residence” or “domicile,” and the term “resided in” mean “domiciled in.”

3. The legal residence of one who is under twenty-one (21) years of age is that of the father. Upon death of the father, the legal residence of the minor continues to be that of the last surviving parent until he becomes twenty-one (21) years of age unless he makes his home with his grandparents, whereupon their residence is controlling.

4. A student under twenty-one (21) years of age shall not be classified as a resident student until his parents shall have maintained legal residence in this State for at least twelve (12) months. A residence in another State shall be classified as a non-resident student. It shall be the responsibility and duty of the student to submit legal evidence of any change of residence.
5. All individuals who have come from without the State of Texas and who are within the State primarily for educational purposes are classified as non-residents. Registration in an educational institution in the State is evidence that residence is primarily for educational purposes even though such individuals may have become qualified voters, have become legal wards of residents of Texas, have been adopted by residents of Texas, or otherwise attempted to establish a legal residence within the State.

6. A student twenty-one (21) years or older who comes from without the State and desires to establish a status as resident student must be a resident of the State for a period of at least twelve (12) months other than as a student in an educational institution and must have the intention of establishing a permanent residence within the State during that entire period.

7. The residence of a wife is that of her husband; therefore, a woman resident of Texas who marries a non-resident shall be classified as a non-resident and shall pay the non-resident fee for all semesters subsequent to her marriage. A non-resident woman student who marries a resident of Texas is entitled to be classified immediately as a resident student and is entitled to pay the resident fee for all subsequent semesters.

8. All aliens shall be classified as non-resident students except that an alien who has applied for naturalization in the United States and has received his first citizenship papers shall have the same privilege of qualifying as a resident student as a citizen of the United States. The twelve (12) months residence required to establish the status of a resident student shall not begin until after such first citizenship papers have been issued to the alien.

9. Members of the Army, Air Corps, Navy or Marine Corps of the United States who are stationed in Texas on active duty shall be permitted to enroll their children by paying the tuition fees and charges provided for resident students without regard to the length of time such member of the Armed Services shall have been stationed on active duty within the State. This provision shall extend only during active military service in Texas, and upon such member of the Armed Services being transferred out of the State of Texas, his children shall be classified as to residence under Section one of these regulations. Any student claiming the privilege of this section shall submit at each registration a statement by the commanding officer of the post or station at which his parent is on active duty verifying the fact of his parent's military status.

10. Appointment as a member of the teaching or research staff or the holding of a fellowship, scholarship, or assistantship shall not affect the student's residence status or the tuition fee to be paid.

11. It shall be the responsibility of the student to pay the correct fee at the beginning of each semester or term for which he may register, and a penalty of five dollars ($5.00) shall be assessed for failure to pay the proper fee.

F. Members of the Armed Forces who were bona fide residents of the State of Texas when they entered the service and who have been temporarily assigned elsewhere by the United States Government shall be considered residents of Texas and their minor children shall not be required to pay the non-resident fee set forth above.
ACADEMIC INFORMATION

ADMISSION

General Admission Requirements

All communications in regard to admission to the College should be addressed to the Director of Admissions, Prairie View A. and M. College, Prairie View, Texas.

All applicants for admission to the College must be of good moral character and must pass a satisfactory physical examination administered by the family physician. The school reserves the right to admit or reject any applicant. Any applicant who makes false statements or claims in order to gain admission forfeits his privilege of admission or privilege to continue in the college if already admitted on the basis of false data.

Admission by Certificate

Applicants who present complete certified transcripts showing graduation from accredited four-year high schools with a minimum of fifteen units of work will be admitted without examination. From a secondary school which is organized with separate junior high school and three years senior high school, twelve units done in the upper three years of high school will satisfy the entrance requirements; the other three units may be accepted en bloc from the junior high school work.

A unit is the equivalent of one high school study satisfactorily pursued during one school year, thirty-six weeks length, on the basis of five forty-five minute recitations a week. In laboratory courses three recitation periods and two double periods of laboratory work per week constitute a unit.

Of the fifteen units acceptable for admission, from high school, eight are distributed as follows:

- English ................................................. 3 units
- Mathematics .......................................... 2 units
- History and Civics .................................. 2 units
- Natural Science (with laboratory) .............. 1 unit

In order to pursue the courses leading to a Degree in Industrial Education or to a Technical Certificate, the student must satisfy the same entrance requirements as are prescribed for entrance to freshman college courses. The entrance requirements for admission to Engineering courses are as follows:

| Social Science | 2 units | Algebra | 1½* units |
| Solid Geometry | ½** unit | English | 3 units |
| Natural Science (with laboratory) | 1 unit | Plane Geometry | 1 unit |

The seven elective units may be earned in any subject or subjects accredited by the Department of Education of the state in which the high school is located, provided that the total number of required and elective units together in any one subject shall not exceed four units.

All credit for admission must be filed and classified in the Admissions Office before the student may attain academic status of any kind. Transcripts should be on file in Admissions Office at least one month before the registration date of the semester in which the applicant plans to register. At the request of the applicant, a blank for this purpose will be sent by the Admissions Office to the principal of the high school from which the applicant was graduated.

If the student lacks some of the above requirements, he must make up the deficiencies.

*Students having only 1 unit in Algebra will be required to take a five-hour course in College Algebra.

**Students without the credit will take Solid Geometry first semester, which will add three credit hours to requirements for graduation.
All students must have taken the American College Testing Program examinations (ACT) prior to registering for classes. Information regarding test dates and locations may be received either from the high school counselor or the Director of Admissions at Prairie View.

Students entering to major in Applied Music (piano, voice, and violin) should show evidence of satisfactory elementary training and technique. Those who do not meet entrance requirements in Applied Music will study without credit until work and development are acceptable.

Admission by Examination

Any or all of the unit requirements for admission may be met by passing entrance examinations.

Spring entrance examinations are held throughout the State in May under supervision of the Texas Education Agency, mainly for the convenience of students in non-accredited high schools who wish to satisfy college entrance requirements.

Fall entrance examinations will be given at Prairie View A. and M. College during the Freshman orientation for graduates of four-year non-accredited high schools who wish to qualify for admission.

Entrance examinations will be administered between May and September at home, upon approval of such arrangements by the Registrar, Prairie View A. and M. College, Prairie View, Texas. These arrangements should be made through the principal or the superintendent of the high school from which the applicant was graduated.

Admission to Advanced Standing

A student transferring from another college will be admitted to advanced standing upon presentation of evidence showing honorable dismissal and an official transcript of all work completed at the other institution.

The college will allow transfer credit for each course taken at another institution which is approved by an established accrediting agency in the section in which the institution is located, provided that the course consists of content similar to a course offered at this college, and provided that a grade of "C" or higher is earned; a transfer student presenting both parts of courses which are considered year courses in this institution and having earned a grade of "D" in the first part and a grade of "B" or better in the second part of such course, will be relieved of having to repeat the first part, unless that course is in the student's major or minor areas.

Since all credits given by transfer are provisional, final acceptance will depend upon the maintenance of satisfactory standing by the student during the first semester of his attendance. In addition all transfer students must meet residence requirements of this college.

Credit for undergraduate courses in extension and/or correspondence in the major subject or for the requirements for the baccalaureate degree shall be limited to one-fourth of the total credit hours required. Transfer credit will be allowed only for extension and/or correspondence courses meeting the above qualifications.

Students applying for advanced standing in music courses leading to a degree must show evidence of satisfactory completion of courses equivalent to those outlined in the music curriculum of the College and must pass acceptably an examination in applied music. Standing in music courses will be determined in consultation with the head of the Music Department.

Admission by Individual Approval

Applicants for admission who are over 21 years of age may be admitted to college courses without examinations. Such persons must show evidence that they have substantially completed the work represented by the number of admission units required of other applicants and have sufficient ability and seriousness of purpose to do the work desired with profit to themselves and satisfaction to the College. Inability or failure to do the work shall be sufficient cause for withdrawal of such classification.
Students thus admitted may not receive credit toward a certificate or a degree until the fifteen admission units are absolved. These units may be absolved as follows: Upon completion of Freshman English three admission units are granted; two units in mathematics are granted upon completion of Freshman mathematics; two units in history and civics are granted for completion of freshman social science; one unit in science is granted for completion of a freshman level science course. Any or all of these admission units may be granted upon completion of 30 semester hours of college work provided the average is no lower than “C”.

Admission as Irregular Student

Applicants at least 16 years of age who have completed scholastic training equivalent to completion of the elementary grades may be permitted to restrict their studies to special courses upon petition to the Registration Committee and the Dean of the School in which the work is to be pursued.

Special Admission Requirements for Veterans

Under certain circumstances, veterans who have not completed high school may enter the College on individual approval. After successfully completing the Freshman year, the high school credits can be liquidated through appropriate examinations.

Prairie View A. and M. College normally admits high school graduates upon the recommendation of their high school principals. They must have fifteen units of high school work. Veterans may be admitted on individual approval even though they do not have fifteen units of high school work. Those admitted must complete the first year’s work in college and pass the prescribed examinations to validate the high school credit.

Veterans’ Eligibility

If there is any doubt as to status as a veteran student, inquiry should be made to the nearest Veteran Administration office or to the College’s Veterans Counselor.

If eligibility matters are determined before registration, both the registration and allotments will be expedited.

Korean veterans planning to attend school under the provisions of the Korean G.I. Bill should secure their own authorizations from the Veterans Administration or bring their VA Forms and be prepared to pay their own fees. After registration, veterans should have enrollment certification papers prepared and forwarded to the V.A. Office by the Office of Veterans Affairs on the campus.

COUNSELING SERVICE

Prairie View, both as an institution and within its schools, recognizes the value of competent guidance and counseling of students in education, vocational, and individual matters. To provide for better educational aims, and to the extent to which the individual is making satisfactory adjustment to his difficulties and responsibilities, the Counseling Center, faculty advisors, and deans of students work jointly for maximum benefit of the student. Through the Counseling Center, the student is assisted in dealing with problems of vocational choice, progressing toward his own educational goals and working out personal and emotional problems. Any student who desires may make use of the facilities of the Counseling Center.

ACADEMIC ACHIEVEMENT CENTER

The Academic Achievement Center is an attempt to supplement or complement classroom experiences for students at every level or capability—to assist the slow learner; to provide acceleration for the average; and to motivate the best students to even greater achievement.

The Center provides laboratory exercises with the same educational objectives as classroom course-work. To help students develop attitudes of respon-
ACADEMIC INFORMATION

SCHOLASTIC REGULATIONS

Unit of Credit
The unit of credit at Prairie View A. and M. is the semester hour. A semester hour represents the equivalent of one recitation or lecture per week for a semester. The time requirement in the laboratory (also field, shop, studio, etc.) necessarily varies with the nature of the subject and aims of the course, and therefore no fixed laboratory-classroom ratio is set up.

Explanation of Course Numbers
The first digit reading from the left indicates the level on which a course is offered, as freshman—1, sophomore—2, junior—3, senior—4. The second digit indicates the semester; odd numbers indicate the first semester and even numbers, except zero, indicate second semester; zero indicates either semester. The third digit specifies the semester hours of credit a course carries.

Numbers in parenthesis indicate the clock hours per week spent in lecture and laboratory respectively. Roman numerals, when used, I and II indicate first and second semesters respectively.

Example: CHEMISTRY 114 (Chem 114 Inorganic) (2-4) I. This means that the course is on the freshman level, that this is the first semester of the course, that it carries four semester hours credit. The abbreviations enclosed in parenthesis are used with key punch equipment in posting the grades on transcripts and grade reports. The numerals enclosed indicate that the course requires two clock hours for lecture and four clock hours for laboratory periods per week. The Roman numeral indicates it is being offered the first semester of the current school year.

Classification
Students who have credit for thirty semester hours are classified as sophomores; those having sixty semester hours are classified as juniors; and those having ninety semester hours are classified as seniors.

CLASS ATTENDANCE
It is each student's responsibility to attend regularly and punctually each class and laboratory exercise in each course. The student should arrange with the teacher in advance for a necessary absence, or explain it immediately on return. The instructor's daily record constitutes the official account of the student's attendance. The administration holds the instructor responsible for an accurate, complete, and clearly comprehensible record of each student's attendance.

Absences from class without good cause may result in a grade of "F" (failure) being automatically recorded for the course. Each student reported for having accumulated enough absences to affect adversely his work will be required to explain his excessive absences and will be dealt with as the individual case may require.

Change of Program
After completing the initial procedure of registration for the session, a student may add or drop a course only with the approval of the Dean of the School in which he is enrolled. No course may be added after the twelfth class day of a regular session or after the fourth class day of a summer term. The total number of hours must not become fewer than fifteen.
ACADEMIC INFORMATION

COURSE LOAD

A. Maximum Load

1. Undergraduates
   a. During a regular session, an undergraduate student may not enroll for more than 18 hours, excluding concepts of health, physical education practice, military science, band, and choir. The total load should not exceed 22 hours, except that a student whose average was “B” or better during the preceding semester or complete summer session may apply to the Dean of the College to take an additional hour.
   b. During a summer term, a student may not enroll for more than six hours, except that one course is a four hour course, in which case he may enroll for seven hours. The total hours for the summer session may not exceed twelve.

2. Graduates
   a. During a regular session, a graduate student may not enroll for more than 15 hours.
   b. During a six-weeks summer term, a student may not enroll for more than six hours, except that one course is a four hour course, in which case he may enroll for seven hours. The total hours for the summer session may not exceed twelve hours.
   c. A student may not enroll for more than three hours during a three-weeks summer term.
   d. A student enrolled in the three-weeks term may not enroll for more than one three-hour course in the six-weeks term being conducted concurrently.

B. Minimum Load. Every undergraduate student enrolled in the College will be expected to carry a minimum load of fifteen semester hours during the regular session, and six semester hours during a summer term. Students who wish to carry less than fifteen semester hours during the regular session are required to have the approval of the Dean of the College.

Symbols of Grading

The grading symbols are: A (91-100); B (81-90); C (71-80); D (61-70); F (below 60), also withdrew unofficially or withdrew while earning a grade “D” or below; I-Incomplete; W-Withdrew officially before the change of program period or during the term or semester while earning a grade of “C” or above; P-Pass; U-Fail.

A grade of “I” means that some relatively small part of the session’s work remains undone because of illness or other unavoidable reason. A grade of “I” may become a passing grade upon completion of the work prescribed by the instructor. (See action on Incomplete Classwork.)

“F” is failing grade. Credit for a course in which the grade of “F” is given can be secured only by repeating the course and earning a grade of “D” or better.

Repetition of Courses. If a student repeats a course his official grade is the last one earned.

Incomplete Class Work

A student who is compelled to delay beyond the end of the semester the completion of the class work of the semester for illness or other imperative causes, should, in person, or through a friend, petition the Dean of the School in which he or she is registered—beforehand, if possible—for permission to delay the work. If permission is granted, the work must be finished within a year and credit for it given at the discretion of the instructor. A student whose work is reported incomplete without the Dean’s permission is given a failing grade.
ACADEMIC INFORMATION

The student must make application to the Registrar for a permit to remove a grade of "I" within a year after the grade is incurred.

Correction or Change of Grades

Any change, or correction, of a grade recorded for a student must be made within the next semester or term of the student's enrollment. In the case of a student who drops out for one semester, or more, no period greater than two years will apply.

Grade Points

For a grade of "A" in any subject, four times as many grade points will be given as there are credit hours in the course; for a grade of "B," three times as many points; for a grade of "C," twice as many points; and for a grade of "D," the same number of points. No other grades yield grade points. Grade points are required for graduation in the ratio of two grade points for each semester hour in residence counted toward graduation. The grade point average is the quotient of total grade points divided by total semester hours taken.

Honor Roll

The College honor roll is published at the end of each semester of the regular session. To qualify for the honor roll a student must have carried a semester hour load of at least 14 hours and made an average of "B" and no grade below "C" in any course.

SCHOLASTIC PROGRESS

An undergraduate student is said to be making satisfactory progress when his semester progress and cumulative record are at a rate equivalent to, or better than the 2.0 grade point average required for graduation. The cumulative grade point average is based on the credit hours attempted at this institution.

An undergraduate student becomes academically deficient when:

1. His cumulative grade point average is below 2.0.
2. His semester grade point average is below 2.0.
3. He is below 2.0 for courses in his major.

In the event an undergraduate student becomes academically deficient, he may, after review by the Academic Standards Committee, be:

1. Warned of scholastic deficiency.
2. Permitted to continue in school on scholastic probation.
3. Dropped from the rolls of the College for deficient scholarship.

Students placed on academic probation are expected to attain the 2.0 cumulative grade point average during the semester of probation. A student who fails to do this will be subject to academic suspension for one semester.

Normally, a student will remain on probation until the close of the semester in which the probation is assigned, but he may be dropped without further warning at any time reports show that he is failing to meet the terms of his probation which always includes satisfactory class attendance.

When readmitted on probation after having been dropped from the rolls for scholastic deficiency, a student may be dropped without further warning if he fails to satisfy the terms of his probation at the close of the semester following his return.

A student may not be continued on probation a third time.

A student dropped for deficient scholarship may request a hearing by the Review Committee composed of the Dean of the College and appointed members.

Official Withdrawal from College

A student who finds it necessary to withdraw from school must make such withdrawal through the Office of the Dean of Men or Dean of Women. Otherwise he receives failing grades in all courses.
ACADEMIC INFORMATION

CONDITIONS FOR WITHDRAWAL (Effective, September 1, 1970)

A. From Classes
1. With the approval of his advisor, and the Dean of the School in which he is enrolled, a student may withdraw from a course before the Change of Program Period ends without having the course recorded on his permanent record.

2. After the close of the Change of Program Period up through the week prior to the beginning of the week of mid-semester during a regular term or through the mid-point of a summer term, a student may withdraw from a course, with the approval of his advisor, and the Dean of the School in which he is enrolled, and have a grade of “W” recorded for the course.

3. Beginning with the week of mid-semester examination during a regular session, or beginning with the mid-point of a summer term, a student with the approval of his advisor, the Dean of the School in which he is enrolled, and the Dean of the College, may withdraw from a course. Upon notification that the student has withdrawn, the instructor is to assign a grade of “W” if the student was passing the course, and a grade of “F” if the student was failing.

B. Voluntary Withdrawal From The College
1. A student who officially withdraws voluntarily from The College prior to the end of the Change of Program Period will not have courses recorded on his permanent record.

2. A student who officially withdraws voluntarily from The College after the Change of Program Period will have courses and grades recorded on his permanent record under the following provisions:
   a. After the close of the Change of Program Period up through the week prior to the beginning of the week of mid-semester, a student withdrawing voluntarily from The College will have a grade of “W” recorded for each course.
   b. Beginning with the week of mid-semester examinations during a regular term or through the mid-point of a summer term, upon notification that a student has voluntarily withdrawn from The College, the instructor is to assign a grade of “W” if the student was passing and a grade of “F” if the student was failing.

C. Withdrawal Due to Dismissal or Involuntary Conditions
1. A student who prior to the Change of Program Period is dismissed from the college or withdraws due to involuntary factors, e.g., personal illness, will not have courses recorded on his permanent record.

2. After the close of the Change of Program Period up through the week prior to the beginning of the week of mid-semester a dismissed student or one who involuntarily withdraws will have a grade of “W” recorded for each course.

3. Beginning with the week of mid-semester examinations during a regular term or through the mid-point of a summer term, upon notification that a student has been dismissed or has withdrawn involuntarily, the instructor is to assign a grade of “W” if the student was passing the course, and a grade of “F” if the student was failing.

EXAMINATION AND TESTS

Semester Examinations
Examinations in all college courses are given at the end of the first and second semesters. Exemptions from examinations will not be granted. In all examinations, account is taken of English usage.

Mid-Semester Tests
Intra-semester tests in all college courses are given at the end of the first half of each semester.
Absence from Examinations

A student who is compelled to be absent from a semester examination for sickness or other imperative cause should petition his dean—beforehand, if possible—for permission to postpone the examination. This permission must be presented in writing to the teacher who is to give the examination and submitted by the teacher with the grade to the Registrar's Office.

A student absent from a semester examination without the Dean’s permission is graded “F” and required to repeat the semester's work.

Grade Reports

The College's responsibility for the maintenance of student records in no way relieves each student of his individual responsibility for keeping up with his own standing in his particular program of study. Course grades, semester hours, and/or grade points are available to each student from the Dean of his School on the completion of each semester or term. In case an error is made in the maintenance and reporting of a student's record the student will be held responsible for meeting the requirement as published in the Catalogue.

The parents or guardians of all students failing in 50% or more of their semester hour load are notified of this condition shortly after the results of the mid-semester tests have been reported to the Registrar's Office and/or after semester grades have been received.

At the end of each semester, parents or guardians of students whose grade point average make them subject to probationary or suspension status will be notified of such.

DEGREES AND CERTIFICATES

Applying for Graduation

During the semester or summer session at which the degree or certificate is to be conferred, a student must be officially registered in the college; the registration may be either for classes or in absentia.

In order to be a candidate for a degree or a certificate at the end of a semester, a student must fulfill the following three conditions:

1. He must be registered for or have passed the courses necessary to complete the requirements of his curriculum.
2. Entering his final semester, he must not lack a grade point ratio in excess of 1.80 in his major and minor fields, and for the over-all program of studies comprising his curriculum.
3. On a farm provided by the Registrar for the purpose, he must present to the Registrar, the signature of the Dean of his School verifying the above conditions.

In order to be a candidate for a degree or a certificate at the end of a summer session, a student must fulfill the following conditions:

1. He must, if application is made in the first term, not counting the work for which he is then enrolled, need not more than six semester hours to complete the requirements of his curriculum.
2. He must, if application is made in the second term, be registered for or have passed the courses necessary to complete the requirements of his curriculum.
3. He must not lack a grade point ratio in excess of 1.80 in his major and minor fields, and for the over-all program of studies comprising his curriculum.
4. On a form provided by the Registrar for the purpose, he must present to the Registrar, the signature of the Dean of his School verifying the above conditions.

The latest dates for making application for graduation are as follows:

October 1 for December graduation
March 1 for May graduation
June 20 for persons enrolled the first summer term, and who expect to graduate in August
August 1 for persons not enrolled the first term, and who expect to graduate in August

Degrees Offered
1. From the School of Agriculture, Bachelor of Science.
2. From the School of Arts and Sciences, Bachelor of Arts, Bachelor of Science, and Bachelor of Science in Education.
3. From the School of Home Economics, Bachelor of Science.
4. From the School of Nursing, Bachelor of Science.
5. From the School of Engineering, Bachelor of Science.
6. From the School of Industrial Education and Technology, Bachelor of Science and Associate of Science.
7. From the Graduate School, Master of Science, Master of Arts, and Master of Education.

No degree will be conferred except publicly on Commencement Day except January graduates, for whom there is no commencement exercise. Every candidate must attend in person, in academic attire, the Commencement at which his degree is to be conferred. If he must be absent for a good cause, he must petition the President at least one week in advance.

Requirement for Degrees and Certificates
Graduation Evaluations. Any student whose complete graduation evaluation and other pertinent graduation information have not been submitted to the Registrar's Office prior to the graduation date, will be required to graduate with a later graduating class.

Semester Hour and Grade Point Requirements. To qualify for any degree a student must satisfy the specific course hour and grade requirements listed for the School in which he is enrolled. Two grade points for each semester hour presented in residence for graduation is required for all candidates for degrees and certificates.

Repetition of Courses. If a student repeats a course, his official grade is the last one earned.

Special Requirements in Major Subjects. Of the courses offered for an undergraduate degree at least six semester hours in advanced courses in both the major and minor subjects must be completed in residence.

Credit for undergraduate courses in extension and/or correspondence in the major subject or for the requirements for the baccalaureate degree shall be limited to one-fourth of the total credit hours required. Transfer credit will be allowed only for extension and/or correspondence courses meeting the above qualifications.

General Education Requirement. All students are required to include in all baccalaureate degree plans a minimum of forty-six semester hours from approved areas generally recognized as the general education program. The distribution of these hours is as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Usage (Eng. 113-123-213)</td>
<td>9 semester</td>
</tr>
<tr>
<td>Humanities (Eng. 223, Foreign Language, etc.)</td>
<td>3-15 semester</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6 semester</td>
</tr>
<tr>
<td>Science</td>
<td>6-8 semester</td>
</tr>
<tr>
<td>Social Science (Hist. 173-183 plus Pol. Sc. 113-123 plus 3 semester hours of social science elective)</td>
<td>15 semester</td>
</tr>
<tr>
<td>Concepts of Health 111-121</td>
<td>2 semester</td>
</tr>
<tr>
<td>Non-technical elective</td>
<td>3 semester</td>
</tr>
<tr>
<td>Physical Education 111, 121, 211, 221</td>
<td>4 semester</td>
</tr>
<tr>
<td>Military Science 112, 122, 212, 222</td>
<td></td>
</tr>
<tr>
<td>or Naval Science 143, 153, 233, 243</td>
<td>8-12 semester</td>
</tr>
</tbody>
</table>
ACADEMIC INFORMATION

Time Limit. A student may graduate under the catalog requirements for the year in which he registered in this institution for the first time, provided he completes graduation requirements within a continuous five-year period. If a student interrupts his attendance, or transfers from one school to another, he must graduate under the catalog in effect at the time of his readmission or transfer. Failure to complete the requirements for the degree within five (5) years after the date of initial registration will subject the student to graduation requirements under the regulations effective for the current graduating class. The catalog year shall be considered as beginning with the long session in September. Students entering for the first time in the summer session will be subject to the catalog for the long session immediately following.

Extension Limitation. Of the courses offered for an undergraduate degree, not more than thirty semester hours in correspondence and extension will be accepted.

Credit for undergraduate courses in extension and/or correspondence in the major subject or for the requirements for the baccalaureate degree shall be limited to one-fourth of the total credit hours required. Transfer credit will be allowed only for extension and/or correspondence courses meeting the above qualifications.

Residence Requirements. No degree will be conferred without residence equivalent to two semesters comprising thirty-six weeks, and the completion in residence of at least thirty (30) of the last thirty-six (36) semester hours required by his curriculum. Departmental approval must be received to enroll in non-resident courses within the last 36 semester hours of work, and the approval should be filed with the Registrar prior to enrollment in such courses.

Six Hours in American History Required. All students seeking an undergraduate degree after July 1, 1956, are required by State Law to complete six semester hours in American History, or three semester hours in American History plus three semester hours in Texas History.

Six Hours in Government Required. The Forty-fifth Legislature passed the following law: "Provided further, that after September 1, 1937, no student shall be certified for graduation from any tax-supported State educational institution with the award of a college degree unless such student shall have completed theretofore in a standard college or university at least six (6) hours of credit in the government of the State of Texas or of the United States of America, or the equivalent in both or shall have completed at least three (3) hours of said credit in government and at least (3) hours of credit in a course in Military Science as provided in an approved Senior R.O.T.C. unit."

Student Teaching Requirements. Students in the Teacher Education Program in all schools shall be required to take student teaching before they may be recommended for graduation.

National Teacher's Examination Requirement. Effective September 1, 1965, all students seeking a recommendation for a teaching certificate, at the bachelors degree level, will be required to take the National Teacher's Examination; both in the Common Examination and one teaching field of the Optional Examination.

Essay Requirement. Every candidate for the bachelor's degree must write a report or an essay on some practical topic or project in his field of concentration. The report or essay must be typewritten, double-spaced on plain white bond paper, and must be approved by the advisor under whose supervision it has been written, and the Head of the Department. Two copies must be bound at the expense of the student. The original and first carbon must be filed in the Dean's office not later than May first of the academic year in which the degree is to be conferred. Candidates for the degree at the Summer School Commencement must file their reports of essay before August first. December candidates must file their reports by the first day of class in December.
Basic Military Science Requirement. Completion of two years of basic military science, either AROTC or NROTC is required for all physically qualified male students who are citizens of the United States, except for veterans, students who are past their 23rd birthday upon initial enrollment, and those who enter with advanced standing in excess of sophomore year first semester academic requirements.

Graduation Honors. Eligible candidates for graduation will be designated on the Commencement program as follows:

SUMMA CUM LAUDE—Those having attained a quality point ratio of 3.6 to 4.0.

MAGNA CUM LAUDE—Those having attained a quality point ratio of 3.3 to 3.5.

CUM LAUDE—Those having attained a quality ratio of 3.0 to 3.2.

No student who has made a grade below “D” shall be eligible for consideration for honors regardless of his grade point ratio.

Registration Requirement. Students who are to receive a degree must be enrolled in the institution for the semester or summer session in which the degree is to be conferred. A minimum fee of $15.00 is required of students who are not enrolled in any classes. Non-resident students pay $17.50.

Second Baccalaureate Degree Requirement. No second Bachelor's degree will be conferred until the candidate has completed at least thirty semester hours in addition to those counted toward the first Bachelor's degree. The credit subsequent to the first undergraduate degree required for presentation of the second undergraduate degree must be done in residence.

Requirements for Certificate of Proficiency

Certificates of Proficiency are awarded for completion of special trade courses as follows: Automotive Technology, Building Construction Technology, Drafting and Design Technology, Electrical Technology, Electronic Technology, Metal Technology, Brickmasonry, Carpentry, Commercial Foods, Electricity, Plumbing, Printing, Secretarial Science, and Dressmaking. For specific requirements of each trade see the school in which the trade is scheduled.
The School of Agriculture offers three four-year curricula leading to a Bachelor of Science in Agriculture. They are the curriculum in Agricultural Education, the curriculum in Agriculture and the curriculum in Agricultural Engineering.

The curriculum in Agricultural Education is designed primarily to train men who expect to become teachers of vocational agriculture in Texas high schools participating in federal funds.

The curriculum in Agriculture is offered for those men who are preparing for the business of farming; for research workers; for employment in work with the various governmental agricultural agencies; farm managers; teaching in agricultural colleges. It offers training for students who plan to process and market agricultural products.

The options offered in technical agriculture are: Animal Science; (emphasis may be in general, dairy or poultry science) and Plant Science and Soil Science.

The curriculum in Agricultural Engineering is offered in cooperation with the School of Engineering. The course offerings in agricultural engineering deal with the application of the fundamental branches of engineering to the special requirements of agriculture. This curriculum is designed to train students in both engineering and agriculture who are qualified to develop, design, organize and direct engineering work in the agricultural and closely allied areas.

An Agricultural Experiment Station which is located on the premises of the campus is directly beneficial to students in agriculture. Through these research discoveries, students learn to apply new scientific principles to the business of farming.

The freshman and sophomore years are basic for all agricultural students. All electives in any of the departments must be officially approved by the Dean of the School of Agriculture and the head of the department in which the student majors.

Students choosing the curriculum in Agriculture are not required to name the department in which they will major until the second semester of the sophomore year.

Beginning with the junior years the curriculum is broadened and varied so as to permit the selection of major areas of study in the agricultural sciences. Students electing to follow a curriculum in a specialized or technical area of agriculture will devote the major part of their junior and senior years to laboratory and classroom assignments that are designed to give a broad knowledge of one of the special areas in technical agriculture.

Honor Societies and Clubs

The School of Agriculture sponsors two organizations designed to encourage scholarship, the pursuit of excellence and the development of leadership in agricultural studies and related activities. These student organizations are:

1. The Prairie View A&M College Collegiate Chapter of The Future Farmers of America is open to all students enrolled in the School of Agriculture. The primary purposes of the chapter are to encourage high academic performance and to develop leadership.

2. The Alpha Tau Alpha Honor Society is the first agricultural honor society to be installed at Prairie View A&M College. The society is open to those agricultural students above the Freshman level who have attained an academic record of 2.5 or above.
SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURAL ENGINEERING

98 Semester Hours

Mathematics 115, 125, 214, 224
Chemistry 114, 124
General Engineering 112, 113, 122
Agricultural Engineering 123, 213, 343, 413, 423
Physics 215, 225
Civil Engineering 122, 243, 313, 323, 343
Mechanical Engineering 313, 323
Electrical Engineering 223
Agronomy 433
Animal Husbandry 113
Architecture 222
Agricultural Economics 423
Economics 213
Plant Science 123

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURAL ENGINEERING

38-47 Semester Hours

English 113, 123, 213, 223
History 173, 183 or equivalent
Political Science 113, 123
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalent in restricted Phy. Ed.
Military Science 112, 122, 212, 222

A total of 128 semester hours, excluding Military Science, is required for the Bachelor of Science Degree in Agricultural Engineering.
SCHOOL OF AGRICULTURE

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURAL ENGINEERING

FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>1st 2nd</th>
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<tbody>
<tr>
<td>English</td>
<td>113-123</td>
</tr>
<tr>
<td>Mathematics</td>
<td>116-125</td>
</tr>
<tr>
<td>Chemistry</td>
<td>114-124</td>
</tr>
<tr>
<td>General Engineering</td>
<td>113-122</td>
</tr>
<tr>
<td>General Engineering</td>
<td>-112</td>
</tr>
<tr>
<td>Agricultural Engineering</td>
<td>-123</td>
</tr>
<tr>
<td>Nursing</td>
<td>111-121</td>
</tr>
<tr>
<td>Physical Education</td>
<td>111-121</td>
</tr>
<tr>
<td>Military Science (Men)</td>
<td>112-122</td>
</tr>
<tr>
<td>or Naval Science (Men)</td>
<td>163-</td>
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</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>English</td>
<td>213-221</td>
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<tr>
<td>Mathematics</td>
<td>214-221</td>
</tr>
<tr>
<td>Physics</td>
<td>215-225</td>
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<td>Civil Engineering</td>
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<tr>
<td>Civil Engineering</td>
<td>-321</td>
</tr>
<tr>
<td>Architectural Engineering</td>
<td>222-</td>
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<tr>
<td>Animal Science</td>
<td>113-</td>
</tr>
<tr>
<td>Physical Education</td>
<td>211-221</td>
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<tr>
<td>Military Science (Men)</td>
<td>212-222</td>
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<tr>
<td>or Naval Science (Men)</td>
<td>233-241</td>
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THIRD YEAR

<table>
<thead>
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<th>Course</th>
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<tr>
<td>Civil Engineering</td>
<td>243-313</td>
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<tr>
<td>Civil Engineering</td>
<td>-343</td>
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<tr>
<td>Mechanical Engineering</td>
<td>313-</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>223-</td>
</tr>
<tr>
<td>Agricultural Engineering</td>
<td>-213</td>
</tr>
<tr>
<td>Plant Science</td>
<td>103-</td>
</tr>
<tr>
<td>Political Science</td>
<td>113-123</td>
</tr>
<tr>
<td>Economics</td>
<td>213-</td>
</tr>
<tr>
<td>Agricultural Engineering</td>
<td>-343</td>
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<tr>
<td>Electives</td>
<td>3-</td>
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FOURTH YEAR

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Agricultural Engineering</td>
<td>433-</td>
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<tr>
<td>Agricultural Engineering</td>
<td>413-423</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>-223</td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>-423</td>
</tr>
<tr>
<td>Agronomy</td>
<td>-423</td>
</tr>
<tr>
<td>History</td>
<td>173-183</td>
</tr>
<tr>
<td>Elective</td>
<td>3-</td>
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SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE

(Animal Science Option)

Plant Science 103
Mathematics 173, 183
Animal Science 113, 313, 403, 413, 473
Biology 114, 134, 254, 334
Entomology 323
Chemistry 114, 124, 314
Agronomy 413 or 303
Agricultural Economics 223, 323 or 373
Dairy Science 213, 223
Poultry Science 223, 403, 323
Veterinary Science 313, 323
Agricultural Engineering 123, 314
Economics 203 or equivalent
Sociology 233 or equivalent

Six hours of specified electives—from the following:
Animal Science 412, 423, 433, 443, 453
Dairy Science 313, 323, 403, 453
Poultry Science 312, 443, 453

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE

(Animal Science Option)

English 113, 123, 213, 223
Political Science 113, 123
History 173, 183 or equivalent
Physical Education 111, 121, 211, 221
Nursing
Military Science or Naval Science (men)
Nursing 111, 121

A total of 141 semester hours, excluding Military Science or Naval Science, is required for the Bachelor of Science Degree in Agriculture with an option in animal science.

44
### SCHOOL OF AGRICULTURE

**CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE**

**(Animal Science Option)**

#### FIRST YEAR

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**SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE**

*109 Semester Hours*

**(Plant and Soil Science Option)**

- Mathematics 113, 123 or 115, 125 or 173, 183
- Animal Science 113
- Chemistry 114, 124, 314 or 115, 125, 314
- Agronomy 323, 403, 423, 433, 443, 453, 473
- Dairy Science 213
- Poultry Science 223
- Biology 114 or 115, 134, 254, 334
- Plant Science 103, 313, 323, 403, 423, 453, 463
- Agricultural Engineering 123, 433
- Entomology 323
- Sociology 263 or 273
- Agricultural Economics 323
- Nine Hours Electives

**COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE**

*30-38 Semester Hours*

**(Plant and Soil Science Option)**

- English 113, 123, 213, 223
- History 173, 183 or equivalent
- Political Science 113, 123
- Nursing 111, 121
- Physical Education 111, 121, 211, 221 or restricted equivalent in restricted P.E.
- Military Science or Naval Science (Men)

A total of 139 hours excluding Military Science or Naval Science 233, 243, is required for the Bachelor of Science Degree, Plant and Soil Science Option.
## CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE

(Plant and Soil Science Option)

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SCHOOL OF AGRICULTURE

DESCRIPTION OF COURSES

AGRICULTURAL ECONOMICS

223. Fundamentals of Economics. (AgEc 223 Fundamentals) (3-0) Credit 3. II. Study of agriculture as an industry, including regions, types of farming, tariff, and national production programs.

313. Cooperatives. (AgEc 313 Cooperatives) (3-0) Credit 3. I. Principles involved in the successful operation of cooperative organizations; marketing, purchasing, and other forms of cooperation are included.

323. Marketing Agri. Products. (AgEc 323 Mktg Prod) (3-0) Credit 3. II. Principles underlying the successful marketing of farm products; middlemen, grading, packing and shipping are included.

333. Advanced Economics. (AgEc 333 Adv Econ) (3-0) Credit 3. I. Principles of economics applied to special problems of agriculture, farm credit, tenancy, farm ownership, land values and government policies as related to agriculture.

343. Records and Accounts. (AgEc 343 Records) (3-0) Credit 3. II. The various systems of farm record keeping, farm accounts, property, labor, feed production, and field records are included.

353. Legal Relations of the Farmer. (AgEc 353 Legal Rltns) (3-0) Credit 3. I. Legal instruments as they affect the farmer; contracts, corporations, partnerships, bankruptcy, auctions, wills, deeds, abstracts, insurance companies, banks and the Farm Credit Administration.

363. Agricultural Credit. (AgEc 363 Agri Credit) (3-0) Credit 3. Includes the credit needs of farmers; the institutions involved; legal instruments; and cost of credit from various sources.

373. Marketing Livestock and Product. (AgEc 373 Mktg Lvstock) (3-0) Credit 3. A study of the marketing of livestock and livestock products. The assembly of livestock, cooperative association, country dealers, auctions, terminal markets, packing plants, wholesale and retail meat dealers. The decentralization of markets, the growth of direct marketing and the rise of demand for sales based on carcass weight and grade.

413. Land Economics. (AgEc 413 Land Econ) (3-0) Credit 3. I. Land and the population; agricultural land; land as property; recreational land; land tenure and soil conservation.

423. Farm Management. (AgEc 423 Farm Mgmt) (3-0) Credit 3. II. Practical farm management problems; farm records, choosing a farm; farm labor and equipment, cropping; feeding, and production costs.

AGRICULTURAL EDUCATION

313. Future Farmers of America. (AgEd 313 FFA). (3-0) Credit 3. I or II. Methods of making vocational education in Agriculture more effective through the Future Farmers of America Organization.

323. Course Planning & Teaching Methods. (AgEd Planning 323). (3-0) Credit 3. I or II. Aims and functions of Agricultural Education provide introductory preliminaries for this course. Building instructional programs and related farming programs in Agricultural Education constitutes a major unit. Teaching methods serve as coordinate subject matter of the course. Prerequisite: Junior Classification or approval of Department Head.

403. Supervised Practice Records. (AgEd 403 Records) (3-0) Credit 3. Instructional methods in keeping, analyzing and using farm records.
426. Observation and Practice Teaching in Agriculture. (AgEd 426 Prac Tchg). (6-0) I. or II. Planning and executing an instructional program in vocational agriculture in selected high schools in Texas. Members of the class are required to do a half semester of directed student teaching in approved school centers. Prerequisite: Senior Classification—completion of prerequisite sequences of professional courses in Agricultural Education; grade point average of 2 or above.

433. Programming & Problems. (AgEd 433 Problems) (3-0) Credit 3. I. or II. Planning and supervising organized agricultural work experiences for students in vocational agriculture. Planning and developing FFA activities. Prerequisite: Senior Classification—comprehensive survey of problems incident to instruction in agriculture.

AGRONOMY

303. Grain & Fiber Crops. (Agro 303 Grain & Fiber) (2-2) Credit 3. I. Study of geographical distribution and economic importance; classification and physiology; principles of production of grain and fiber crops.

323. Soils. (Agro 323 Soils) (2-2) Credit 3. II. Nature and properties of soils including origin, formation and biological, chemical and physical aspects.

400. Special Problems in Soil-Plant Relationships. (Agro 400 Special Problems) (1-0) Credit 1 to 4. I & II. For individual research by advanced undergraduates on topics not included in established courses but chosen so as to demonstrate the use of the scientific approach in problem solving.

403. Soil Management. (Agro 403 Soil Mgmt) (2-2) Credit 3. II. The profitable management of soil with respect to the use of drainage and irrigation, organic matter content, tillage and conservation practices, cropping sequences, soil reaction and liming, fertilizer and micro-nutrients, and geographical distribution.

413. Forage Crops. (Agro 413 Forage) (2-2) Credit 3. I. Production, utilization, adaptation and identification of major forage plants in grassland regions.


423. Soil Conservation and Land Use. (Agro 423 Conservation) (2-2) Credit 3. II. Soil resources of the United States and methods and plans for soil conservation including control of erosion; interpretation of soil survey maps and land evaluation for farm crops, fruits, forestry engineering and wildlife; soil judging.

433. Soil Classification and Morphology. (Agro 433 Morphology) (2-2) Credit 3. I. Field Study of morphological features of soil profiles and the morphological characterization of soils including the interpretation of the profiles in relation to land utilization; preparation of land use reports based upon soil maps.

443. Soil Fertility and Fertilizers. (Agro 443 Fertility and Fertilizers) (2-2) Credit 3. II. Influence of soil chemical, physical and microbiological properties on crop production, fertilizer preparation and usage; assessment of the fertility of soils and the alteration of fertility by the use of fertilizers, lime, manure and cropping systems.

453. Soil Chemistry. (Agro 453 Soil Chem) (2-2) Credit 3. II. Chemistry of mineral weathering and soil formation, ion activities, ionic exchange equilibrium relations, soil pH, specific elements and their chemical analysis and availability of nutrients to plants.
473. Agricultural Chemicals. (Agro 473 Agri Chemicals) (3-0) Credit 3. I. Study of the fundamentals underlying the economical use of fertilizers, herbicides and other agricultural chemicals. Emphasis will be given to relationships with soils properties and plant growth with respect to their selectivity and fate.


493. Principles of Field Crops. (Agro 493 Prin of Field Crops) (2-2) Credit 3. II. Distribution, morphology, identification, physiology, management and utilization of field crops for food and fiber; for hay, silage, and pasture; for livestock and for soil improvement and conservation.

AGRICULTURAL ENGINEERING

123. Farm Shop. (Engr 123 Shop Practices) (2-2) Credit 3. II. Farm workshop methods; tools identification, care, and use; skills in fitting farm tools and making simple working drawings. Course includes some woodwork, forging, soldering, welding & general repairs. Lab. Fee: $2.00.


413. Farm and Home Utilities. (Engr 413 Utilities) (2-2) Credit 3. I. Installation, operation, care and repair of ventilation, heating, lighting, water supply, sewage disposal, refrigeration units and air conditioning units. Lab. Fee: $2.00.


ANIMAL SCIENCE


303. Fitting and Showing Livestock. (AnSc 303 Lvstock Show) (2-2) Credit 3. II. Selecting, grooming, handling and showing beef cattle, dairy cattle, sheep and swine for show and sale. Lab. Fee: $2.00.


403. Animal Breeding. (AnSc 403 Breeding) (3-0) Credit 3. II. Physiology of reproduction, breeding systems, and practices, application of genetic principles to the problems of animal breeding.

412. Meat Grading and Judging. (AnSc 412 Meat Cutting) (2-2) Credit 2. I. Selection, grading, judging and cutting meats; nutritive values, factors influencing quality and dressing percentages of meats from different animals. Lab. Fee: $3.00.

413. Livestock Management. (AnSc 413 Stock Mgmt) (2-2) Credit 3. I. Methods and practices used in the production and management of beef cattle, swine, sheep and work animals. Lab. Fee: $2.00.

422. Special Management Problems. (AnSc 422 Problems) (2-2) Credit 3. II. Problems associated with management, marketing, registration and record keeping as they relate to livestock training programs.


443. Swine and Sheep Management. (AnSc 443 Swine Mgmt) (3-0) Credit 3. Systematic studies of methods of breeding, feeding and management practices used in swine and sheep production.


DAIRY SCIENCE

213. Production. (DaSc 213 Production) (2-2) Credit 3. I. Branches of the dairy industry; introduction to dairy type and breeds, the major factors in the management of cattle for milk production; the common dairy processes. Lab. Fee: $2.00.

223. Management. (DaSc 223 Management) (2-2) Credit 3. II. Judging, breeding, feeding and management of dairy cattle; the economics of milk production. Lab. Fee: $2.00.

313. Dairy Cattle Feeding. (DaSc 313 Feeding) (2-2) Credit 3. I or II. The Chemistry and Physiology of digestion; the nutrients and their application to economic feeding. Lab. Fee: $2.00.

323. Dairy Cattle Production. (DaSc 323 Cattle) (2-2) Credit 3. II. The dairy breeds; management of purebred herds; modern testing and breeding methods and their application to profitable dairy farming. Lab. Fee: $2.00.

403. Creamery Plant Management. (DaSc 403 Plant Mgmt) (2-2) Credit 3. I or II. Production, transportation, processing, sanitation, distribution and plant management of market milk and related products. Visits will be made to commercial milk plants. Lab. Fee: $3.00.

453. Dairy Herd Operations. (DaSc 453 Herd Operation) (2-2) Credit 3. II. Adjusting the herd and available facilities to market demands; Management of dairy farm. Lab. Fee: $3.00.

ENTOMOLOGY

323. General Entomology. (Entomology) (2-2) Credit 3. II. Insect morphology, life histories, family characteristics, habits and their agricultural relationships. Lab. Fee: $2.00.

PLANT SCIENCE

103. Introductory Plant Science. (PlSc 103 Intro P. Science) (2-2) Credit 3. I & II. Science of crop and horticultural plant production; relation of environment to plant physiology; botany of crop and horticultural plants; structures in relation to cultural practices.

313. Landscape Design. (PlSc 313 Landscape Design) (2-2) Credit 3. I. Appreciation and use of ornamental plant materials; fundamental principles underlying the use of these materials in urban, suburban and rural planning.

323. Vegetable Production. (PlSc 323 Vegetables) (2-2) Credit 3. II. An introduction to the growth habits, soil and climatic requirements, storage, varietal characteristics and pest control of vegetable crops.

343. Floricultural Crops Production. (PlSc 343 Flor Crops) (2-2) Credit 3. II. Scientific principles and practices involved in production, marketing and use of flowers.
401. Seminar. (PlSc 401 Seminar) (1-0) Credit 1. II. Presentations and discussions led by senior graduate students and staff on topics of individual research.

403. Plant Breeding and Improvement. (PlSc 403 Breeding) (3-0) Credit 3. I. Genetic and cytological variations in crop plants; the production and control of such variations in developing varieties and hybrids; and the maintenance of high quality seed stocks.

423. Plant Pathology. (PlSc 423 Pathology) (2-2) Credit 3. II. Introduction to fundamental principles of plant pathology including isolation, diagnosis of the cause, and control of plant disease.

443. Orchard Management. (PlSc 443 Orchard Mgmt) (2-2) Credit 3. II. Planting, maintenance and management of orchards.


463. Ornamental Plant Management. (PlSc 463 Ornamental Plants) (2-2) Credit 3. II. Planting, maintenance and management of ornamentals.


POULTRY SCIENCE

223. Production. (PSc 223 Production) (2-2) Credit 3. II. Poultry breeds and types; incubation and brooding; cullings for egg production; housing and equipment construction and care. Lab. Fee: $2.00.

312. Poultry Judging. (PSc 312 Judging) (2-2) Credit 2. II. Production characteristics and evaluation of present breeds and types; production judging methods; standard judging methods; growing and fitting for show room. Lab. Fee: $2.00.

323. Commercial Poultry Plant Management. (PSc 323 Plant Mgmt) (2-2) Credit 3. I. Comprehensive studies in operating poultry farms; breeding and fattening plants and/or special problems. Lab. Fee: $2.00.

403. Poultry Marketing. (PSc 403 Poultry Mktg) (2-2) Credit 3. I. Methods of handling of eggs, live and dressed poultry for market; candling and grading eggs; killing, dressing, grading and packing poultry for market. Lab. Fee: $2.00.

422. Management and Selection Problems. (PSc 422 Mgmt Prob) (2-2) Credit 2. II. Study in recognizing field problems in poultry science and how those working with vocational training programs can economically solve such problems. Practice consists of training skills such as judging, fitting show birds and management of a show, demonstrations, and science projects using poultry.

443. Poultry Breeding. (PSc 443 Breeding) (3-0) Credit 3. II. Genetic principles applied to poultry breeding and improvement; inheritance of economically important traits; methods of breeding poultry.

453. Fundamentals of Poultry Nutrition. (PSc 453 Nutrition) (2-2) Credit 3. I or II. Nutritive requirements for growth, egg production, hatchability and viability; essentiality of specific nutrients for chick nutrition is demonstrated; formulation and feeding of these diets in laboratory. Lab. Fee: $2.00.

VETERINARY SCIENCE


The School of Arts and Sciences offers courses in Biology, Business Education, Business Administration, Chemistry, Economics, Education, English, Geography, History, Mathematics, Music, Health and Physical Education, Physics, Philosophy, Political Science, Psychology, Sociology, Social Science, Social Work, Modern Foreign Languages, (French, German, Spanish, and Russian), and Library Science.

Students may major in any of the above courses with the exception of German, Philosophy, Psychology, Russian and Social Science. One may minor in Psychology, and in Social Science.

The first two year's work is designed (1) to give the student a general education background, regardless of this intended major or the profession he hopes to enter; and (2) to perfect the tools required in more advanced studies.

During the last two years of college work, a considerable degree of concentration in a major field is required although ample opportunity is given for cultivating related interests or pursuing studies which do not fall within the field of the student's major.

All freshmen are administered the ACT Test. Those freshmen whose standard score is 16 or above are placed in the regular freshmen English course; those making a score lower than 16 are assigned one additional hour per week.

Students whose course of study requires College Algebra and higher mathematics are required to take a mathematics placement test. If the score is unsatisfactory, the student is required to take Mathematics 113. This course must be satisfactorily passed before they are permitted to take advance work in mathematics. Those who made a satisfactory score are placed in Mathematics 115.

Physical Education practice is required of all students—two hours per week throughout the freshman and sophomore years.

All freshmen and sophomore students of the School of Arts and Sciences, unless specifically excused by the Department Head and the Dean of the School of Arts and Sciences before registration, are required to follow the prescribed courses as set forth in the catalogue. The various departments will hold to the work and sequence as outlined herein for those who plan to major within the department. Majors and minors however, should always work out their course of study with the department head.

**REQUIREMENTS FOR GRADUATION**

**COLLEGE REQUIREMENTS** 45-56 Semester Hours

The following courses are required of all students enrolled at the College who are pursuing the undergraduate degree.

- **ENGLISH** (113, 123, 213, 223) .......................................................... 12
- **SOCIAL SCIENCE ELECTIVE** (See General Education Listing) ........... 3
- **NATURAL SCIENCE** (Any Natural Science) ....................................... 6
- **MATHEMATICS** (Any Mathematics) ............................................... 6
- **AMERICAN GOVERNMENT** (I and II) ............................................. 6
- **AMERICAN HISTORY** ................................................................. 6
- **MILITARY SCIENCE or NAVAL SCIENCE** (Men) ............................... 8-9
- **PHYSICAL EDUCATION PRACTICE** ............................................. 4
- **NURSING** 111, 121 .................................................................. 2

The minimum required for graduation is 120 semester hours.

**REQUIREMENTS OF THE SCHOOL OF ARTS AND SCIENCES** 12 Semester Hours

In addition to the requirements of the College, with the exception of students majoring in elementary education who must complete six semester hours of one foreign language, the person expecting an undergraduate degree must complete twelve semester hours of one foreign language.
MAJOR AND MINOR REQUIREMENTS

After the completion of the sophomore year, all students enrolled in the School of Arts and Sciences must select a major and a minor in one of the departments of the School of Arts and Sciences or a minor in one of the other schools of the College. However, students majoring in Elementary Education, All-Level Music, and Plan II Certification Programs, may graduate without a minor. The selections should be made in consultation with the head of the department or designated representative. This is commonly referred to as selecting a major and a minor.

Each student must also earn an over-all average of “C” in his college work and the specific average required by the department in which the student is majoring or minoring before the student will be approved for graduation.

At least six hours of the last 12 required for the completion of a major and minor must be done in residence. The courses must be approved by the department concerned and the Dean of the School of Arts and Sciences. The acceptance of transferred credits toward the major or minor must also be approved by the Department Head and Dean of the School of Arts and Sciences.

All students must have at least a “C” average in their major and minor fields before they will be approved for student teaching and/or graduation.

DEGREES

Bachelor of Arts. The degree of Bachelor of Arts will be conferred upon candidates who satisfy all of the general requirements for graduation and satisfactorily complete their work in English, Modern Foreign Languages (French or Spanish), Music, or one of the Social Sciences (Economics, Geography, History, Political Science, Sociology, Social Services).

Bachelor of Music. The degree of Bachelor of Music will be conferred upon candidates who satisfy all the general requirements for graduation and complete not less than 75 semester hours in Music.

Bachelor of Science. The degree of Bachelor of Science will be conferred upon all candidates who satisfy the general requirements for graduation and satisfactorily complete their major work in Biology, Chemistry, Mathematics, Physics, and Physical Education.

Bachelor of Science in Education. The degree of Bachelor of Science in Education will be conferred upon candidates who satisfy all the general requirements for graduation and satisfactorily complete their major work in Education or Library Service Education.

GENERAL CURRICULUM IN THE SCHOOL OF ARTS AND SCIENCES

(The general curriculum is presented merely to show the general college requirements. The courses are not necessarily taken during the semester as listed. The student is still expected to have a major and a minor.)

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<td>English 113-123</td>
<td>Foreign Languages 113-123</td>
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<td>Mathematics 3-3</td>
<td>Electives 6-6</td>
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<tr>
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<td>Political Science 113-123</td>
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<td>or Social Science</td>
<td>English 213-223</td>
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<td>College Science 113-123</td>
<td>Physical Education 211-221</td>
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<td>or Chemistry or Biology 114-124</td>
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DEPARTMENT OF BUSINESS EDUCATION 
AND BUSINESS ADMINISTRATION

Bernice B. Rollins, Head
1972-73 Faculty
Kenneth H. Briggs, Pauline Bonner, Savannah J. Collier, Sandra Davis, A. D. James, Dorisula W. Hawkins, Elton Harrison, Gentris Hornsby, Ladelle Hyman (on leave), Sam Murphy, Rose Knotts, Lois Parsons, Royce Plyler, Junius Robinson, Esther Tyler, and Gladys Wytch.

The Department of Business Education and Business Administration offers two distinct undergraduate programs leading to the Bachelor's degree.

1. The Bachelor of Science degree with a major in Business Education is offered for students who wish to prepare themselves for commercial teaching positions in secondary schools. The program combines a well-balanced combination of general education, professional education, and business education. The Department's program is approved by the Texas Education Agency under Plan I and Plan II. Under Plan II, one is required to have one teaching field, only. Plan I requires a second teaching field of at least 24 semester hours.

2. The Bachelor of Arts degree with a major in Business Administration is offered for students who wish to develop the abilities necessary for responsible positions in business and government, or who plan to manage independent enterprises. The factual content of the courses will prepare the student for accounting, selling, marketing, management positions, and administrative positions at all levels of government. Special attention is given to the preparation for graduate and professional school.

The Department also offers a two-year training program in Secretarial Science for persons not pursuing an undergraduate degree. The program is designed to prepare students for responsible secretarial positions.

Minors are offered in business education and business administration.

OBJECTIVES OF DEPARTMENT

Objectives Relating to Academic Services

1. To provide an orientation in the basic structure, motive force, values, mores, and general ethos of industrial society and enhance the student's ability to define his role in it.

2. To encourage a balanced perception of the proper roles of government, business, and labor, in an industrial democracy.

3. To seek a viable degree of proportion between the theoretical and functional content of business curricula.

4. To humanize the utilitarian disciplines to the greatest degree possible compatible with occupational proficiency.

5. Based upon an in-depth assessment of the student's personal objectives and capacities, to individualize the instructional effort.

6. To integrate the otherwise fragmented disciplines into an articulated and intellectually and morally defensive business viewpoint.

7. To expose the student to the entire range of post-graduate choices open to him and match capabilities with specific alternatives.

8. To provide the means of stimulation for independent scholarship and to encourage students to conduct research, or read for honors.

9. To identify, encourage, and assist able prospects for graduate and professional schools.
10. To give the students a working facility in the use of the quantitative skills and decision-making tools used in business.

11. To encourage co-operative effort among students while strengthening individual initiative.

Objectives in the Area of General Student Development

1. To encourage and stimulate independent thinking and self-realization.

2. To instill a system of ethical and moral values to support a merging of social concern with enlightened self-interest.

3. To raise the general aspirational level of students and provide the basis for greater upward mobility.

4. In deference to the ethnic derivation of student personnel, to attempt to mitigate the effects of their historical alienation from the dominant culture.

5. To attempt through well conceived extra-curricular encounters to alter the negative aspects of the student’s personality structure.

6. To provide experiences which stimulate student participation in group activities and encourage the emergence of leadership.

7. To teach students, by precept and example, the dignity of hard work, the rewards of thrift, and prudent management of finances.

8. To enhance the over-all citizenship training of the student.

PHI BETA LAMBDA is a national Business Fraternity that has a chapter on the College campus. It is organized to assist youth and young adults enrolled in business programs to develop vocational competencies and a sense of civic responsibility. PHI BETA LAMBDA is designed to be an extension of the instructional program, thus being an integral part of the business curriculum. PHI BETA LAMBDA strives to develop competent, aggressive business leadership; strengthen the confidence of young men and women in themselves and their work; create more interest and understanding in the intelligent choice of business occupations; and encourage members in the development of individual projects and in establishing themselves in business.
DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN BUSINESS ADMINISTRATION: 48 Semester Hrs.  
Major: A minimum of 42 semester hours of Business Administration including Business Administration 143, 253, 263, 313, 373, 383, 393, 403, and 18 semester hours of additional courses.  
Economic 213 and 223  
The following courses may be presented by a candidate in fulfilling the 18 elective semester hours:  
Math 112, 133, 162, 463  
Minor: A minimum of 18 semester hours of business administration courses including: Business Administration 143, 253, 263, and 9 semester hours of additional courses.  
SCHOOL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN BUSINESS ADMINISTRATION: 12 Semester Hrs.  
Foreign Language—113, 123, 213, 223, Spanish, French, German, or Russian  
COLLEGE REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN BUSINESS ADMINISTRATION: 45-53 Semester Hrs.  
English 113, 123, 213, 223  
Mathematics 173, 183 (or equivalents)  
Science 113, 123 (or equivalents)  
History 173, 183  
Political Science 113, 123  
Social Science 113  
Nursing 111, 121  
Physical Education 111, 121, 211, 221  
Military Science  
or Naval Science (men)  
A total of 123 semester hours, excluding military science or naval science is required for graduation with the B.A. Degree with a major in Business Administration.  
REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN BUSINESS EDUCATION  
Business Education majors who plan to teach business subjects should follow the Teacher's Certification Program Plan I or Plan II, approved by the Texas Education Agency. For further specifics see Certificate Programs in the Teacher Education section of the Catalogue.  
DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN SECRETARIAL SCIENCE 40 Semester Hrs.  
A minimum of 31 semester hours of Business Education courses, including Business Education 142, 153, 163, 253, 263, 272, 282, 303, 304, 312, 372, 382.  
Business Administration 143, 253  
Economics 213  
SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN SECRETARIAL SCIENCE 8 Semester Hrs.  
A minimum of 8 semester hours of free electives.
COLLEGE REQUIREMENTS FOR THE
CERTIFICATE OF PROFICIENCY IN
SECRETARIAL SCIENCE

A minimum of 22-26 semester hours including English 113, 123, Mathematics 173, 183, (or equivalents), College Science 113, 123 (or equivalents), Physical Education 111, 121, Nursing 111, 121, and Military Science (males) 112, 122.

A total of 70 semester hours, excluding military science 112, 122, is required for graduation with the Certificate of Proficiency in Secretarial Science.

PROFICIENCY AND CIVIL SERVICE EXAMINATIONS

Each student majoring in Secretarial Science is required to pass a proficiency examination and the Texas State and Federal Civil Service Examination to qualify for the certificate. Each candidate must demonstrate a minimum speed of 50 net words per minute in typewriting and 100 words per minute in shorthand transcribed at least 95 per cent accurate.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN BUSINESS ADMINISTRATION

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CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY
IN SECRETARIAL SCIENCE

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DESCRIPTION OF COURSES

BUSINESS EDUCATION

132-142. Elementary Typewriting. (BE 132 142 Elem Typing) (0-5) Credit 2. I and II. Development of sense of touch; master the ordinary vocabulary and proper techniques in the operation of all mechanical parts of the machine. Introduction of letter forms, manuscripts, legal documents, rough drafts, tabulating and creative typing. Prerequisite for 142—30 wpm. Lab. fee: $4.50.

343-373. Advanced Shorthand. (BE 343 373 Shorthand) (3-0) Credit 3.
I and II. Reading from shorthand, dictation and typed transcription. Emphasis on English, spelling and accurate transcription. Prerequisite for 253—80 wpm. 263—100 wpm.

I and II. Development of advanced skills in letter writing, office style typing, rough drafts, legal documents, creative typing, business forms and reports, tabulation. Speed as well as accuracy stressed. Formerly 373-382. Prerequisites for 272—40 wpm and for 282—50 wpm. Lab. fee: $4.50.

303. Business Correspondence. (BE 303 Correspondence) (3-0) Credit 3.
The course will provide an opportunity for students to learn and practice the art of effective business communication which emphasizes writing letters, reports, memos, telegrams, news releases, and minutes of meetings; talking on the telephone and also face-to-face with fellow employees, customers, and the public at large; listening, reading business documents—letters, reports, and articles.

302-304. Office Practice. (BE 302 304 Office Prac) Credit 2-4. I or II.
This course provides actual working experience for the business education and secretarial science students and aids the student in developing, proficiently, those skills and techniques needed to handle problems and assignments that are encountered in the actual job situation. This course requires the student to spend from seven to fifteen hours per week in an office.

312-322. Introduction to Office Machines. (BE 312 322 Office Mach) Credit 2.
I. A course designed to provide familiarity with office machines and to provide fundamental knowledges and training in machine operation and applications. The rotation method is used to teach such basic machines as calculators, duplicators, transcribers, etc.

372-382. Secretarial Practice. (BE 372 382 Sec Practice) (2-1) Credit 2.
I and II. Correlation of business skills with other duties of a secretary. Emphasis on correspondence responsibilities, transmittal of service: filing, procedures, receptionist and telephone techniques. Prerequisites: BE 363 and 282 or consent of the instructor. (Formerly 272-282).

413. Business Education Research. (BE 413 Research) (3-0) Credit 3.
A study of the meaning and philosophy of research and research methodology. Consideration is given to the use of the scientific methods as applied to the collection, processing and presentation of data from the fields of business and business education. The course attempts a broad overview of the substantive content of the business curriculum with a view to problem identification. A review of statistical techniques is included. Designed for juniors and should be taken prior to beginning the investigative paper.

423. Teaching of Business Subjects. (BE 423 HS Meth) (3-0) Credit 3. I.
Through lectures, student presentations, and group discussions, the student is guided in developing those skills, traits, knowledges and teaching procedure that are most recent in the teaching of business subjects in the high schools. All current periodicals and materials pertaining to methods of teaching business subjects are presented and the student is introduced to all materials available for using highly skilled methods of teaching. Case studies and projects are included dealing with all areas of business education in order to expose the student to situations he is likely to encounter in the teaching of business subjects.

433. Problems in Business Education. (BE 433 Problems) (3-0) Credit 3.
II. A survey of the problems of the field of business education; designed for teachers and administrators of business subjects, particularly in the secondary school; also for persons who are responsible for other agencies of business education.
143. Introduction to Business. (BA 143 Introduction) (3-0) Credit 3. This course has as its primary aim to acquaint the student with the organizational structures, policies and practices in modern day business, emphasizing the non-technical values in business preparation which are useful to all persons regardless of specific occupations. Stress will be so placed that the student may understand fundamental economic problems and appreciate the part that business operations play in our modern social order. An additional phase of the work will be devoted to discovering aptitudes, abilities, and interest that will aid in the selection of specific vocations, as well as to serve as a background for the efficient mastering of advanced courses.

253-263. Elementary Accounting. (BA 253 263 Elem Acctng) (3-0) Credit 3. I and II. Accounting procedures for small-scale business operations; laboratory work in double-entry bookkeeping employed in common and uncomplicated business transactions. Study of the entire accounting cycle, including peculiar procedures for partnerships and corporations; the application of accounting to the preparing of financial statements.

273. Introduction to Electronic Data Processing. (BA 273 Data Process) (3-0) Credit 3. This course will provide a foundation for future detailed study of data processing systems. Lectures will include an introduction to problem organization, the use of flow charts, block diagrams, and decision tables in problem solving. Fundamentals of punched card accounting, card design, form design, function of auxiliary punched card equipment. Basic computer concepts and terminology, computer characteristics, storage media, fundamentals of input and output operations will be covered. Prerequisite: BA 253-263.

283. 1401 Computer Programming I. (BA 283 Computer I) (3-2) Credit 3. The course will cover introduction to the IBM 1401 Computer Card System, instruction format and standard operation codes. Programming drills, exercises, and case studies will serve to bridge the gap between the academic and the real world of data processing and computer programming. Prerequisite: BA 273 (Grade of C).

293. 1401 Computer Programming II. (BA 293 Computer II) (3-2) Credit 3. A continuation of 1401 Computer Programming I. The student will be given actual experience in program debugging, program testing, and familiarization with the 1401 System. Advanced programming technique will be covered. Prerequisite: BA 283 (Grade of C).

313. Marketing. (BA 313 Marketing) (3-0) Credit 3. I. An intensive study of the marketing function of the firm primarily from the viewpoint of management. Examines the marketing variables of product, channels, pricing, and promotion and relates them to the profitability, survival, and growth of the firm. Detailed analyses of marketing institutions and their function in the economic system are considered.

323. Elementary Business Statistics. (BA 323 Statistics) (3-0) Credit 3. An evaluation and technical study of the measurements of central tendency and dispersion, sampling analysis, index number construction and time series composition, and specialized correlation techniques as applied to business and economic data. A course in reading and interpretation of statistics as well as one in construction of the standard measure.

333. Principles of Insurance. (BA 333 Ins Prcncls) (3-0) Credit 3. I and II. A survey of the history vocabulary, principles and practices of all forms of insurance. Attention is given to social insurance and to risk-bearing in the five principle kinds of commercial insurance (fire, casualty, marine, life and corporate surety-ship) and to their supervision by public authority.
343. Salesmanship. (BA 343 Salesmanship) (3-0) Credit 3. II. The course treats of all activities related to the selling process, combining the study of salesmanship per se with sales management. It is concerned with the planning, organizing, execution, and control of sales effort. It focuses upon the place of selling in the economy and in the firm; co-ordination of selling with other components of the marketing mix; the types of products and the proper sales techniques for each. Attention is also given to the recruitment, training, motivating and effective utilization of sales personnel; the art of face-to-face consumer confrontation, both intramurally and in the field.

BA 353. Managerial Accounting. (BA 353 Mangr Acctng) (3-0) Credit 3. Managerial use of accounting for operations control and decision-making. Treats budgetary control, tax effect of alternative procedures, capital budgeting, cost control, project and operational analyses, special internal reports, analyses of statements. Prerequisite: BA 263.

363. Cost Accounting. (BA 363 Cost Acctng I) (3-0) Credit 3. Cost determination for manufacturing, distribution, and service operation; accumulation and recording of the cost of materials, labor, and overhead; job order, job lot, process, estimates, and standard cost systems; cost control; and joint and by-product costing. Designed primarily for seniors. Prerequisite: BA 263.

373-383. Business Law. (BA 373 383 Business Law) (3-0) Credit 3. I and II. Emphasis is on contracts, relations among principal, agents, and third persons and the nature and use of negotiable instruments. BA 383 deals with partnership, corporations, nature of property and special legal problems incidental to ownership and the transfer of real property. Course is designed primarily for juniors.

393. Introduction to Finance. (BA 393 Int Finance) (3-0) Credit 3. I and II. A general course in finance encompassing all phases of the money and capital markets. It studies and evaluates the procurement and use of funds by the different sectors of the economy, and the underlying unity of principles is exposed and conceptualized. A study of the sources and uses of funds by each of the following is made: Business, the consumer, Government, Agricultural, Real Estate Market. Such additional specialized topics are considered as: The Corporation, Internal Financial Management, Investment Banking, and Brokerage.

403. Principles of Management. (BA 403 Mgmt Prncpls) (3-0) Credit 3. I and II. The study of the business enterprise as an integrated whole and a study of each of the basic functional areas and auxiliary activities. Emphasis is placed on the following: The philosophy of business, the organizational structure, line and staff relationships, organizational change, the principles of planning, the decision-making process, recruitment, training, motivation, and compensation of key personnel.

413. Advanced Cost Accounting. (BA 413 Adv Acctng) (3-0) Credit 3. A study of standard costs, distribution costs, cost system design, use of statistical analysis of costs. Cost practice sets required.

423. Income Tax Accounting. (BA 423 Tax Acctng) (3-0) Credit 3. II. Analysis of federal income tax law; procedure in using the federal tax law and regulations to determine the amount of the tax liability for individuals and corporations. Prerequisite: BA 263.

433. Real Estate Principles. (BA 433 Real Estate) Credit 3. Various concepts of the kinds of property will be identified and examined to determine the responsibilities attendant to property rights of ownership and/or management. The principles of real estate appraisals and the methods used in the acquisitions, management and control will be studied.
443. Auditing. (BA 443 Auditing) (3-0) Credit 3. The course attempts to describe and demonstrate the functions of the internal as well as the independent auditors. An attempt is made to establish the university of the auditing function. Close attention is given to the purposes of the audit and the steps in executing the audit. The types of audits are described and study is given to the preparation and execution of the audit engagement. Considerable discussion is given to auditing standards, auditor-client relationships, the auditor's liability, and the auditor's public responsibility.

453-463. Intermediate Accounting. (BA 453-463 Inter Acctng - Int Acctng II) (3-0) Credit 3. I and II. An intensive study of accounting concept and procedures and an extended consideration of all balance sheet and income statement components. Emphasis is placed upon accounting as a basic supplier of economic data as well as an instrument for performance measurement and policy determination within the firm. Special attention is given the following: Refinement of recording techniques; evaluation of alternative procedures; strengthening of theoretical foundation. Study of generally accepted accounting principles as promulgated by the American Institute of Certified Public Accountants; study of the controlship function as it relates to all aspects of the business enterprise. The course is designed for students at the junior and senior levels with BA 353 as a prerequisite.


493. CPA Problems. (BA 493 CPA Problems) (3-0) Credit 3. The solution of problems drawn from examinations of American Institute of Certified Public Accountants, and the various other state examinations. In addition to problems, readings and lectures are required.
DEPARTMENT OF ECONOMICS AND GEOGRAPHY

C. Edward Tatum, Head
1972-73 Faculty
Ura Fontenot, Susan Shan, Mostfa Soliman, K. R. Thiagarajan, Florida J. Yeldell (on leave).

The Department of Economics and Geography offers two degree programs.
1. The Bachelor of Arts Degree with a major in economics has two options:
   A. Liberal Arts Option: This program is designed for the student who has an interest in preparation for graduate study leading to a career in teaching, research, and specialized government service.
   B. Teacher Education Option: This option is designed for the student whose interest is in teaching economics and social studies. The Department's Program is approved by the Texas Education Agency under Plan II, which certifies one for teaching social studies in Texas High Schools, grades 7-12. Under Plan II, one is not required to have a second teaching field.
2. The Bachelor of Arts with a major in geography is provided for the student who has an interest in environmental studies, government positions, meteorology, urban planning, climatology, cartography, and public school teaching.
3. A minor is offered in geography and/or economics. A second teaching field is offered in geography.

OBJECTIVES OF THE DEPARTMENT

General Objectives
1. To provide instruction in a variety of courses which meet the needs of majors in other fields as well as students in Geography and Economics. For example, majors in Elementary Education, History, Political Science, Economics, Engineering, Agriculture and other fields will find Geography 183, 203, 403, 423 helpful, etc.
2. To provide adequate training for students who intend to become professional Economists, Geographers, or teachers, or intend to de graduate work in the field.
3. To develop in each student the attitude, knowledge and skills to function effectively in a top level position, such as an economist, with the foundation for continuous professional advancement and additional academic preparation.
4. To develop the student's sensitivities to the contributions made by others (and those which he can make, himself) that are considered necessary for effective living in a capitalistic economy.
5. To prepare the students for successful graduate work.
6. To teach the geographic, social and economic aspects of good citizenship.
7. To provide an atmosphere that lends itself to self-realization and full utilization of capacities that the student may possess.
8. To develop skills in the solution of socio-economic problems.
9. To develop an awareness and an appreciation of the knowledge of Geography, Economics, and Social Science.
Specific Objectives

1. To develop the best physical facilities including library, cartography, laboratory, map and chart resource center and other materials necessary to augment our staff in the training of our students.

2. To develop professional standards for staff members directed toward improving methods of presentation, subject content and contributions to their special areas.

3. To encourage and aid our senior students to pursue advanced study and research on the graduate level.

4. To develop an understanding and an appreciation for Geography, as an area of concentration.

5. To familiarize students with methods of analyzing, describing economic problems.

HONOR SOCIETY

The Department of Geography and Economics sponsors the Iota Epsilon Chapter of Gamma Theta Upsilon—a National Geography Fraternity. This is an honorary organization designed for the purpose of recognizing high academic attainment on the part of those students majoring and/or minoring in Geography. It is open to those students who maintain an average of "B" or better and provides an avenue for them to fraternize in a way that serves any need for good human relationship and receiving direct information concerning the field of Geography.

This organization furnishes the student an opportunity for motivation and inspiration toward higher academic achievement.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN ECONOMICS

(30 Semester Hours)

MAJOR: A minimum of 30 semester hours are required including Economics 213, 223, 353, 403, 423, 433, 443, 473 and 6 additional hours which must be selected from courses numbered 300 and above.

MINOR: A minimum of 18 semester hours—students are required to complete 18 semester hours of which 12 must be numbered above the Sophomore level. Selection of courses must be made in consultation with the Chairman of the Department. A minor in Economics consists of courses numbered 213, 223 and 12 semester hours of additional courses.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN ECONOMICS

(12 Semester Hours)

Foreign Language—One Foreign Language 12 Hours
COLLEGE REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN ECONOMICS (Liberal Arts Option)

- English, 113, 123, 213, 223
- Social Science Elective 3 hours
- Natural Science (any 6 hours)
- Mathematics (any 6 hours)
- Political Science 113, 123
- History 173, 183 or equivalents
- Nursing 111, 121
- Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
- Military Science or Naval Science (men). A minimum of 120 hours, excluding military science or naval science is required for the Bachelor of Science Degree with a major in Economics.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN ECONOMICS (Liberal Arts Option)

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<th>First Year</th>
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DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN GEOGRAPHY (Liberal Arts Option)

MAJOR: A minimum of 30 semester hours is required including Geography 163 and 173, freshman level, and Geography 213 and 273 on the sophomore level. An additional 18 hours must be selected from courses numbered 300 or above.

Four semesters of work in at least two of the departments of Biology, Chemistry, Mathematics, Philosophy (logic only), and physics are required. At least two semesters must be in the same laboratory science.

MINOR: A minimum of 18 semester hours—of which 9 must be above the sophomore level. The selection of courses must be made with consultation with the Chairman of the Department.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN GEOGRAPHY (Liberal Arts Option)

- Foreign Language—One Foreign Language 12 hours
COLLEGE REQUIREMENTS FOR THE
BACHELOR OF ARTS DEGREE
WITH A MAJOR IN GEOGRAPHY

(1) Liberal Arts Option

45-53 semester hours

English, 113, 123, 213, 223
Social Science Elective 3 hours
Natural Science (any 6 hours)
Mathematics (any 6 hours)
Political Science 113, 123
History 173, 183 or equivalents
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical education

Military Science or Naval Science (men). A minimum of 120 hours, excluding military science or naval science is required for the Bachelor of Science Degree with a major in Geography.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN GEOGRAPHY

(Liberal Arts Option)

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REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN GEOGRAPHY

(Teacher Education Option)

The program in geography is approved by the Texas Education Agency as a Plan I Program. The completion of the program makes one eligible for certification as a teacher of geography, grades 7-12. For specifics see the section of the catalogue relative to Teacher Certification Programs.

DESCRIPTION OF COURSES

ECONOMICS

203. Survey of Economics. (Econ 203 Survey) (3-0) Credit 3. I or II. Overview of Economics. An introductory course to the study of the mixed economy at the macro-level. Prerequisite: sophomore standing; not open to Economics majors or minors.

213. Principles of Economics. (Econ 213 Principles) (3-0) Credit 3. Analysis of the principles and problems of production and distribution, market structures, business enterprise and comparative economic systems. Prerequisite for all upper level courses.
223. Principles of Economics. (Econ 223 Principles) (3-0) Credit 3. Analysis of the principles and problems of money and banking, national income, public finance, international trade and economic growth. Prerequisite for all upper level courses.

313. Public Finance and Taxation. (Econ 313 Finance) (3-0) Credit 3. I. Introduction to the study of government finance; principles of taxation and problems of tax administration; problems of coordination of federal state and local finance; special attention is given to current problems.

323. Economic Development. (Econ 323 Econ Devel of Europe) (3-0) Credit 3. Development of the Wage system, expansion of markets, industrial revolution and development, colonialism and economic and political imperialism.

333. Economic Development of the United States. (Econ 333 Econ Dev of U. S.) (3-0) Credit 3. I. Economic development of the United States from colonial times to the present, with emphasis on developments after 1860.

34. Personnel Management. (Econ 343 Persln Mgmt) (3-0) Credit 3. I. The development and importance of employee-employer relationships.


363. Economics of Consumption. (Econ 363 Consumption) (3-0) Credit 3. II. Application of economic principles to major decisions of consumers. How to use income most effectively; problems of consumer finance; budgeting, saving, buying insurance, buying home and others; sources of consumer information; business and consumers; government and consumers.

403. Money and Banking. (Econ 403 Banking) (3-0) Credit 3. I or II. Money, credit, commercial and central banking, financial intermediaries, treasury operations, monetary theory and policy; and foreign exchange.

413. Labor Legislation. (Econ 413 Legislation) (3-0) Credit 3. II. Economic and social issues raised by labor legislation. Right to organize and bargain collectively, machinery for adjustment of labor disputes.

423. Intermediate Microeconomic Analysis. (Econ 423 Micro Theory) (3-0) Credit 3. I. Analysis of principles governing price and output decisions of business firms, and allocation of resources under various market structures.

433. Intermediate Macroeconomic Analysis. (Econ 433 Macro Theory) (3-0) Credit 3. II. Analysis of determinants of aggregate level of employment, output and income of an economy. Prerequisite: 403.

443. Contemporary Economic Systemc. (Econ 443 Econ Systems) (3-0) Credit 3. II. Capitalism, socialism, fascism, communism and other economic systems; examination of resource allocation, consumption, pricing, production, investment, income distribution, central planning.

453. Labor Problems. (Econ 453 Labor) (3-0) Credit 3. II. An economic analysis of the labor market; historical and theoretical analysis of labor problems and labor relations; labor force wage theories and practices; employment and unemployment; government regulations.

463. Modern Economic Thought. (Econ 463 Econ Thought) (3-0) Credit 3. Development of economic doctorines. Theories of mercantilism physiocracy, classicism, neoclassicism, Marxism and contemporary economics. Prerequisite: 12 hours of Economics.

473. International Trade. (Econ 473 Trade) (3-0) Credit 3. II. Principles and practices of foreign trade with special emphasis upon international economic relations. Analysis of foreign exchange, balance of payments, foreign investments, tariff history and policy, currency problems.
481. Seminar in Economics. (Econ 481 Seminar) (1-0) Credit 1. I or II. Informal seminar meetings once per week to allow staff members and economic majors and minors to develop espirit de corps and to discuss contemporary economic developments. (May be repeated.)

483. Economic Research. (Econ 483 Research) (3-0) Credit 3. Required of all majors in Economics for graduation credit. Majors are required to consult with members of the staff.

GEOGRAPHY

163. Introduction to Geography. (Geography 163 Introduction) (0-3) Credit 3. I. A survey of the cultural and physical elements, their characteristics, spatial organization, and distribution as viewed in contemporary geography.

173. Introduction to Physical Geography. (Geography 173 Introduction) (0-3) Credit 3. I. General introduction to the field of geography, emphasizing the study of the physical earth and man in his physical environment.

183. Economic Geography. (Geography 183 Economic Geography) (3-0) Credit 3. II. A commodity approach to the geography of economic activity. Consideration of selected agricultural commodities and systems of land used in different physical and cultural settings and the role of trade and transportation in interregional relationships.

203. Geography of Transportation. (Geog 203 Transportation) (3-0) Credit 3. I. A consideration of the nature of spatial interaction, the various kinds of transport media, and the relationship between transportation and economic and social patterns. Prerequisites: Six semester hours of Geography and/or Economics, or consent of instructor.

213. Urban Geography. (Geog 213 Urban) (3-0) Credits 3. II. Study of the form, function, classification, internal land use and structure, and inter-city and city-hinterland relation of urban areas with particular emphasis upon the United States. Prerequisites: Nine semester hours of Geography including 163, 313, and 423.

273. Cultural Geography. (Geography 273 Cultural Geography) (3-0) Credit 3. Economic, social and political adjustments which man makes to various habitats and natural environment factors as are to human life.

283. Geography of Africa. (Geog 313 Africa) (3-0) Credit 3. Physical, cultural, economic and political characteristics of the African landmass. Prerequisite: 9 semester hours of Geography including 163-173 and 183.

303. Geography of Texas. (Geography 303 Texas) (3-0) Credit 3. Emphasis on the geographic regions of our own state; the problems of proper adaptations of man to environment; the geographic distribution and development of natural resources in the state; the possibilities of greater human development.

313. World Regional Geography. (Geog 313 Regional) (3-0) Credit 3. A survey of the regions and nations of the world and the geographical foundations of their physical and cultural characteristics; a practical and systematic approach to the field of Geography; a survey of the world in terms of outlook; regional types.

363. Geography of Latin America. (Geog 363 Latin America) (3-0) Credit 3. A regional treatment of the continent with emphasis upon the cultural pattern in the various natural regions. Prerequisite: 9 semester hours of Geography including 163-173 and 183.

403. Cartography and Graphics. (Geog 403 Cartography) (3-0) Credit 3. Introduction to the fundamentals of Cartography, the use, availability and evaluation of maps by triangulation, reproducing and developing map series.
423. Industrial and Commercial Geography. (Geog 423 Industrial) (3-0) Credit 3. Describes and analyzes the geographic distribution of selected energy resources and manufacturing industries. Factors influencing the localization of manufacturing are analyzed to discover geographic and non-geographic consideration affecting industrial development. Problems of industrialization in selected areas.

433. Geography of Anglo America. (Geography 433 Anglo America) (3-0) Credit 3. A systematic study of the different physical, economic, and cultural settings in the United States and Canada which form the basis for the various forms of livelihood. A regional and systematic approach will be made with attention given to political administrative units.

443. Climatology. (Geography 433 Climatology) (3-0) Credit 3. A study of the basic temperature and moisture elements of climatology, atmosphere pressure and wind systems and the general circulation of the atmosphere. An analysis of air mass stability concepts, air mass characteristics in North America and the use and significance of weather maps in climatic studies.

473. Geography in Education. (Geog 473 HS Methods) (3-0) Credit 3. Analyzed the distinctive contribution of geography to education for citizenship on elementary and secondary levels. Discusses teaching sources and organization of materials, textbooks and test. Designed for teachers of geography, social studies, and related fields.

483. Political Geography (Geog 483 Political) (3-0) Credit 3. A systematic study of the geography of political power settings and the factors that contribute to their stability and instability.

SOCIAL SCIENCE

113. Social Science. (SoSc 113 Introduction) (3-0) Credit 3. Introduction to Social Sciences.


483. Social Studies in Elementary School. (SoSc 483 Elm Methods) (3-0) Credit 3. Prerequisites: Education 273-283, Education 363. II. Improving social living, emphasis upon the place of democratic values and processes, purposes, content, organization of subject matter and development of materials as a continuous process in appraising the child's learning in terms of social experiences.
DIVISION OF EDUCATION

Jonel L. Brown, Director

1972-73 Faculty


The Division of Education offers the Bachelor of Science Degree in Elementary Education.

Minors are offered in art education, elementary education, kindergarten education, and in psychology. The minor in psychology is not applicable to a certificate program. The remaining minors are not applicable as second teaching fields for persons enrolled in Plan I Programs at the secondary level.

A minimum of 123 semester hours excluding military science is required for the Bachelor of Science Degree in Elementary Education.

OBJECTIVES OF DIVISION

In line with the general objectives of the College, the Division of Education has the following purposes and objectives:

1. To provide a program of general education designed to extend and enrich the common basic experiences of all students. At the College, this program is a continuation of the kind of education predominant in the secondary school, being concerned principally with fundamental learning in the liberal arts and receives chief emphasis in the first two years of the four-year college course. The studies are essentially nonspecialized, nonvocational, general education with the aim of balanced development of the individual's knowledge, understanding, attitude, and behavior for responsible and intelligent maturity, successful and satisfactory adulthood, and civic competence in a contemporary society.

2. To effect a teacher education program with the following general objectives:

   Professional orientation: To acquaint student with the duties, opportunities, and responsibilities of teachers and supervisors in the elementary and secondary schools. To help students to determine for themselves whether their personal qualifications give prospect of success in the teaching profession and encourage those whose prospects are favorable.

   Understanding the principles of effective teaching: To provide students with the information, methods and attitudes needed by the effective teacher and supervisor; to help them acquire a knowledge of child growth and development, an understanding of the nature of the learning process and to develop a sound philosophy for the teaching profession.

   Provision for laboratory experiences in teaching: To provide selected students with opportunities for directed observation, participation and actual teaching experiences under the guidance of competent supervisors.

   Stimulation of professional growth: To assist teachers in their professional growth after they leave the College and to acquaint them with findings of recent experimentation and research.
REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN ELEMENTARY EDUCATION

MAJOR: The programs in elementary education are approved by the Texas Education Agency under Plan I and Plan II. Completion of either qualifies one for certification to teach in the elementary grades of the State. For specifics relative to degree requirements refer to the Teacher Certification Programs section of the catalogue.

MINOR: A minor in elementary education has the prerequisite of a major in some content field or at least the professional core, i.e., Education 343, 313, 483, and 333. The minor itself consists of the following eighteen hours: Art Education 253-263, Music 253-263, Education 463-473.

REQUIREMENTS FOR THE ENDORSEMENT FOR KINDERGARTEN TEACHERS

The kindergarten endorsement for the provisional certificate in elementary education shall require nine semester hours of junior level courses or above of the work toward the bachelor's degree, specifically devoted to kindergarten education. For specifics refer to the section of the catalogue dealing with Teacher Certification Programs.

REQUIREMENTS FOR THE MINOR IN ART EDUCATION

The minor in art education consists of the following eighteen semester hours: Art Education 253-263, 353, 373-383, and three hours of electives.

REQUIREMENTS FOR THE MINOR IN PSYCHOLOGY

The minor in psychology consists of the following eighteen semester hours: Psychology 113-123, 233, 343, 443, and Sociology 333.

DESCRIPTION OF COURSES

ART EDUCATION

253. Elementary School Art. (ArEd 253 Elem Art) (6-0) Credit 3. I. Elements and principles of art as forms of creative expression in relation to the child, to the classroom teacher and in connection with the entire school curriculum; techniques in developing creative ability.

263. Advanced Elementary School Art. (ArEd 253 Elem Art) 6-0) Credit 3. II. A progressive evaluation of the elementary school child and his creative activities, tracing his developmental stage and citing his creative and mental growth.

353. Drawing and Composition. (ArEd 353 Draw Comp) 6-0) Credit 3. I. Basic principles and elements of drawing, compositions, and painting; exploration of various media and subject matter. Prerequisite: ArEd 253.

373. History of Art. (ArEd 373 History) (3-0) Credit 3. I. Art from prehistoric period to the contemporary period. The course enriches one's appreciation of art. Prerequisite: ArEd 253, 263 or equivalents.

383. Special Projects. (ArEd 383 Spec Proj) (6-0) Credit 3. II. Designing and building art forms into unified wholes through various media of expression. Prerequisite: ArEd 253 and 263 or equivalent.

453. Organization of Instruction in Elementary School Art. (ArEd 453 Elem Meth) (6-0) Credit 3. I. Procedures, methods and techniques of teaching art in the elementary school. Prerequisite: ArEd 253 and 263 or equivalent.
EDUCATION


303-306. Student Teaching. (Educ 303-306 Elem Pr Tchg) Credit 3-6. I and II. Prerequisite: A "C" average in Professional Education Sequence Art Education, and all required methods courses for a major in Elementary Education. Application for approval of on-campus and off-campus student teaching is to be filed with the Head of the Department of Education by May 1, prior to the school year in which student teaching is desired. Each student must participate in Seminar experiences prior to student teaching assignment.

309. Kindergarten-Primary Student Teaching. (Educ 309 Kdgtn Tchg) Credit 9. Prerequisites: A "C" average in Professional Education Sequence, and in all required methods courses for a major in Kindergarten Education. I and II.—Supervised on-campus and off-campus student teaching. One-half of time must be spent in a kindergarten school situation, or its equivalent.

313. American Public School and Curriculum. (Educ 313 Pub Sch Educ) (3-0) Credit 3. Role of the public school in the American social order; purposes of public education; organization and administration, curriculum; teacher personnel; school and community relations; financial support.

333. Methods of Teaching. (Educ 333 Meth of Tch) (3-0). Methods, techniques and devices as applied to teaching; analysis and evaluation of student learning difficulties and teaching responsibilities; nature, preparation and use of instructional and teaching materials; selection and organization of subject matter.

343. Human Development and Learning. (Educ 343 Human Dvlp) (3-0) Credit 3. Human growth and development and the learning process; its evaluation and guidance.

403-406. Student Teaching (Secondary School). (Educ 403-406 HS Prac Tchg) Credit 3-6. I and II. Supervised on-campus and off-campus teaching Students should make application for approval to student teacher by May 1 prior to the school year in which student teaching is desired. Prerequisites: Completion of Professional Education Sequence and prior approval of major department and Central Teacher Education Council. Each student must participate in Seminar experiences prior to student teaching assignment.

413. Kindergarten Methods and Materials. (Educ 413 Kdgtn Meth) (3-0) Credit 3. Selection and use of materials for program organization, creative expression, physical and mental activities, directing work habits and informal experiences in language arts and number work.

432. Children's Literature. (Educ 432 Children Litr) (2-0) Credit 2. The reading and evaluation of books for children, information about children's books, children's interest in reading, important authors and illustrators, and problems in the guidance of reading.

433. Language arts in the Elementary School. (Educ 433 Lang Arts) (3-0) Credit 3. I or II. Oral and written expression, spelling and handwriting. Conditions necessary for children's best development in the language arts; materials and procedures for improving the quality of instruction in these fields.

443. Tests and Measurements. (Educ 443 Test Measrm) (3-0) Credit 3. I or II. Principles of making and using tests; use of standardized tests.

463. Foundations in Reading Instruction. (Educ 463 Reading Inst) (3-0) Credit 3. I or II. The various stages in the development of reading. Special emphasis in reading readiness, developing experience background, diagnostic approaches, and meeting individual needs and interest, and enriching the individual reading program.
483. Basic Concepts in Education. (Educ 483 Basic Concept) (3-0) Credit 3. History, Philosophy, status and trends of education in the United States and other countries of the world; major education problems; teaching as a profession.

PSYCHOLOGY

113. General Psychology. (Psy 113 Gen Psych) (3-0) Credit 3. An introductory course dealing with the elementary principles of human behavior. Some attention is focused upon the application of psychology and social problems and situations.

123. General Psychology. (Psy 123 Gen Psy) (3-0) Credit 3. I. Personality development through personal-social and cultural social conditioning larger group relationships. Prerequisite: Psychology 113; General Psychology.

233. Fundamentals of Statistics. (Psy 233 Statistics) (3-0) Credit 3. I or II. Understandings and techniques of collecting, tabulating, and computing statistical data from central tendency through variability relationship, and the significance of differences among such measures.

343. Abnormal Psychology. (Psy 343 Abnormal) (3-0) Credit 3. II. Prerequisite: Psychology 123, Advanced General Psychology. An examination of the organic and functional types of psychological abnormality, with emphasis on the ways in which personality may become disordered. Evidence and theories concerning causation and the problems of treatment are considered.

443. Psychology of Personality. (Psy 443 Personality) (3-0) Credit 3. I or II. Prerequisite: Psychology 123, Advanced General Psychology. Evaluation of theories in the field of personality. The development of personality as a pattern of strivings manifested in interpersonal relation. The convergence of constitutional, psychological, social and cultural factors in the development of the normal individual and his adjustment.

PHILOSOPHY

303. Philosophy of Life. (Phil 303 Phil Life) (3-0) Credit 3. I or II. Designed for those who want to know and understand the main philosophies of life.

313. Introduction to Philosophy. (Phil 313 Introduction) (3-0) Credit 3. I. For beginning philosophy students; methods and theories of the field. Prerequisite: Sophomore standing.

SPECIAL EDUCATION

313. Introduction to the Education of Exceptional Children. (Sp Ed 313 Excep Chld) (3-0) Credit 3. Introduction of the basic concepts and understandings related to developing an overview of the education of exceptional children.

403. Curriculum Building for Mentally Retarded Children. (SuEd 403 Curr-Bldg) (3-0) Credit 3. An introduction to basic techniques of curriculum development or implementation with emphasis on mental retardation.

413. Problems and Methods of Teaching Retarded Children. (Sp Ed 413 Methods) (3-0) Credit 3. An introductory study of the characteristics and needs of the mentally retarded child with emphasis on basic principles related to methods and techniques of meeting the needs of the retarded child.

433. Psychological Problems of Mentally Retarded Children. (Sp Ed 433 Psy Prob) (3-0) Credit 3. An introduction to the study of special emotional blocks to affect the adjustment of youth who are mentally retarded.
DEPARTMENT OF ENGLISH

Anne L. Campbell, head
1972-73 Faculty
  Wilson A. Curtis, Ruby F. Dabney, Frankie B. Ledbetter, Myrtle Roser, Theodis Shine

The Department of English offers the following degree programs:

1. The Bachelor of Arts Degree with a major in English. This major has two options.
   A. Teacher Education Option: This option is designed for the student who has an interest in teaching English. The Department's Program is approved by the Texas Education Agency as a Plan I Program, certifying the person for teaching English in Texas High Schools, grades 7-12.
   B. Language Literature Option: This option provides specialized study in language and literature for the student desiring to pursue a career in The Arts or Letters.

2. The Bachelor of Arts Degree with a major in Speech and Drama is provided for the student whose interest is in communication, and in the theater and related areas.

OBJECTIVES OF THE DEPARTMENT

The Department of English believes that a person's ability to live successfully in modern society is greatly determined by his skill in language by his knowledge of his literary heritage, and by his appreciation of literature and other art forms.

The department, therefore, aims primarily to give students a broad cultural background, to develop skill in written and spoken composition, to create an atmosphere conducive to intellectual growth, to provide students the means of developing critical ability and artistic taste, and to offer mental and emotional experiences essential to the cultivated human being, as well as to prepare the student for enlightened and competent participation in contemporary society.

HONOR SOCIETY AND CLUBS

The department has a chapter of Sigma Tau Delta, National English Honor Society, an organization affiliated with the National Association of Honor Societies. Membership is comprised of junior and senior English majors with an average of B or above. The Prairie View Chapter is the Upsilon Lambda Chapter.

Alpha Psi Omega, national honorary society in drama, has a chapter at the College. Eligible for membership are students who have twelve semester hours of work in drama and a grade point average of 3.00 or higher.

The Department of English sponsors a chapter of the National Council of Teachers of English known as the “Prairie View Affiliate of NCTE.” Membership is open to all English majors and minors and to other interested in implementing their training in English. Other departmental sponsored organizations and activities include:

The English Seminar Group — a discussion and study group concentrating on literary classic and research
The Creative Writing Group — open to all campus students and concentrating on developing writing skills
The Charles Gilpin Players — a drama group for the study and production of dramas. Open to all students.
The Debate Society — open to all students who wish to participate in intercollegiate debate and forensic activities
The Journalism Club — open to all journalism students and others interested in training and practice in newswriting and editing. The club sponsors, jointly with the NCTE Affiliate, a daily newsheet FOCUS.

DEPARTMENTAL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN ENGLISH

(Language-Literature Option)

MAJOR: Thirty-nine hours of English, including 113, 123, 213, 233, 333, 343, 353, 363, 373, 383, and 423, are required; the remaining six hours should be in courses numbered 300 and above.

History 303
Art Education 373

MINOR: A minimum of 27 hours of English, including English 113, 123, 213, 223, 333, 353, 363, is required; the remaining six hours should be in courses numbered 300 and above.

SCHOOL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN ENGLISH

(Language-Literature Option)

12 Semester Hours

12 hours of one foreign language

COLLEGE REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN ENGLISH

(Language-Literature Option)

33-42 Semester Hours

Mathematics 173-183 or 113-123
History 173-183 or equivalents
Political Science 113, 123
Social Science 113 or Sociology 123
Natural Science (any six hours)
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
Military Science or Naval Science. A minimum of 120 hours, excluding Military Science or Naval Science is required for graduation with the Bachelor of Arts Degree with a major in English.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN ENGLISH

(Language-Literature Option)

FIRST YEAR

<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
<tr>
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<tr>
<td>College Science</td>
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<td>Mathematics</td>
<td>173-183</td>
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<tr>
<td>History</td>
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<td>173-</td>
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<td>Nursing</td>
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<td>Physical Education</td>
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<tr>
<td>Military Science (Men)</td>
<td>112-122</td>
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<td>or Naval Science (Men)</td>
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SECOND YEAR

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<td>213-223</td>
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<tr>
<td>History</td>
<td>183-303</td>
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<td>Political Science</td>
<td>113-123</td>
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<tr>
<td>Speech</td>
<td>133-143</td>
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<tr>
<td>Physical Education</td>
<td>211-221</td>
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<tr>
<td>Military Science (Men) or</td>
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<td>Naval Science (Men)</td>
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THIRD YEAR

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<tr>
<td>English</td>
<td>353-363</td>
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<tr>
<td>English</td>
<td>383-393</td>
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<tr>
<td>Art Education</td>
<td>373-</td>
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<tr>
<td>Electives (Minor)</td>
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FOURTH YEAR

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<tr>
<td>English</td>
<td>453-</td>
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<tr>
<td>Electives</td>
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</table>
REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN ENGLISH
(Teacher Education Option)

English majors who plan to teach should follow the Teacher's Certification Program which is a Plan I Program approved by the Texas Education Agency. For specifics, see the Teacher Certification Programs section of this catalogue.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SPEECH AND DRAMA 27 Semester Hours

**MAJOR:** A minimum of 27 hours of courses in The Department, including Drama 103, 283, 433, 493, and Speech 163, 223, 233. The six hours of electives are to be in speech and drama courses.

**MINOR:** Eighteen hours of speech and drama courses consisting of Drama 103, 283, 433, and Speech 163, 223, 233.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SPEECH AND DRAMA 12 Semester Hours

12 hours of one foreign language

COLLEGE REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SPEECH AND DRAMA 45-53 Semester Hours

- English 113, 123, 213, 223
- Mathematics 173-183 or 113-123
- Natural Science 113-123 or Bio. 114-124 or Chem. 114-124
- History 173-183 or equivalents
- Political Science 113, 123
- Social Science (Soc. Science 113 or Sociology 123)
- Phy. Educ. 111, 121, 211, 221 or equivalents in Restricted Phy. Educ.
- Military Science (Men) 112, 122, 222
  or Naval Science (Men) 153, 233, 243
- Nursing 111, 121

A minimum of 120 hours, excluding Military Science 112, 122, 212, 222 or Naval Science 153, 233, 243 is required for graduation with the Bachelor of Arts with a Major in Speech and Drama.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SPEECH AND DRAMA

<table>
<thead>
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<td>History</td>
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<td>Political Science</td>
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<td>112-122</td>
<td>or Naval Science (Men)</td>
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<td>263-283</td>
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<td>433-443</td>
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<td>Electives (Minor)</td>
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<td>Electives</td>
<td>223-9</td>
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</table>

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SCHOOL OF ARTS AND SCIENCES

DESCRIPTION OF COURSES

(Language-Literature)

113. Freshmen Composition. (Eng 113 Composition) (3-0) Credit 3. I
Various forms of written composition. Designed to develop correct language habits and logical thought in effective writing.

123. Freshman Composition. (Eng 123 Composition) (3-0) Credit 3. II
Forms of written composition with emphasis on the language devices which contribute to the development of a clear, interesting, and forceful style. Theme writing; preparation of a fully documented research paper; assigned library reading; individual conferences.

213. Fundamentals of Speech. (Eng 213 Speech Fund) (3-0) Credit 3. I & II. A course dealing with the universal principles underlying oral communication. While the course is content oriented attention is given to theory and practice in voice and dictation. Several classroom speeches are required.

223. Introduction to Literature. (Eng 223 Intro Litr) (3-0) Credit 3. I & II. An introductory study of literary types and forms, literary style, basic literary masterpieces, and representative modern works. Prerequisite: Eng. 113, 123, 213.

233. English Literature. (Eng 233 Eng Litr) (3-0) Credit 3. II Historical survey from Beowulf to the twentieth century; study of chief authors and representative works. Prerequisite: English 213. (Required of English majors in place of English 233.)

253. Oral Interpretation of Literature. (Eng 253 Oral Interp) (3-0) Credit 3. I. Analysis and practice of techniques in the oral interpretation of basic literary forms. Emphasis placed upon the careful analysis of material in terms of plot, character, setting, theme, atmosphere, and the overall effectiveness of individual readings.

263. Grammar for the Teacher. (Eng 263 Tchr Grammar) (3-0) Credit 3. II. An intensive study of Modern English inflection and Syntax with special reference to usage. Basic principles of traditional, structural and generative grammars and approved methods of teaching grammar in the High School.

273. Advanced Composition. (Eng 273 Adv Comp) (3-0) Credit 3. II. Instruction in writing techniques extending the range and depth of Freshman Composition. Emphasizes the possibility of alternate strategies in solving writing problems. Examination of reason for choosing among verbal forms and theories of rhetoric. Open to English majors and minors and all students who have demonstrated ability in composition. Prerequisite: English 9 hrs.

333. American Literature. (From the beginning to 1860) (Eng 333 Amer Lit) (3-0) Credit 3. I. Critical study of the literature of the United States from the Colonial period to 1865: emphasis upon the unique character of the American Experience and its expression in Literature. Prerequisite: 12 semester hours of English.

343. American Literature. (From 1965 to 1914) (Eng 343 Amer Lit) (3-0) Credit 3. II. Survey of major American writers and periods from 1865 to 1914.

353. The English Language. (Eng 353 English Lit) (3-0) Credit 3. I. A descriptive survey of the English language with emphasis on the historical development of English sounds, vocabulary and principles of grammar and usage.

363. Advanced Grammar. (Eng 363 Adv Grammar) (3-0) Credit 3. II. A study of modern English grammatical forms, conventional grammatical terminology and assumptions underlying the structure of traditional grammar. An introduction to the new grammars, with emphasis on the concept of structural meaning.
373. Journalism. (Eng 373 Journalism) (3-0) Credit 3. I. Introduction to theory and practices in different forms of modern journalism. With news-practical experiences designed to prepare the student to publish, direct or sponsor student publication. Theoretical and practical work in recognizing, gathering and writing news.

383. The Romantic Movement. (Eng 383 Romantic Mvt) (3-0) Credit 3. I. A study of the major figures of the Romantic period in English Literature; emphasis upon their philosophy and artistry.

393. The Victorian Movement. (Eng 393 Victorian Mvt) (3-0) Credit 3. II. A study of the major figures of the Victorian period; emphasis upon the literary innovations in style and forms and the courses which dominate the literature of that area. Writers to be chosen from the earlier and later Victorian figures (Tennyson, Browning, Hopkins, Arnold). Prerequisite: Eng. 233.

413. Eighteenth Century Literature. (Eng 413 18th Century) (3-0) Credit 3. I. The prose and poetry of the Neo-Classical movement, and the Pre-Romantic period. Prerequisite: English 233.

423. Shakespeare. (Eng 423 Shakespeare) (3-0) Credit 3. II. General survey of dramatic works; character and conditions of the age; more detailed study of representative plays. Prerequisite: English 233.

453. Medieval Literature. (Eng 453 Medieval Litr) (3-0) Credit 3. II. A study of the great and evil poems and prose works from the 7th to the 14th century; the chief literary types of the period; epic, romance, legend, the Old and Middle English lyrics, and the beginnings of dramas with their continental European relationships.

Ed. 383. Teaching of English. (HS Methods) (3-0) Credit 3. I. A study of basic issues, problems, practices and trends in the teaching of English. Approved methods of teaching English in the High School; the curriculum; composition and literature suitable for the high school. Prerequisite: Three hours advanced literature and three hours from Group E.

473. Writing Clinic. (Eng 473 Writing Clinic) (3-0) Credit 3. II. Designed to give students beyond sophomore level opportunity to develop greater proficiency in written language usage and techniques helpful in creative writing.

483. The Novel. (Eng 483 Novel) (3-0) Credit 3. II. The development of the English Novel from Defoe through Scott. Its varieties, aims and techniques.

SPEECH

133. Argumentation and Debate. Sp 133 Debate) (3-0) Credit 3. I. The principles of argumentation as applied to public debates; analysis of the proposition, finds the issues, the nature of evidence, kinds of argument, structure and presentation of the case.

143. Group Discussion. (Sp 143 Grp Disc) (3-0) Credit 3. I. The role of oral communication in the dynamics of group behavior; theories of participation and leadership in discussion situations.

163. Speech Composition. (Sp 163 Composition) (3-0) Credit 3. II. Preparation of manuscripts for various types of speeches. Emphasis on language, supporting materials, structure and logical thought in effective writing. Practical experience in speaking from the manuscript.
SCHOOL OF ARTS AND SCIENCES


233. Training the Speaking Voice. (Sp 233 Trng Spkng Voice) (3-0) Credit 3. II. Voice training for the teachers; to establish correct breathing habits and proper focusing of tone; to overcome voice problems such as nasality, throatiness, breathiness, and vocal fatigue; to develop efficient and pleasing use of the voice.

313. Public Speaking. (Sp 313 Pub Spkng) (3-0) Credit 3. I. An advanced course in speech designed to develop proficiency in the skills of effective oral communication. Organization of ideas, presentation of varying types and lengths of speeches. Prerequisite: Eng. 213.

323. Persuasion. (Sp 323 Pers) (3-0) Credit 3. II. The principles of influencing the beliefs and actions of individuals and groups through the spoken word. Adaptations required by various purposes, audiences and occasions. The ethical responsibility of the speaker. Practice in the construction and presentation of persuasive speeches.

DRAMA

103. Introduction to Theatre. (Dram 103 Intro Theatr) (3-0) Credit 3. I. An orientation course exposing the student to the plays and the various technical areas involved in bringing the play to life. Designed to give the student an understanding of theatre and all its aspects as it exists in our society.

243. Theatre History. (Dram 243 Theatr Hist) (3-0) Credit 3. I. Origin and development of Western Theatre as revealed through plays, theories, and techniques characteristic of each important historical period from the Greek to the Elizabethan.

263. Theatre History. (Dram 263 Theatr Hist) (3-0) Credit 3. II. A continuation of Drama 243 from the 17th Century to the development of modern theatre. Prerequisite: Drama 243.

283. Acting I. (Dram 283 Act I) (3-0) Credit 3. I. A training course providing the student with the basic fundamentals of ensemble acting. Includes characterization, play analysis, movement, business, voice and diction, and stage make-up.

293. Acting II. (Dram 293 Act II) (3-0) Credit 3. II. A continuation of Drama 283. Advanced skills in acting. Prerequisite: Drama 283.

403. Contemporary Theatre (Dram 403 Contm Theatr) (3-0) Credit 3. I. The development of modern theatre from the 19th century concept of realism—naturalism through the present movements away from realism. Prerequisites:

433. Directing I. (Dram 433 Dirtng I) (3-0) Credit 3. I. A basic course in stage direction including play and character analysis, ground plans, movement and business. Each student is required to do a detailed prompt book for a one-act play.


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DIVISION OF FRESHMAN STUDIES

Harry L. Faggett, Director
1972-73 Faculty

The Nature of the Program

The Division offers neither majors, minors, nor degrees. The course offerings are service and terminal in nature.

The Division is organized into sections for instruction and an additional section for Research, Experimental and Developmental Services. The sections designated for instruction include communications and mathematics specifically; general science and chemistry relatedly.

Statement of General Objectives

Primary objectives of the Program in Freshman Studies English, Mathematics, and Education:

1. To assist every student in his personal development of essential skill in the use of basic tools of learning: in language usage and in mathematical reasoning and logic.

2. To insure the acquisition or development of self-confidence, self-respect, and pride in achievement through the elimination of any sense of uncertainty or insecurity in communications skills and mathematical competence, not only for college but for life.

3. To prepare students for special achievement in all major courses of study through a program either constructed by or approved by every department head of this institution.

The Program in Freshman English

Principal features of the Program in Freshman English follow:

1. Team-teaching: A lecture-laboratory system of team-teaching large groups for lectures; individualized instruction in the laboratory for at least one two-hour period each week.

2. Class time: Every class period is of two-hours' duration: One hour teaching; one hour review and testing.

3. Audio-visuals: The media center is utilized for laboratory exercises with taped lectures, film strips and other audio-visual supplements to every unit of study.

4. Progress and acceleration:
   a. In a special effort to allow for individual differences in learning ability, students are permitted at least three (3) semesters to complete the two-semester course. Very slow learners (1st term) simply receive S for satisfactory progress; and they may complete the required projects in the Writing Laboratory of the Learning Resources Center while attending the regular classes of the second term of the course.
   b. Conversely (from a. above) the best students may advance as rapidly as their ability indicates: any number may earn full credit for either semester in as little time as six to nine weeks. Such students are invited to serve as tutorial assistants in the Laboratory.

*On Leave
5. Testing:
   a. Pre-testing in grammar and mechanics and an impromptu theme are exercises of the first two days.
   b. Follow-up examinations are administered, for comparative and evaluative purposes, at mid-term and finally.
   c. A proficiency examination (national) is given to all freshmen as a culminating exercise for the “tri-term” course (“tri-term” since it is permissible for the slower students to work for three terms to complete the two-term course).

   NOTE: Repeaters are encouraged to practice all language-usage skills in the Reading and Writing Laboratories during the sophomore, junior and even senior years until they score satisfactorily on the English Proficiency (national exam) Examination for each level.
   d. Progress is charted on the Achieve-o-graph bulleting board—with only passing grades to indicate completion of each project.

6. Class activities (outlined):
   a. In English 113 (first term)
      (1) First eight weeks: grammar—words, phrases, clauses, and sentences to the paragraph.
      (2) Second eight weeks: intensive practice in writing impromptu themes (20 required).
   b. In English 123 (second term)
      (1) First eight weeks: use of the dictionary use of the library; writing the investigative paper, letter-writing.
      (2) Second eight weeks: an introduction to literary criticism—reading, writing, listening, understanding and evaluating.

   NOTE: Five types of literature—five units; taped student lectures and student evaluation of each lecture presented by his peers feature this second half of study. Five oral reviews and five acceptable essays are minimum requirements.

7. Filing: All written work is kept on file in the Writing Laboratory for two years. Such work furnishes information and statistical data for student or faculty research.

The programs in chemistry, college science and mathematics follow a pattern somewhat similar to the English program described above.
1973-74 Faculty

The programs in the Department of Health, Physical Education, and Recreation are designed to meet the professional needs and interests of students who wish to pursue a major or minor sequence in Health, Physical Education, and Recreation, as well as those students who seek only to fulfill the general college requirement of four semester hours in Physical Education. The Department offers the Bachelor of Science degree with a major sequence in Physical Education and the Bachelor of Arts degree with a major sequence in Recreation. A minor sequence in Health Education is offered to students who are not required to qualify for a second teaching field.

Two options are available to students who wish to pursue a major sequence in Physical Education:

1. Teacher Education Option: This program is designed for the student having an interest in teaching health and physical education. The program is approved by the Texas Education Agency under Plan I, and as an All-Level Program, certifying one for teaching health and physical education in Texas public schools. A student following the Plan I sequence or the All-Level Program is required to complete a second teaching field is offered in physical education. For details, see Teacher Education section of this catalog.

2. Liberal Arts Option: This program is designed to prepare the student for positions with recreational agencies and other types of employment for which a background in health and physical education is deemed valuable.

GENERAL OBJECTIVES OF THE DEPARTMENT

The general objectives of professional preparation in Health Education, Physical Education, and Recreation are:

1. To prepare students for roles as teachers, leaders, specialists and/or administrators in Health, Physical Education and Recreation.

2. To prepare students to meet the certification requirements of the State of Texas, as well as other states without undue hardship.

3. To provide students with a broad base of knowledge and skills required to direct effective teaching and/or learning experiences in their respective fields or areas of specialization and to continue advanced study, if desired.

DEPARTMENTAL CLUB

The Physical Education majors club is a local departmental club open to all majors in the department. A scholastic average of 2.00 or higher is required for membership.

REQUIREMENTS OF UNIFORMS

Students enrolled in activities class will be required to purchase a uniform in compliance with departmental standards. Regulation gymnasium shoes are also required. Those students engaged in swimming activities will be expected to purchase a swimming suit recommended by the department.

The uniform and swim suit should be purchased at the College Exchange.
DEPARTMENTAL ACADEMIC STANDARDS

All students pursuing major or minor sequences in Health and Physical Education or Recreation are required to maintain a minimum accumulative grade average of “C.” Any course in the major or minor fields in which a grade of “D” is acquired must be repeated.

ACTIVITY COURSES FOR MAJOR STUDENTS

Students majoring in Health and Physical Education are required to take a minimum of 8 semester hours of activity courses. The first four activities should include the beginning courses in swimming, stunts and tumbling, folk dance, and modern dance or their equivalent. Other activities may be selected from aquatics, dance, individual and team sports.

ACTIVITY COURSES FOR NON-MAJOR STUDENTS

The physical education activity program is designed to broaden the educational background of the student by providing opportunities for the development of skills, appreciations, and understandings associated with a wide range of movement experiences, especially in lifetime sports.

The college requirements of 4 semester hours of physical education may be fulfilled by selecting activities from the areas of sports, dance, and/or aquatics. A student may not enroll in the same activity more than once for credit. Students are expected to complete the physical education activity requirements during both semesters of the freshman and sophomore years, unless permission for deferment is granted by the Dean of the College of the Dean of the School.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICAL EDUCATION (Liberal Arts Option)

MAJOR: A minimum of 29 semester hours of courses in 171 health and Physical Education including Physical Education 111, 121, 361, 132 or 142, 172, 211, 221, 151, 161, 363 or 383, 462, 483, and 433 Health Education 203 and 303 Biology 115, 125, 314, 324

MINOR: For the physical education minor see the Teacher Education section of this catalogue. The minor in Health Education requires 18 semester hours elected from the following: Home Economics 103, Health Education 203, 333, 353, 392, Physical Education 402, 403, 423 and Driver Education 303.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICAL EDUCATION

Foreign Language, any one language 12 Semester Hours

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICAL EDUCATION

English 113, 123, 213, 223
Mathematics 6 hrs.
History 173-183 or equivalents
Political Science 113, 123
Sociology 123
Nursing 111, 121
Military Science or Naval Science (men). A minimum of 120 hours excluding military science is required for graduation with the B. S. Degree with a major in physical education for those following the liberal arts option.
CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN HEALTH AND PHYSICAL EDUCATION (Liberal Arts Option)

**FIRST YEAR**
- English
- Mathematics
- or Mathematics
- History
- Biology
- Physical Education
- Nursing
- or Naval Science (Men)

**SECOND YEAR**
- English
- Mathematics
- or Mathematics
- History
- Biology
- Physical Education
- Physical Education
- Nursing
- or Naval Science (Men)

**THIRD YEAR**
- Biology
- Foreign Languages
- Political Science
- Physical Education
- Physical Education
- Physical Education
- Sociology

**FOURTH YEAR**
- Physical Education
- Minor and Field Electives
- Physical Education

The areas of Recreation of the Department of Health, Physical Education, and Recreation offers the Bachelor of Science Degree with a major in Recreation.

**LIBERAL ARTS OPTION**
The nature of this program is to provide graduates for work in municipal recreational programs, Y.M.C.A., Y.W.C.A., libraries, therapeutic recreation, and other recognized private and governmental agencies, industry, adult educational programs and summer and winter camps. The program is designed to prepare the student for recreational service in his area of interest.

**OBJECTIVES OF RECREATION**

The objectives of the Recreation Area of the Department of Health, Physical Education, and Recreation are to provide the student with:

1. the basic background information required to understand the environment within which he will work, the broad technical training and minimum experience necessary to be a productive employee in a recreation position, and the educational foundation needed to undertake further study within the field through in-service training, professional short courses, or to enroll in graduate studies in a specialized area of recreation and/or parks.

2. a broad liberal education in human relations necessary in a face-to-face involvement with program participants.

**RECREATION AREA REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN RECREATION**

51 Semester Hours

**MAJOR:**
- A minimum of 16 semester hours of courses in Recreation including Recreation 103, 212, 313, 332, 343, and 423.
- Physical Education 132 or 142, 151, 262, 443, 241 or 251, 442.
- Sociology 262, 123, and either 363 or 483.
- Home Economics 373
- Industrial Arts 152
- Education 253
- Eight (8) additional hours must be selected from Art, Music, Dramatics, Literature, Dance, Sports, Aquatics, and Nature Activities. Courses must be approved by the advisor.
## SCHOOL OF ARTS AND SCIENCES

### SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN RECREATION

12 Semester Hours

### COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN RECREATION

45 Semester Hours Minimum

- English 113, 123, 213, 223
- Social Sciences Electives 3 hrs.
- Natural Science (Choice of 113-123, Biology 114-124, or Chemistry 114-124) 6 hrs.
- Mathematics Electives 6 hrs.
- American History 173, 183
- American Government 113, 123
- Military Science Naval Science (Men)
- Physical Education 4 hrs.
- Nursing 111, 121

A minimum required for graduation is 120 semester hours.

### CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN RECREATION

#### FIRST YEAR

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### DESCRIPTION OF COURSES

#### PROFESSIONAL COURSES REQUIRED IN OTHER DEPARTMENTS

The following courses are required of all students majoring in health and physical education who are qualifying for teacher certification under Plan I (Secondary) or the All-Levels Plan.

- Biology 114
- Biology 314-324
- Sociology 262
- Psychology 113
- Education 383 (PE) Methods of Physical Education in Secondary Schools
- Education 333 (PE) Methods of Physical Education in Elementary Schools

The following courses are required of all students majoring in Health and Physical education who are qualifying under the Liberal Arts Option.

- Biology 114
- Biology 314-324
- Sociology 262
- Psychology 113

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172. History and Principles of Physical Education (PE 172 History) (2-1) Credit 2. I. Historic developments from ancient time to present. Required of all majors and minors.

A study of the structure and function of the neuromuscular system and its relation to the principles of human motion.

333. Physical Education Program in Elementary School (PE Elementary Program) (3-0) Credit 3. Study of innovations in elementary schools and their implications for physical education; age characteristics; planning of activity programs, techniques of teaching activities for elementary grades.

362. (Women) Coaching and Officiating. (1-1) Credit 2. Theory and practices of coaching and officiating basketball, volleyball, softball, track and field, and tennis.

*382. (Men) Coaching and Officiating. (1-1) Credit 2. Theory and practices of coaching and officiating basketball, football, baseball, volleyball, and tennis.

383. Methods and Materials in Physical Education. (PE 383 High School Methods) (3-0) Credit 3. II. Organization and classification of activities, play areas, equipment and supplies; each student will be expected to teach activity and classes in physical education, and to evaluate methods of teaching physical education activities. Required of all majors and minors.

*402. First Aid. (PE 402 First Aid) (2-0) Credit 2. I and II. Techniques of first aid to the injured in home, school and community; safety measures and accident prevention. Course meets requirements for American Red Cross certificate.

*423. Safety Education. (PE Safety) (3-0) Credit 3. II. The general program of safety education in public schools is presented with special reference to the selection and organization of materials including the methods and techniques of instruction.

433. Tests and Measurements in Health and Physical Education. Credit 3. Current practices in the organization and administration of testing, evaluation and grading in health and physical education in reference to knowledge, skills, attitudes, behavior patterns and statistical procedures.


462. Corrective Physical Education. (PE 462 Corrective) (1-2) Credit 2. II. Selection and adaption of activities for corrective procedures, methods of examining and determining individual needs, activities, programs of both a formal and informal nature. Prerequisites Anatomy and Physiology.

483. Organization and Administration of Physical Education. (PE 483 Organization) (3-0) Credit 3. II. Policies in the organization, management, and supervision of the physical program. Required of all majors and minors.

Suggested Electives:

303. Driver Education and Safety. (DE Driver Education I) (1-6) Credit 3. I, II. Preparation for teaching driver education in work shops or secondary schools; state laws and regulations, safety practice, teaching methods; practice in training driving and using a dual control car.

403. Playground and Community Recreation. (PE 403 Recreation) (3-0) Credit 3. I and II. A brief historical review of the growth of the play movement; organization and community activities.

*Electives
HEALTH EDUCATION COURSES

Fds. 123. Elementary Nutrition. (See Department of Home Economics for description.) Required of all minors in Health Education.


333. Methods and Materials in Health Education. (HIEd 333) (HIt Methods) 3-0) Credit 3. The Sources of Material and techniques in the field. Required of all majors and minors.

353. Public School and Community Hygiene. (HIEd 353 Cmty Hygiene) (3-0) Credit 3. I and II. Health problems related to the school and community.

392. Principles of Health Education. (HIEd 392 Principles) (2-0) Credit 2. I. Programs now in operation; evaluation in terms of various hygiene and scientific criteria.

Practice Courses in Health and Physical Education

Only one freshman or sophomore practice course may be selected each semester, except in case of a repeat due to failure.

111W. Freshman Practice for Women. (PE 111W) (0-2) Credit 1. (Beginning Swimming) To equip the individual with basic water safety skills and knowledge in order to make him (her) reasonably safe while in, on or about the water.

121W. Freshman Practice for Women. (PE 121W) (2-0) Credit 1. Theory and techniques of physical conditioning, body mechanics, and badminton.

111M. Freshman Practice for Men. (PE 111M) (0-2) Credit 1. Theory and techniques of, and resistive exercises, body mechanics, and badminton.

121M. Freshmen Practice for Men. (PE 121M) (0-2) Credit 1. (Beginning Swimming) To equip the individual with basic water safety skills and knowledge in order to make him reasonably safe while in, on, or about the water.

*132 or 142 Individual Sports (PE 132 or 142) (0-2) Credit 2. Theory and techniques of tennis, golf, archery, shuffleboard and table tennis.

151. Elementary Gymnastics. (PE 151 Elem Gymnastics) (1-2) Credit 1. I Theory and practice in gymnastics (tumbling, stunts, and self-testing.)


171. Elementary Modern Dance. (PE 171 Elem Modern Dance) (1-2) Credit 1. I and II. Fundamental steps designed for beginners.

181. Intermediate Modern Dance. (PE 181 Interm Modern Dance) (1-2) Credit 1. I and II. Free and natural movements; self expression through original and creative dance patterns. Prerequisite Elementary Modern Dance 171.

211W. Sophomore Practice for Women. (PE 211W) (0-2) Credit 1. Theory and practice of speed ball, square and folk dance, and volleyball.

221W. Sophomore Practice for Women. (PE 221W) (0-2) Credit 1. Theory and techniques of basketball, softball, track and field.

*Electives
211M. Sophomore Practice for Men. (PE 211M) (0-2) Credit 1. Theory and techniques of touch football, basketball and speed ball.

221M. Sophomore Practice for Men. (PE 221M) (0-2) Credit 1. Theory and techniques of softball, volleyball, track and field.

241 or 251. Intermediate Swimming. (PE Interm Swimming) (0-3) Credit 1. To provide the student with the opportunity to learn the elements of good swimming. Course content: Flutter kick on front and back, scissor kick, breast stroke, kick-side stroke (arms), breast stroke (arms), elementary back stroke, American crawl, treading water, underwater swimming. Prerequisite 111, 121, Swimming or equivalent.

*252. Intramural Sports. (PE 252 Intramural) (1-1) Credit 2. I. Methods of organizing and conducting tournaments, meets and field days; organization and administration of the intramural program in high school.

*361. Intermediate Folk Dance. (PE Interm Folk Dance) (0-3) Credit 1. Instruction and practice in folk dance requiring intermediate skills. Prerequisite Physical Education 211W.

391. Advanced Swimming. (PE 391 Adv Swimming) (0-2) Credit 1. This course will provide the individual with additional strokes: 1. elementary back stroke, 2. breast stroke, 3. inverted breast stroke, 4. side stroke, 5. over-arm side stroke, 6. Trudgen stroke, 7. back crawl, 8. American crawl, 9. Trudgen crawl stroke. Prerequisite 241 or 151 or its equivalent.

402. Senior Life Saving. (PE Life Saving) (0-4) Credit 2. This course will provide the individual with the knowledge and skills designed to save his life or the life of another in the event of an emergency. It will include the following: 1. Elementary forms of reserve, 2. Fundamental swimming skills for lifesaving, 3. Recovery of a submerged victim, 4. Defense and release. Prerequisite 391 or its equivalent.


*443. Rhythms and Games for Elementary School Teaching. (PE 443 Rhythms and Games) (1-2) Credit 3. Designed to provide the opportunity and experiences necessary to organize and administer an acceptable program of physical education for respective grade levels.

*481. Advanced Modern Dance. (PE 481 Modern Dance) (1-2) Credit 1. Theory and practice in the advanced techniques of modern dance movements, choreography and production of dance recitals. Prerequisite Physical Education 171, 198 or skills comparable to those obtained in these courses.

*452. Water Safety Instructor. (PE 452 Water Safety) (0-3) Credit 2. In this course the individual becomes familiar with techniques of teaching and supervising swimming. Prerequisite 402.

Restricted Physical Education
Activities adapted to the needs of students who cannot, because of disabilities, enroll in a regular physical education activity class. Written recommendation of the University physician is required.

131. Restricted (PE 131) (0-2) Credit 1. (Adapted to individual need and capacity). Theory and practice of body mechanics, techniques of relaxation, paddle tennis, checkers, calisthenics and health films.

321. Restricted (PE 231) (0-2) Credit 1. (Adapted to individual need and capacity.) Theory and practice of training habits for good posture, table tennis, rope jumping, goal shooting, beginners and intermediate card games, walking, and calisthenics. Prerequisite: Restricted 131.
331. Restricted (PE 331) (0-2) Credit 1. (Adapted to individual need and capacity). Theory and practice of physical fitness techniques, shuffleboard, horse shoes, dance, volleyball, health and safety films, and calisthenics. Prerequisite: Restricted 231.

431. Restricted (PE 431) (0-2) Credit 1. (Adapted to individual need and capacity). Theory and practice of adaptive corrective exercises, archery, badminton, arts & crafts, musical games, calisthenics, exercises, and advanced card games or dominoes, isometric exercises. Prerequisite: Restricted 331.

RECREATION

103. Introduction to Recreation. (Rec. 103 Intro to Rec) Credit 3. Study of the nature, scope, and significance of leisure and recreation. Emphasis is placed upon factors involved in the operation of basic recreation units, major program areas, and the inter-relationship of special agencies and institutions which serve the basic recreation needs for society.

212. Recreation Leadership. (Rec 212 Rec Leadership) Credit 2. Leadership types, theories, and principles and techniques of program activities. Includes the organization of competition, intramurals and playground activities.

313. Program Planning and Organization. (Rec 313 Prog Plan and Org) Credit 3. Study of essential elements of basic principles involved in the organization, supervision, promotion, and evaluation of various types of recreation programs.

332. Social Recreation. (Rec. 332 Soc Rec) Credit 2. Methods and materials for planning, organizing, and conducting social activities for groups of various sizes and ages in a variety of social situations.

343. Camp Leadership. (Rec 343 Camp Leadership) Credit 3. Orientation to the role of the camp counselor, the part that camp life has and can play in life, camp crafts, wood crafts, overnight trips, cook crafts, and orienteering. The student will participate in on three day hike.

423. Field Work in Recreation. (Rec 423 Field Work) Credit 3. Directed observation and supervised field work in a professional setting. Emphasis on administration, supervision, and program leadership in public or voluntary agencies, hospitals, or institutions, industrial or commercial recreation agencies.
The Department offers the Bachelor of Arts Degree with a major in History. The history curricula are designed to develop an understanding of historical manifestation, historical methods, historical literature, historiography, and the scientific spirit in history. The degree has the following options:

A. Liberal Arts Option: This program is designed for the student who does not wish to teach at the public school level. The objective of this program is to prepare the student for professional school and/or those allied occupational goals to which history makes a significant contribution.

B. Teacher Education Option I: This program is designed for the student whose occupational objective is public school teaching. The program presents History as a teaching field under Plan I for provisional certification and is approved by the Texas Education Agency. One so prepared may teach in Texas high schools from grades 7 through 12.

C. Teacher Education Option II. The emphasis of this program is the Social Studies and is designed to obtain provisional certification under Plan II. The core discipline of this program is history and its occupational objective is secondary school instruction. This program is certified by the Texas Education Agency.

The minor program in the liberal arts is designed for the student interested in the field of history as an adjunct to his general liberal arts or humanities studies arising out of either pre-professional or general avocational objectives.

OBJECTIVES OF DEPARTMENT

1. To offer and integrate courses which will take the students on all levels to most of the phases of modern historical developments.

2. To work toward the acquisition of an adequate staff to carry out the programs of instruction entailed in the first objective.

3. To build a critical and discriminating library collection as a means of acquainting the student with the basic achievement of man, with the conquest of nature through science, with the major resources of intellectual and aesthetic enjoyment, and with the evolution of loyalties and values necessary to civilized human existence.

4. To prepare the student for independent, self-directed learning as an evidence of his growing intellectual and spiritual maturity and responsibility.

5. To widen the participation and contact of faculty and students of the department in the activities of the professional and critical related learning societies in the region and the nation so that there will be a constant enrichment of the learning experiences of the student and so that faculty and students will appreciate the obligation of contributing to the total growth of the sum of knowledge.

6. To use the experiences in the instructional program of the department as a basis of improving, with the aid of interested parties in the state, instruction and interest in history and the other social sciences in the elementary and secondary schools of the state.
7. To encourage within the departments with which we are associated, and throughout the college generally, an understanding of the importance of knowing the past and the possibilities of using that knowledge in the solution of present and future problems.

DEPARTMENTAL CLUB

The History Club, open to all majors and other interested persons, provides non-classroom activities related to the study of history.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN HISTORY

(Liberal Arts Option)


MINOR: A minimum of 18 semester hours in history is required. The department specifically requires that twelve hours consist of History 143, 153, 213, and 223. The remaining 6 hours may be selected from the three advance course options herein listed. Social Science Minor: The History Department cooperates with the other social science areas in offering an integrated social science minor. The program's emphasis is interdisciplinary and is designed to provide a basic functional knowledge of the ideas and interrelationship of the social disciplines.

The Integrated Social Science Minor consists of the following 21 hours:

- History 143 or 153
- Geography 163
- Economics 213, 223
- Sociology 343
- Political Science 213, 383

REQUIREMENTS OF SCHOOL OF ARTS AND SCIENCES FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN HISTORY 12 Semester Hours

12 hours of one foreign language

REQUIREMENTS OF THE COLLEGE FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN HISTORY 39-47 Semester Hours

- English 113, 123, 213, 223
- Math 113, 123 or 173, 183
- College Science 113, 123
- Political Science 113, 123
- Social Science 113
- Nursing 111, 121
- Phy. Educ. 111, 121, 211, 221, or equivalents in restricted phy. Educ.
- Military Science or Naval Science (Men)

A minimum of 120 hours excluding Military Science and Naval Science is required for graduation with the Bachelor of Arts Degree with a major in history.
### Academic Specialization Courses For Undergraduate Programs In History

**Contemporary World Option:**
- History 353  3
- History 473  3
- History 373  3
- History 433  3
- History 453  3

**American Option:**
- History 323  3
- History 333  3
- History 433  3
- History 453  3
- History 463  3

**European Option:**
- History 103  3
- History 113-123  6
- History 303  3
- History 353  3

Related courses may be chosen from such allied fields as Political Science, Geography, Economics, Sociology, English, or as the advisor may direct. A suggested list of courses which would strengthen the major program is given below:

- 213 Political Parties
- 313 Modern Political Theory
- 323 Comparative Government
- 273 Principles of Human Geography
- 313 World Regional Geography
- 213 Principles of Economics
- 223 Economic Problems
- 463 Modern Economic Thought
- 263 General Sociology
- 303 The Family
- 343 Modern Social Problems
- 372 Social Stratification in American Society
- 233 English Literature
- 343 American Literature
- 453 Medieval Literature

In the interest of maintaining proper academic standards, all freshmen and sophomores in the History Department must maintain at least an accumulative grade average of “C”; Juniors and Seniors, accumulative grade average of “B” or better.

### CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN HISTORY

(Liberal Arts Option)

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SPECIAL AND REQUIRED COURSES

313. American Historiography. (Hist 313 Amer Histrns) (3-0) Credit 3. Survey of the writing of American History with emphasis on the social-intellectual Motivation and Historical Theory. Representative historical literature of the following periods will be examined: Colonial and Revolutionary; The “Middle Period,” Literary and Romantic; Modern and Contemporary. Lectures, discussions, independent study, and special reports. Prerequisite: Junior status.

363. Historical Methods. (Hist 363 Histl Meth) (3-0) Credit 3. II. Historical theory and techniques, with emphasis upon their relationship to the allied social sciences are developed in the following areas: The Field of History, Choice of Subjects for investigation, The Tools of investigation (bibliographies, indexes, guides—government and private), Collection and Criticism of Data, Historical Composition. Required of all majors. (Prerequisite: Junior Standing.)

373. Problems In Latin American History. (Hist 373 Latin Amer) (3-0) Credit 3. I. Seminar. Special problems in specific time areas. Advanced junior or senior status. Special research reports.

383. (Education 333) Methods of Teaching History and Other Social Studies in Secondary Schools. (Hist 383 HS Methods) (3-0) Credit 3. The nature of the Social Studies; the development and changing emphasis in current social studies programs; purposes and values; classroom methods and materials. Lectures, projects, readings, tests and laboratory experiences; offered both semesters yearly, junior standing or above; required of all majors and minors seeking teacher certification.

402. Historical Investigative Paper. (Hist 402 Inves Paper) (2-0) Credit 2. II. Open to advanced Juniors and Seniors. Required of all majors in History for graduation credit; allowed upon satisfactory completion of proposed study agreed upon in consultation with advisor.

473. History of the Far East. (Hist 473 Far East) (3-0) Credit 3. The course emphasis is distributed as follows: The Culture of The Far East, which consists of a survey of China and her offshoots; Japan, and the area of Southeast Asia; The Response to the West, which is designed to show how colonialism engendered a nationalism in China, Japan, Southeast Asia (with some attention paid to the special problems of Russia in the area); The Far East in World Conflict, which is designed to afford an examination of the impact of Contemporary Democracy, Fascism and Communism upon the emergence of China, Japan, and Southeast Asia either as world powers or world problems. Lectures, discussions, special reports, tests. Prerequisite: Upper college status.
DEPARTMENT OF LIBRARY SERVICE EDUCATION

Frank Francis, Jr., Head
1971-72 Faculty
Harriette Bridges, Marie Clem, Marian Henry, Frances Moore, Terry Vanderplas, Dorothy Wilson, Helen Yeh.

The Department of Library Service Education offers one degree program, The Bachelor of Science in Education with a major in Library Service. Two options are available to students.

A. Liberal Arts Option: This option is designed for the student interested in beginning positions in public, college, and special libraries and/or for the student whose concern is that of graduate work in a professional school of Library Science.

B. Teacher Education Option: This option is designed for the student whose interest is in qualifying as a school librarian. This option is approved by the Texas Education Agency. CERTIFICATION IN LIBRARY SERVICE IS A SPECIAL ENDORSEMENT, ELIGIBILITY FOR WHICH REQUIRES THAT THE STUDENT MEET CERTIFICATION REQUIREMENTS OF ONE OF THE FOLLOWING PLANS: Plan I, Plan II.

A minor is offered by the Department.

OBJECTIVES OF THE DEPARTMENT

To prepare school librarians and teacher-librarians for the public schools of Texas in keeping with the accrediting standards of the State.

To lay the foundation for graduate work in library science and to encourage capable students toward that goal.

To prepare students for beginning positions in public, college and special libraries.

To acquaint future teachers and future school administrative officials with the need for and the function of school libraries in modern education.

To inspire students to develop an appreciation for the value of books and non-book materials as sources of information, culture, and recreation.

The Department of Library Science sponsors a library science club which is designed, 1) to promote subject matter excellence among the majors and minors of the department through the sharing of information on library science course content and on various innovations introduced into the profession; 2) to encourage personal and cultural growth and development as a basic need of each member of the club and as members participating in the sponsored activities of a college-wide program; 3) to provide advisory service for students of the department who find themselves in academic difficulty; 4) to foster wholesome social activities for the members of the club; and, 5) to encourage students to contribute their talent and skills toward promoting programs for the community children in the Children's Library Room of the W. R. Banks Library.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN EDUCATION WITH A MAJOR IN LIBRARY SERVICE

27 Semester Hours

MAJOR: A minimum of 24 semester hours of library service courses, including 213, 223, 313, 323, 333, and 343
Business Education 132

MINOR: A minimum of 18 semester hours of library service courses including 213, 223, 313, 323, 333, and 343
SCHOOL OF ARTS AND SCIENCES

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN EDUCATION WITH A MAJOR IN LIBRARY SERVICE

12 Semester Hours

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN EDUCATION WITH A MAJOR IN LIBRARY SERVICE

45-53 Semester Hours

English 113, 123, 213, 223 12
Social Science Elective 3
Natural Science 6
Mathematics 6
American Government 113, 123 6
American History 173, 183 6
Physical Education 111, 121, 211 221 or equivalent in restricted Phy. Educ. 4
Nursing 111, 121 2
Military Science (men) 112, 122, 212, 222 8
or Naval Science (men) 153, 233, 243 9

A minimum of 120 hours, excluding military science 112, 122, 212, 222 or Naval Science 153, 233, 243 is required for graduation with the Bachelor of Science Degree in Education with a major in library service.

REQUIREMENTS FOR CERTIFICATION

Certification as a school librarian is a special endorsement. The student must complete certification requirements of either a Plan I Program or a Plan II Program. For specifics see Certificate Programs in the Teacher Education section of the catalogue.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN EDUCATION WITH A MAJOR IN LIBRARY SERVICE

(Liberal Arts Option)

FIRST YEAR

1st 2nd

English 113-123 113-123
History 173-183 173-183
Mathematics or Mathematics 113-123 113-123
College Science 115-123 115-123
Nursing 111-121 111-121
Physical Education Military Science (Men) 112-122 112-122
or Naval Science (Men) 153 153

SECOND YEAR

1st 2nd

English 213-223 213-223
Library Service 213-223 213-223
Foreign Language 213-223 213-223
Political Science 113-123 113-123
Business Education 132- 132-
Sociology -123 -123
Physical Education 211-221 211-221
Military Science (Men) 212-222 212-222
or Naval Science (Men) 233-243 233-243

THIRD YEAR

1st 2nd

Library Service 333-313 333-313
Library Service 363-323 363-323
Electives (Minor) 10- 9 10-

FOURTH YEAR

1st 2nd

Library Service 383-343 383-343
Electives and Minor 12- 12 12-

DESCRIPTION OF COURSES

LIBRARY SERVICE-EDUCATION

213. The Library in the School. (LbSc 213 Sch Libr) (3-0) Credit 3. I Introduction to libraries and librarianship; rise and growth of the school library and its role in the school program; library services to students and teachers; instruction and practical experiences in use of the library.

223. Children’s Literature and Non-Book Materials. (LbSc 223 Child Litr) (3-0) Credit 3. II. Survey of children’s books and related materials, illustrators, and publishers. Emphasizes reading interests of children, types and development of the literature, methods and materials used to stimulate their reading interest.
313. Administration of School Libraries. (LbSc 313 Libr) (3-0) Credit 3. I. Library service as related to the school's objectives and programs; selection and acquisition of library materials; organization and administration of libraries and library service; professional aspects of librarianship.

323. Cataloging and Classification. (LbSc 323 Cataloging) (3-0) Credit 3. II. Cataloging and classification of school library materials; according procedures. Prerequisite: L. S. Ed. 313.

333. School Library Reference Materials and Tools. (LbSc 333 References) (3-0) Credit 3. II. Various types of school reference materials and tools; reference methods and techniques of reference services; organization for reference services.

343. Experience Work in Library Methods. (LbSc 343 Libr Methods) (3-0) Credit 3. I, II. Prerequisite: All theory courses.


383. Selection of Library Materials. (LbSc 383 Selection) (3-0) Credit 3. I. Study and evaluation of books, periodicals, and other library materials selected for the school library; use and care of non-book materials; principles of selection; book reviewing; publishers and publishing.
DEPARTMENT OF MATHEMATICS

A. D. Stewart, Head

1971-72 Faculty

The Department of Mathematics offers the Bachelor of Science Degree with a Major in Mathematics. The student may choose one of three available options.

A. Teacher Education Option: This program is designed for the student who is interested in teaching mathematics. The curriculum is approved by the Texas Education Agency under Plan I, which certifies one for teaching mathematics in Texas High Schools, grades 7 through 12. Under Plan I, one is required to have two teaching fields.

B. Computer Science Option: This program is designed for the student who is preparing for a career in industry and government in positions in which the job description requires a background in computer science.

C. Pure Mathematics: This program is designed for the student who is planning to pursue graduate study or who is interested in employment in which competence is required.

A minor is offered in each of the three options.

OBJECTIVES OF THE DEPARTMENT
The objectives of the Department of Mathematics are (1) to assist students in developing the orderliness of thought and precision of expression universally found in mathematics; (2) to serve the mathematical needs of other schools and departments of the college; (3) to prepare prospective teachers of mathematics; (4) to train professional mathematicians for careers in private industry and governmental agencies.

HONOR SOCIETY AND CLUB
Pi Mu Epsilon, the National Honorary Society for mathematics has a chapter on the college campus. (A) all sophomores who are honor students with a grade point average of 4.00 in mathematics (must include at least two courses in calculus); (B) all juniors and seniors with a grade point average of 3.00 or higher in mathematics and a general scholastic average of 2.80 or higher and (C) all graduate students in the Department of Mathematics are eligible for membership. The Mathematics Club is open to all majors and minors in the department and to any student who has an interest in mathematics.

ADMISSION AND ACADEMIC STANDARDS FOR STUDENTS PURSUING A BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN MATHEMATICS
A prospective mathematics major should satisfy the following:
1. Graduate from an accredited high school
2. Stand in the upperhalf of his graduating class
3. High school transcript should show only A's and B's in mathematics
4. Demonstrate good moral, physical and mental health
5. Should possess a basic background in algebra, geometry, and trigonometry

Academic Expectation
Mathematics majors are expected to maintain high standards of academic achievement. All mathematics courses for majors and minors must be taken in the proper sequence, with at least a grade of C. Only grades of C and above can be counted toward either a major or a minor in mathematics.
All mathematics majors are given a mathematics placement test. (The same applies to minors). Students are placed according to scores attained on the placement test. Those students who score exceptionally high are encouraged to take the Advanced Standing Examinations.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN MATHEMATICS
(Pure Mathematics or Computer Science Option)

MAJOR: Basic background: Each option assumes the elementary calculus sequence—Mathematics 125, 214, 224, (or its equivalent). Additional requirements are as follows:

Option II—A. (27-39) hours of upper division mathematics or (300-400) level
B. Mathematics 313, 413, 453, 483, and 493 27 hrs.

Option III—A. (27-30) hours of upper division mathematics or (300-400) level
B. Mathematics 143, 323, 373, 413, and 414 27 hrs.

MINOR: A minor in mathematics includes the elementary calculus sequence—Mathematics 125, 214, 224, and 9 semester hours of upper division mathematics or (300-400) level. In addition, Mathematics 353 (Methods) is required in the teaching program.

REQUIREMENTS OF THE SCHOOL OF ARTS AND SCIENCES FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN MATHEMATICS
12 hours of one foreign language 12 hrs.

REQUIREMENTS OF THE COLLEGE FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN MATHEMATICS 39 or 47 hrs.

English 113, 123, 213, 223
Natural Science (any sequence)
  College Science 113, 123
  Biology 115 or 125
  Chemistry 115 or 125
  Physics 115 or 125
History 173-183 or equivalents
Political Science 113, 123
Social Science (any one)
  Home Economics 123
  Social Science 113
  Sociology 123
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in Restricted Physical Education
Military Science (Men) 112, 122, 212, 222
or Naval Science (Men) 153, 233, 243
A minimum of 120 hours, excluding military science 112, 122, 212, 222, or Naval Science 153, 233, 243 is required for graduation with the B.S. Degree with a major in mathematics.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN MATHEMATICS
(Teacher Education Option)
Mathematics majors who plan to teach mathematics should follow the Teacher's Certification Program which is a Plan II Program, approved by the Texas Education Agency, and which makes one eligible for certification as a teacher in mathematics, grades 7 through 12. For specifics see Certificate Programs in the Teacher Education section of the catalogue.
## Option II—Pure Mathematics

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### THIRD YEAR

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## Option III—Computer Science

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<td>or Naval Science</td>
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## DESCRIPTION OF COURSES

### MATHEMATICS

113. **College Algebra.** (Math 113 Algebra) (3-0) Credit 3. I or II. The theory of quadratic equations, systems of equations, logarithms, exponential and logarithmic equations, binomial theorem, progressions, permutations, combinations, and probability.

123. **Trigonometry.** (Math 123 Trigonometry) (3-0) Credit 3. I, II. Trigonometry functions; radians, logarithms; solutions of triangles; functions of composite angles; identities; trigonometric equations. Prerequisite: Math 113.

162. **Introduction of Computational Processes.** (Math 162 Comput Proc) (2-0) Credit 2. History of calculating machines and methods of computing; the abacus, tables, and formulas, the slide rule, desk calculators, digital computers, application of these machines to trigonometry, logarithms, roots and powers, correlations, evaluation of statistical formulas, business and other arithmetic processes; description of basic digital computers, methods of writing programs for computers, in particular the 1401 computer.

173-183. **General College Mathematics.** (Math 173-183 Applied) (3-0) Credit 3. I and II. Graphical methods, simple equations; exponents and radicals, logarithms, progressions, interest and annuities, numerical trigonometry. Especially designed for those students majoring in fields other than mathematics, the physical sciences, the natural sciences, and engineering.

115. **College Algebra and Trigonometry.** (Math 115 Algebra Trig) (5-0) Credit 5. I. A basic course in mathematics for engineering students, including algebra and trigonometry. Topics included are: linear, quadratic and higher
degree polynomial functions and identities. Combinatorial formulas probability, determinants and systems of linear equations, inverse trigonometric functions, trigonometric equations.

153-163. Technical Mathematics I and II Calculus. (Math 153-163 Tech. Math) (3-0) Credit 3. Algebraic equations, curves of algebraic equations, conic sections, calculus of the straight line, velocity areas; curve sketching, integration of algebraic and trigonometric functions; transcendental functions; and applications.

125, 214, 224. Calculus. (Math 124-214-224 Cal) (5, 4-0) Credit 5. I; Credit 4. II and III. Basic ideas and properties of analytic geometry, polynomial, calculus, general methods of computation and application of the derivative methods of integration, partial derivatives, multiple integration, sequences and series; application: maxima, minima, rates, areas and volumes, etc.

213. Analytical Geometry. (Honors Course) (Math 213 Analyt Geom) (3-0) Credit 3. Elementary logic and sets; conic sections, matrices and linear transformations in 2 and 3 dimensions, parametric and polar representation, functions and limits. Prerequisite: Consent of instructor.

263. Structure of the Number System. (Math 263 Structure) (3-0) Credit 3. The language and nature of deductive reasoning; elements of Set Theory; whole numbers; number lines; rational numbers; numeration system; number patterns; number bases.

273. Fundamentals of Algebra. (Math 273 Fund Algebra) (3-0) Credit 3. Properties of real numbers; linear equations; system of equations; quadratic equations; inequalities; graphs; functions; problem solving; complex numbers.

283. Informal Geometry. (Math 283 Inf Geometry) (3-0) Credit 3. Experimental and informal geometry; sets; points; linear planes and space; elementary theorems and proofs; construction and measurements of angles and segments; length; areas; volumes; congruencies.

313. Introduction to Modern Abstract Algebra. (Math 313 Mod Alg) (3-0) Credit 3. Real numbers, modular arithmetic, integral domain, groups, fields, rings, polynomials. Prerequisite: Mathematics 214.

401. Mathematics Colloquium. (Math 401 Colloquium) (1-0) Credit 1. Detailed reports on selected high level topics in both theoretical and applied mathematics; students majoring in the departments are required to report on at least one topic of a moderate degree of difficulty as a demonstration of their resourcefulness, ability and achievement in the field of mathematics. Required of all majors in the mathematics department. 2 years.
403-443. Independent Study. (Math 403-443 Analysis and Diff Eq) (3-0) Credit 3. These courses are designed to encourage and permit those students who are able and willing to pursue advanced topics in mathematics with little or no assistance from the staff. Prerequisites: Consent of the instructor; at least four courses in the mathematics sequence with at least a 3.0 average in these courses and not less than a 2.0 academic average.

412-422. Undergraduate Research. (Math 412-422 Undergrad, Res) (2-0) Credit 2. I and II. This course is designed to introduce the advanced mathematics students to mathematics literature and techniques of mathematics research. The results may be published as an investigative paper or in a mathematics journal. Prerequisites: Consent of instructor.


453. Foundations of Mathematics. (Math 453 Foundations) (3-0) Credit 3. Basic ideas and operation with sets; elementary notions of Topology; Topological properties related to the linear continuum. Prerequisite: Math 214 and consent of instructor.

473. Advanced Mathematics for Engineers. (Math 473 Engr Math.) (3-0) Credit 3. Matrices; determinants; power series; Fourier series; LaPlace transforms; system of ordinary differential equations; applications LaPlace transforms to partial differential equations; applications to mechanized networks; electrical networks; heat flow. Prerequisite: Math 413 and 423.


COMPUTER SCIENCE


233. Introduction to Discrete Structures. (Math 233 Discrete Struct) (3-0) Credit 3. Review of set algebra including mapping and relations. Algebraic structures including semigroups and groups. Element of the theory of directed and indirected graphs. Boolean algebra and propositional logic. Applications of these structures to various areas of computer science. Prerequisite: C. Sc. 113.


363. Systems Programming. (Math 363 System Prog) (3-0) Credit 3. Review of both process systems programs, their components, operation characteristics, user services and their limitations. Implementation techniques for parallel processing of input-output and interrupt handling. Overall structure of multiprogramming systems on multiprocessor hardware configurations. Details on addressing techniques, core management, system accounting, and other user-related services. Traffic control, interprocess communication, design of system modules, and interfaces. System updating, documentation, and operation. Prerequisites: C. Sc. 223, 323 and 333.

383. Compiler Construction. (Math 383 Compiler Con) (3-0) Credit 3. Review of program language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Organization of a compiler including compile-time and run-time, symbol tables, lexical scan, syntax scan, object code optimization techniques, and overall design. Use of compiler writing languages and bootstrapping. Prerequisites: C. Sc. 223 and 323.

393. Switching Theory. (Math 393 Switching Th) (3-0) Credit 3. Switching algebra, gate network analysis and synthesis, Boolean algebra, combination circuit minimization, sequential circuit state minimization, hazards and races and elementary number system and codes. Prerequisites: C. Sc. 213 and 333.

394. Sequential Machines. (Math 394 Seq Mach) (3-0) Credit 3. Definition and representation of finite state automata and sequential machines. Equivalence of state and machines, congruence, reduced machines, and analysis synthesis of machines. Decision problems of finite automata, partitions with the substitution property, generalizes and incomplete machines, semigroups and machines, probabilistic automata, and other topics. Prerequisites: C. Sc. 213 and Math 313.

ENGINEERING MATHEMATICS

115E. Engineering Mathematics—College Algebra and Trigonometry. (Math 115E Alg Trig) (5-0) Credit 5. I. A basic course in mathematics for engineering students, including algebra and an introduction to trigonometry. Topics included are: exponents and radicals; quadratic equations, simultaneous quadratics, inequalities; proportion and variation, binomial theorem, progressions; introduction to the theory of equations; determinants and simultaneous linear equations; permutations, combinations, and probability, trigonometric functions, identities, related angles, radian measure, and graphs.


413E. Engineering Mathematics—Differential Equation. (Math 413E Diff Equations) (3-0) Credit 3. Classification and solutions of homogeneous; exact and general first order differential equations; a thorough study of first order linear equations; second order linear differential equations with constant coefficients; linear differential operators; system of differential equations; applications. Prerequisite: Engineering Mathematics 224E.

473E. Engineering Mathematics—Advanced Mathematics for Engineers. (Math 473E Engr Math) (3-0) Credit 3. Matrices; Determinants; power series; Fourier series; LaPlace transforms, application to systems of ordinary differential equations and partial equations; application to mechanical networks; electrical networks; heat flow. Prerequisite: Engineering Mathematics 413E.

STATISTICS

112. Graphical Methods for the Social Sciences. (Stat 112 Graph. Methods) (2-0) Credit 2. Analysis and interpretation of graphical data related to the social sciences, gathering of data, representation of data by several types of graphs.


123. Elementary Statistics. (Stat 123 Statistics) (3-0) Credit 3. Collection and tabulation of data; bar charts; graphs; sampling average; dispersion; correlation; index number; normal curves; probability; application to various fields. Prerequisite: One semester of College Mathematics.

213. Probability. (Stat 213 Probability) (3-0) Credit 3. Counting problems, probability theory in finite sample spaces, random numbers and their uses, random variables, expectations, means, variances, binomial and normal distribution, random walk problems, point estimation, confidence limits, hypothesis, testing applications of Bayes' theorem, sums of independent random variables, law of large numbers, central limit theorem. Prerequisite: Consent of instructor.

323. Mathematics Probability. (Stat 323 Probability) (3-0) Credit 3. Probability models, derivation in analysis of distributions and distribution functions, such, binomial distribution, chi-distribution, t-distribution, normal distribution, gamma distribution, poisson distribution, f-distribution, etc. Applications. Prerequisite: Stat 313.

413. Statistical Methods for Research. (Stat 413 Stat Res) (3-0) Credit 3. Statistical methods used in research including analysis of variance, analysis of covariance, correlation and regression, multivariate methods and experimental design, the approach is basically on analysis of scientific methods oriented for students in agriculture, natural sciences, economics, education, business, sociology, engineering. Highly recommended for students who plan to do graduate work in these areas. Prerequisite: Consent of the Instructor.
MILITARY SCIENCE

Prairie View A&M College offers two military training programs. Both the Army ROTC Program and the Navy ROTC Program offer the student an opportunity to be commissioned as an officer upon the completion of his undergraduate degree program. The student desiring a commission is required to enroll in a regular degree granting program at The College.

ARMY ROTC

Lieutenant Colonel Jiles P. Daniels, Commanding Officer
1972-73 Faculty
   Lieutenant Colonel Wilmer Andrews Jr., Major Lewis Johnson, Major Willie Tempton, Captain Tommy T. Osborne, Captain Wardell Hollis Jr., Captain Ralph Hamilton, Captain Billy McGowan, Captain George Ingersoll, Captain Preston A. Parrott
   No major is offered.

The Army Reserve Officers Training Corps Program (ROTC) provides military leadership instruction in 283 of the nation’s leading colleges and universities. The purpose of the program is to develop selected college-educated men for positions of responsibility as officers in the Active Army of the United States and its reserve components. Also, in conjunction with other college disciplines, it aims to develop those personal qualities essential to success in any chosen field of endeavor as well as to provide basic citizenship training. Except in periods of major emergencies when officers must be provided faster than they can be produced on the college campus, the Army ROTC Program commissions approximately 80 percent of all new lieutenants entering the Active Army.

Under the provisions of the National Defense Acts of 1916 and 1920, as amended, a Senior Division Army Reserve Officers’ Training Corps (ROTC) unit has been established and maintained at this college since September, 1942. Active duty U.S. Army personnel are assigned by the Department of the Army to administer the ROTC Program and to present the prescribed courses of instruction.
ARMY ROTC PROGRAMS

Army ROTC offers a four-year and a two-year program. The four-year program consists of a BASIC COURSE and an ADVANCED COURSE. The BASIC COURSE, normally taken in the Freshman and Sophomore years, provides instruction in basic military subjects, military history, weapons, equipment and leadership techniques. Class time is approximately two hours per week. An additional two hours per week is devoted to a laboratory period of drill and leadership techniques. Two semester hours credit per semester is awarded for successful completion of the basic course. Successful completion of the basic course is a requirement for all undergraduate male students. Exemptions or exceptions to this policy are as outlined in REQUIREMENTS FOR ENROLLMENT following.

The ADVANCED COURSE, normally taken in the Junior and Senior years, is an elective. Only students who have demonstrated a potential for becoming effective officers are selected for this instruction. The instruction includes military techniques, logistics, administration, teaching methods, leadership techniques and the exercise of command. Class time is approximately 4 hours per week. An additional two hours per week is devoted to a laboratory period of drill and leadership techniques. Four semester hours credit per semester is awarded for successful completion of the Advanced Course. Standards for enrollment in the Advanced Course are as outlined in REQUIREMENTS FOR ENROLLMENT, following:

ROTC SCHOLARSHIPS

Four-, three-, and two-year scholarships are available on a competitive basis, to selected students who are strongly motivated toward a career in the Army. The four-year awards are made to outstanding high school graduates. The three- and two-year awards are made to outstanding cadets enrolled in the four-year ROTC program. Each scholarship pays for tuition, books and laboratory expenses, and the student receives $100 per month for the duration of the award, except during the Advanced Course Summer Training Camp at the end of the Junior year. The pay for this period is $265.00 monthly. Only students who participate in the four-year program are eligible.

OBLIGATION AFTER COMMISSIONING

The student who receives a Reserve Commission is required to serve on active duty for two years and four years in a reserve status. Students receiving active duty for training (ADT) will spend 3 months on active duty and 8 years in a reserve status. The recipient of a Regular Army commission must serve, as a minimum, three years on active duty and three years in a reserve status. Graduates who complete the flight training program and who are accepted for Army Aviation Training must serve a minimum of three years in a reserve status upon completion of training.

REQUIREMENTS FOR ENROLLMENT

The Basic Military Science Course must be completed successfully by all physically-qualified undergraduate male students who are U.S. citizens as a requirement for graduation from the college. Several categories of students are exempted from all or part of this requirement. However, students in the exempted categories who desire to participate in the ROTC program may be permitted to enroll under certain special conditions. Categories of exemption are:

a. Former members of U.S. Armed Forces who have served on active military duty for four continuous months or more.

b. Students who will reach their 28th birthday prior to qualifying for appointment as Second Lieutenants.

c. In some cases, students who are members of U.S. Armed Forces Reserve Components.
d. Students who enter the college with advanced standing as second semester Sophomores or higher.

e. Students who are not pursuing a course load of at least fifteen semester hours, unless specifically approved by the Dean of Instruction.

f. Students certified by a doctor to be medically unfit for ROTC and Physical Education courses.

g. Non U.S. Citizens are exempt. Those who desire to enroll in Military Science should secure written permission from their national consulate. They should then apply to the Professor of Military Science for admission.

Enrollment in the Advanced Military Science Course is voluntary, and is generally limited to students who complete the Basic Course successfully and to veterans of the U.S. Armed Forces who were honorably discharged after one or more years of military service. Students admitted to the Advanced Course are selected by the Professor of Military Science, with the concurrence of the College President. In addition, to qualify for selection for Advanced Course enrollment, the student must:

a. Be selected under procedures prescribed by the Secretary of the Army.

b. Enlist in a Reserve Component for a period prescribed by the Secretary of the Army. These students will be called to active duty in their enlisted status only when they have refused to accept a commission or, in circumstances clearly indicating a willful breach of agreement.

c. Contract, with the consent of his parents or guardian if he is under 21 years of age.

d. Agree to accept a commission, if offered, and to serve on active duty for a period prescribed by law, normally 2 years or ADT for 3 months.

e. Have and maintain a minimum academic average of 2.00.

Special programs for nurses and dieticians are also available. Further information can be gained by contacting the PMS or the Deans of the School of Nursing or Home Economics.
UNIFORMS, TEXTBOOKS AND MONETARY ALLOWANCES

Seasonal uniforms, textbooks, and subject reference publications are furnished each student enrolled in the ROTC Program for their use at the college in required ROTC training activities. These are issued without cost to the student, but remain the property of the U.S. Government and must be returned by the student at the close of the regular school session. Each student is responsible for the safeguarding and proper maintenance of this property. He will be required to reimburse the Government for any items of this property which is lost, damaged, or destroyed while in his possession.

Students selected for the ROTC Advanced Course (Junior and Senior years) now receive a monthly monetary allowance which is known as subsistence pay. This allowance is paid at the rate prescribed by the Secretary of the Army. Currently the pay rate is $100.00 per month during the school year and $265.50 (½ monthly base pay for a Second Lieutenant with less than 2 years service) per month for a six-week summer training period, plus transportation costs from his home to and from the summer camp site. Uniforms, meals, and medical care are provided the students by the Government during his attendance at ROTC Summer Camp. The total monetary allowance a student may realize while enrolled in the Advanced Course is over $2,000.00. An additional $300.00 is paid to each commissioned officer as a clothing allowance at the time of entry upon his initial active duty tour. Students enrolled in the Basic Course who indicate an intent to enter the Advanced Course are deferred from Military Service as are Advanced Course students.

TWO-YEAR PROGRAM

The college student is now offered the opportunity to be commissioned a Second Lieutenant in the Army after only two years of college ROTC training. A new Two-Year Program, authorized by the ROTC Vitalization Act of 1964, extends the advantages of ROTC to Junior College graduates and to students in four-year colleges who have not participated in the ROTC program their first two years.

A basic six-week summer training period after the Sophomore year takes the place of the basic course required of students in the additional four-year program.

To qualify for the two-year program, the student must apply for enrollment during his Sophomore year in college or junior college and meet the requirements for selection before attending the basic summer camp training period. These requirements are:

a. Completion of ROTC questionnaire.

b. Attain a qualifying score on the Army Aptitude Test.

c. Meet the minimum medical standards as determined by current Army Regulations. The examination is conducted by the Army Physicians.

d. Selection by a Board of Army Officers.

Detailed information may be obtained from the Professor of Military Science, Department of Military Science, Prairie View A&M College.

ARMY ROTC FLIGHT TRAINING PROGRAM

All Army ROTC Cadets at Prairie View A&M College now have an opportunity to learn to fly while participating in Army ROTC training. The ROTC Flight Instruction Program is offered to students in the second year of the Advanced Course, usually the senior year of college.

Under this program, the Army will pay for flight training for selected ROTC students who have an aptitude for flying and who meet required qualifications.

The student receives a basic introduction to principles of flying in small fixed-wing aircraft. He learns principles of navigation, map and compass reading, take-offs and landings, and will accrue many hours of solo flying.
ROTC flight instruction is given by the Federal Aviation Agency (FAA), the Department of the Army, and Prairie View A&M College.

The program is conducted as an extracurricular activity. Instruction is normally completed in four months, but up to nine months is allowed in special cases. Each student receives 35 hours of actual in-flight instruction. Three additional hours of instruction may be authorized to meet individual needs. Little additional work is required to qualify for a private pilot's license.

To be eligible to enroll in this program, a student must be enrolled in Army ROTC and have completed the first year of the ROTC Advanced Course. An exception may be granted if a student expects to graduate at midterm in his senior year and there is insufficient time to complete the program prior to graduation. In this case only, instruction may begin in the Junior year.

If a student has completed all ROTC training, but has not completed the academic requirements for graduation, he may qualify for flight instruction provided such instruction can be completed prior to his graduation date.

Qualifying requirements for flight instruction are few, but strict: A sufficiently high academic standing and approvals from both the applicant's Dean and the Professor of Military Science. A series of Flight Aptitude Tests and physical examinations must be satisfactorily completed. If under 21 years of age when he enrolls, the student must submit written parental permission to participate.

To apply for the program, one should: (1) Advise the Professor of Military Science of his interest in the program and request an application. Submit the application the semester before instruction begins. (2) Complete the flight aptitude test and physical examination. The flight aptitude test is administered prior to summer camp. The physical examination is administered at Advanced Summer Camp. In special cases, the Professor of Military Science may arrange for the test and physical examination to be given at another time. (3) Complete other administrative processing required by the Professor of Military Science.

Upon entering the ROTC Flight Instruction Program, the student must agree that, upon successful completion of the program and commissioning, he will voluntarily apply for Army Aviation training when ordered to active duty. He must also agree that if he is selected for Army Aviation Training, he will serve on active duty for three years following completion or termination of such training.

If he accepts a Reserve commission, and is accepted for Army Aviation Training, he must finish the basic officer orientation course in his assigned branch before Aviation Training can begin.

If he accepts a Regular Army Commission, he must normally complete required training and duty in his assigned Branch before his Aviation Training application can be processed.

Flight instruction is terminated if a trainee discontinues his enrollment in the ROTC program. Unsuccessful completion of the Flight Program does not, however, relieve a student of the responsibility to complete the regular ROTC program.

Special recognition is given students in the Flight Instruction Program. The Trainee is authorized to wear the half-wing badge from the date of enrollment until he solos. The student who successfully completes the program is authorized to wear the full-wing badge of the ROTC aviator. From solo to completion the student wears a full wing.

The Army pays for all flight instruction, textbooks, navigational equipment, flight clothing, as well as transportation to and from the flying school.

After graduation and completion of the ROTC Flight Program, qualified individuals will enter the Army Aviation Program to train for a rotary or fixed-wing pilot's rating. Later, they may qualify for multi-engine and/or instrument examiners' rating. They will learn the ins-and-outs of flying troop carriers, cargo, and close-support Army Aircraft.
SCHOOL OF ARTS AND SCIENCES

Upon graduation, the ROTC student who also takes flight instruction, will have a degree, the rank of Second Lieutenant, and a head start in the exciting and challenging field of Army Aviation. Earning wings is a valuable "plus" to a commission as an Army Officer. An officer gains important management and executive experience demanded by today's business and professional worlds. A pilot acquires a premium skill that is valuable in either a military or civilian career.

SUMMER CAMP TRAINING

The ROTC Program now includes two six-week summer training periods: One to prepare students for the Advanced Course under the new Two-Year Program and a basic six-weeks of summer camp training which is a part of the Advanced Course. The student in the Two-Year Program attends both.

The "Basic Summer Training" is a new six-week summer training period which provides instruction equivalent to that received by ROTC students in the Basic Course. It takes the place of Military Science I and II which Four-Year Program students normally receive in their Freshman and Sophomore years. It is mandatory for men accepted into the Two-Year commission-granting program and must be successfully completed before they can enter the Advanced Course. In addition, the student receives $115.20 per month for the training and is provided travel pay to and from the training site.

The "Advanced Course summer training" camp provides field training and experience which cannot be duplicated in the classroom or on the college campus. It is, in effect, a laboratory in which the cadet learns what it takes to become an officer and in which experienced ROTC instructors can determine whether or not he has the ability to do so.

Particular emphasis is placed on the development of leadership. Each cadet is provided an opportunity to demonstrate command ability under field conditions. At the same time he is taught the characteristics of the more complicated military weapons as well as basic military tactics. Cadet unit command positions are filled entirely by ROTC cadets who are rotated so that each cadet performs in a maximum number of leadership positions. Cadets plan and conduct tactical exercises, learn to operate weapons, and engage in such activities as land navigation patrolling and physical training.

The Advanced Course summer camp usually is attended between the Junior and Senior years of college, but may be scheduled for attendance after the Senior year.

Postponement of the time of attendance is authorized only under exceptional circumstances, after approval by the Army Commander, based upon the recommendations of the Professor of Military Science.

ARMY ORIENTATION TRAINING

One Cadet from each college who has completed summer camp is selected to observe unit operations on a Military Post for two weeks immediately following Summer Camp. Travel is at Government expense. Pay is $50.00 for this period.

DESCRIPTION OF COURSES

112. Elementary Military Science I. (MS 112 Elementary Military Science) (2-2) Credit 2. A survey of the United States Defense Establishment, with emphasis on the purpose, history, organization, missions, and functions of the U.S. Army. The survey will include a study of the definitions, causes, and nature of war, the principles of war, the changing nature of war, and the evolution of weapons with stress on present-day weapons; a demonstration of the proper care and use of individual weapons through practical exercise; the basic fundamentals of leadership, drill, and exercise of command. Other
subjects presented include a study of the customs, courtesies, and tradition of the service, care and inspection of clothing, military field sanitation, and first aid.

122. Elementary Military Science I. (MS 122 Elementary Military Science) (2-2) Credit 2. A continuation of the survey of the organization and nature of the United States Defense Establishment, with emphasis on the goals, factors, and instruments that influence national power and their implications; the objectives of national security and defense, a study of the general design and flexibility of military organizations to fit specific missions, the role of the office of Secretary of Defense, the other armed services, and unified and specified commands. The basic fundamentals of leadership, drill and exercise of command. Other subjects presented include Basic Map and Aerial Photograph Reading, and the Care and Maintenance of Military Equipment.

212. Elementary Military Science II. (MS 212 Elementary Military Science) (2-2) Credit 2. A survey of American Military History from the origin of the United States Army through 1898, emphasizing an in-depth study of influential leaders as well as the significant deeds, battles, and campaigns, which have most profoundly influenced the evolution and development of the United States Military tactical, strategical and logistical doctrine and principles, development of the Citizens-soldiers concept, and the lessons to be learned from history. A review of Basic Map and Aerial Photograph Reading as well as the basic fundamentals of leadership, drill, and exercise of command are included.

222. Elementary Military Science II. (MS 222 Elementary Military Science) (2-2) Credit 2. A survey of American Military history from 1898 to the present, emphasizing an in-depth study of influential U.S. Military leaders, as well as the significant deeds, battles, and campaigns which have most profoundly influenced the continuing evolution and development of United States strategic, logistical, tactical, doctrine and principles. Contributions of the military to national accomplishments in civic and scientific areas. Includes an introduction to the principles of small unit tactics, operations and communications.

314. Advanced Military Science III. (MS 314) (4-2) Credit 4. A survey of the principles and techniques of leadership and management; the basic qualities of a leader, special problems of military leadership, delegation of authority and responsibility, span of control, planning, coordination, and decision making. The psychological, physiological, and sociological factors which affect human behavior. Instruction will include practice in the application of sound principles of leadership to the problems of platoon leaders and company commanders. A study of military teaching principles to include the fundamentals of educational psychology as they pertain to the five stages of military instruction techniques; planning, methods of instruction, examination, testing, and evaluation of instruction. A brief survey of the fundamental rules of parliamentary and conference procedures. A review of the principles and fundamentals of small unit tactics and communications with emphasis on the employment of the rifle platoon and rifle company and their relation and utilization within the infantry battalion. A brief survey of the means, principles, and techniques of communications to include communication security.

324. Advanced Military Science III. (MS 324) (4-2) Credit 4. A continuing in-depth review and survey of small unit tactics and communications, principles of offensive and defensive combat and their application to the units of the infantry battalion. Means of controlling units, analysis of the principles and nature of Internal Defense/Development with emphasis on counterinsurgency operations and techniques. Pre-summer camp orientation. (See paragraph preceding: SUMMER CAMP TRAINING).

A brief survey of the missions of the various branches in the overall mission of the Army and their functions in support of field forces. Practical application of fundamentals of leadership, drill and exercise of command.
414. Advanced Military Science IV. (MS 414) (4-2) Credit 4. An overview of Army organization and general concept of the teamwork involved in military operations. The Course includes a study of command and staff evolution, organization and functions. The Army division staff is used as a model. It explains the processes for arriving at sound and timely decisions and translating those decisions into plans and combat orders—an explanation of the “estimate of the situation.” The course also includes an in-depth study of the fundamental concepts of military justice encompassing the procedures by which judicial and nonjudicial disciplinary measures are conducted. Emphasis will be placed on areas where military law varies from civil law. Includes general coverage of investigation procedures, rules of evidence, rights of the accused, preparation of charges and conduct of court members during military trials. Includes a survey of the Army readiness program and outlines procedures used to maintain men and material in a state of combat readiness.

424. Advanced Military Science IV. (MS 424) (4-2) Credit 4. An in-depth review of the staff study and processes involved in arriving at sound and timely decisions; Staff Commander and enlisted relationships and typical problems of the junior officer. Individual reports on internal defense/development techniques. The army supply system. Civil affairs problems of the military. Obligations and responsibilities of an officer.

The Military Science Four Year Program for Male Students leading to a commission in THE UNITED STATES ARMY as a Second Lieutenant.

FRESHMAN YEAR (MS I)

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SOPHOMORE YEAR (MS II)

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SENIOR YEAR (MS IV)

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<tr>
<td>Advanced</td>
<td>Advanced</td>
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<tr>
<td>(Optional Elective without course credit):</td>
<td>ARMY ROTC FLIGHT TRAINING PROGRAM*</td>
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*See Army ROTC Description of Courses
Commander Reeves R. Taylor, USN
1972-73 Faculty
Lieutenant Commander Donald O. Burrell, Captain Henry L. Reed, Lieutenant Ronald J. Abler, Lieutenant Donald J. Scott, Lieutenant Junior Grade Lee E. Henderson, Lieutenant Junior Grade Charles S. Black

Background

The Naval Reserve Officers Training Corps was first established in 1926 to offer qualified college students the necessary Naval Science courses to gain commissions in the U.S. Naval Reserve. Prior to World War II, it expanded even further. Following the war in 1946, the famous Holloway Plan was instituted, which resulted in NROTC Units in 52 colleges and Universities. The Prairie View NROTC Unit, which was established on 19 May 1968, is the first new unit to be established in 22 years, and the first at a predominantly Negro college.

Mission

The mission of the Naval Reserve Officers Training Corps is to provide qualified officers for the Navy and Marine Corps. This is accomplished at NROTC colleges through instruction and training in required naval subjects.

In fulfilling its mission, the Prairie View NROTC Unit conducts three voluntary programs:

1. Regular NROTC

Regular NROTC students are selected annually through nationwide competitive examination, interviews and reviews of high school and other records.
Those selected are appointed Midshipmen, U. S. Naval Reserve, and receive benefits during the entire 4 years of school which include tuition, regular fees, uniforms, books, and a monthly subsistence pay of $50.00 per month. Upon graduation, they receive commissions as regular officers in the Navy or Marine Corps.

2. Contract NROTC

Contract NROTC students are selected by the Commanding Officer, Prairie View, from freshman students enrolled at the college who apply for the program. Contract students are also referred to as Midshipmen although they do not actually hold such appointments. They receive uniforms, Naval Science textbooks, and during their third and fourth years, they receive a monthly subsistence pay of $50.00 per month. Upon graduation they are commissioned in the U. S. Naval Reserve or the Marine Corps Reserve.

3. Naval Science Student

Naval Science Students are selected by the Commanding Officer, Prairie View, from freshman students enrolled at the college who apply for the program. Students selected will participate in all NROTC evolutions for a two year period in fulfillment of their college two year basic military science requirement. This program does not obligate the student to military service upon graduation, however, a Naval Science Student may apply for transfer to the Contract NROTC Program at any time during the two year period.

Flight Indoctrination Program

NROTC students who qualify may volunteer to participate in the Flight Indoctrination Program (FIP) during their third and fourth years. This program consists of 70 hours of instruction (half ground training and half actual flight instruction) to be conducted at the Prairie View flying field. All expenses are borne by the Navy. This program is designed for those who desire to become Naval or Marine aviators.

Deferment

Students enrolled in the NROTC program will be granted deferment for military service. This deferment will continue as long as the student remains in good standing in the unit.

Note

All citizens of the United States, whether or not members of the unit, are eligible to enroll in all courses except Naval Science 213 which includes information normally restricted to Naval personnel.

Required College Courses

In addition to the courses offered by the Department of Naval Science, those male students who enter the NROTC Program must complete certain English, Mathematics and Science courses to be eligible for a commission. The NROTC staff will outline course requirements upon application.

NAVAL SCIENCE DEPARTMENT


233. American Military Affairs. (NS 233 Affairs) (3-2) Credit 3. I. An introductory survey of military affairs in the United States from the American Revolution to the present. Using as a framework the American military experience, chronologically arranged, it describes the transformation from the limited wars of the Eighteenth Century to the total wars of this century, and the brushfire wars of the late two decades.
243. National Security Policy. (NS 243 Security) (3-2) Credit 3. II. Course deals with the formulation and implementation of American security policy. American military history is analyzed briefly to determine the factory bearing on the development of the defense structure of the United States. The method formulation of national security policy is studied as well as the role of each governmental component concerned with security affairs. The elements of national power are reviewed and discussed.

333. Evolution of the Art of War. (For students electing the Marine Corps) (NS 333 Art of War) (3-2) Credit 3. I. Military history from Alexander the Great through the Civil War. The development of weapons and tactics is studied by analyzing selected battles and campaigns both in this country and overseas. Emphasis is placed on the decisions and actions of commanders of opposing forces and the evaluation of their application of principles of leadership.

334. Navigation and Naval Operations I. (NS 334 Operations I) (3-4) Credit 4. I. A comprehensive study of the theory, principles and procedures of ship navigation, movements and employment. Course includes spherical trigonometry, mathematical analysis, study and practices, spherical triangulation, sights, sextants and publications and report logs. Tactical formations and dispositions, relative motion, maneuvering board, tactical plots are analyzed for force effectiveness and unity. Rules of the road, lights, signals and navigational aids including inertial systems are studied. A navigation practice laboratory of 15 hours each semester is included.

433. History of Amphibious Warfare. (For students electing the Marine Corps) (NS 433 Amphib-War) (3-2) Credit 3. I. A historical examination of the development of amphibious warfare, commencing with the WWI campaign of Gallipoli and proceeding through WWII and the Korean War.

Naval Science 453. Naval Ships System II (Naval Weapons Systems) Credit 3. This course provides an introduction to the theory and principles of operation of Naval Weapons Systems. It includes coverage of types of weapons system, capabilities and limitations, theory of target acquisition, identification and tracking, trajectory principles and basics of Naval ordnance.

Naval Science 463. Principles of Naval Organization & Management. Credit 3. An introduction to the structure and principles of Naval Organization and Management. Naval organization and management practices and the concepts that lie behind them are examined within the context of American Social and industrial organizations and practices. This includes lines of command and control, organization for logistics, service and support, functions and services of major components of the Navy and Marine Corps and shipboard organization. Emphasis is placed on management and leadership functions.
The Department of Modern Foreign Languages offers two degree programs.

1. The Bachelor of Arts with a major in French.
2. The Bachelor of Arts with a major in Spanish.

Both degree programs have two options:

A. Liberal Arts Option: This program is provided for the student whose desire is that of a sound knowledge of American culture, foreign cultures, and the ability to interpret the differences between the cultures.

B. Teacher Education Option: This program is provided for the student who has an interest in teaching foreign language. The Department's program is approved by the Texas Education Agency under Plan I, which certifies one for teaching a specific language in Texas schools. Under Plan I, one is required to have two teaching areas.

Minors are offered in French, German, and Spanish. Elective courses are offered in Russian.

OBJECTIVES OF DEPARTMENT

The training of the student in the Modern Foreign Language Department must make them well educated people with a sound knowledge of American culture, the foreign culture, and the ability to interpret the differences between two cultures. It must also enable them to:

(a) Understand the foreign language spoken at normal tempo.

(b) Speak the language intelligibly and with an adequate command of vocabulary and syntax.

(c) Read the language with immediate comprehension and without translation.

(d) Write the language with clarity and reasonable correctness.

(e) Understand the nature of language and language learning.

(f) Understand the evolving objectives of education in the United States and the place of foreign language in this context.

HONOR SOCIETIES

Alpha Mu Gamma. Zeta Xi Chapter of Alpha Mu Gamma, national honor society in foreign languages, is active on the campus. Membership is awarded to students with an average of at least "B" in foreign language courses.

Sigma Delta Pi. Theta Iota Chapter of Sigma Delta Pi, national honor society in Spanish, honors those who seek and attain excellence in the study of the Spanish languages and in the study of the literature and the culture of the Spanish-speaking peoples. To be eligible for membership, one must have studied at least three college years of Spanish or the equivalent thereof with a minimum grade point average of "B".

GENERAL REQUIREMENTS

All beginning language students will be required to take a prognosis test or a language aptitude test during Freshman Orientation Week for the purpose of placement.
Exemptions: Certain curricula require foreign languages. For those students following these curricula, exemption from the 113-123 level courses do not include exemption from the twelve hour requirement in one foreign language. Majors and minors who begin with the 213-223 sequence will have their over-all hour requirements reduced.

Each student majoring in French or Spanish is required to take a comprehensive examination during his senior year. The examination will consist of a three hour written section and an oral section of at least one hour. This and his ability to interpret the literature in his area of concentration, as well as his proficiency in oral and written expression, are evaluated.

The Language Laboratory: The Foreign language laboratory serves an integral part of the course work in the Department of Modern Foreign Languages. In the 113-123 level courses, two hours of laboratory drill per week are required. Students enrolled in language courses at other levels are encouraged to use the laboratory facilities.

Language students should plan to study for two full summer sessions if all work is to be completed in four years. Grade point averages must meet college requirements and sometimes it is not possible for a student to take over fifteen semester hours during one semester.
DEPARTMENTAL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN FRENCH

(Liberal Arts Option)

MAJOR: A total of 39 hours of French courses, consisting of French 113, 123, 213, 223, 303, 323, 333, 403, 413, 423, 433, and 443.

A student may make a request for an advanced French course to serve as a substitute course for any course mentioned above. This action must be approved by the advisor and Head of the Department.

MINOR: A minor in French consists of the following 24 hours. French 113, 123, 213, 223, 303, 313, 323, 333.

DEPARTMENTAL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SPANISH

(Liberal Arts Option)

MAJOR: A total of 39 hours of Spanish courses consisting of Spanish 113, 123, 213, 223, 303, 313, 323, 333, 363, 393, 443, 463, and 473.

A student may make a request for an advanced Spanish course to serve as a substitute course for any course mentioned above. This action must be approved by the advisor and Head of the Department.

MINOR: A minor in Spanish consists of the following 24 hours. Spanish 113, 123, 213, 223, 303, 313, 323, 333, or 363, 373.

COLLEGE REQUIREMENTS FOR THE BACHELOR
OF ARTS DEGREE WITH A MAJOR EITHER IN
FRENCH OR SPANISH

(Liberal Arts Option)

ENGLISH 113, 123, 213, 223
MATHEMATICS 173-183
COLLEGE SCIENCE 113, 123
HISTORY 173, 183 or equivalent
POLITICAL SCIENCE 113, 123
SOCIAL SCIENCE 113
NURSING 111, 121
PHY. EDUC. 111, 121, 211, 221 or equivalent, in restricted Phy. Educ.
MILITARY SCIENCE or Naval Science (men)

A minimum of 20 hours, excluding Military Science or Naval Science is required for graduation with the Bachelor of Arts Degree with a major in either French or in Spanish.

A minor in German consists of the following 24 hours:
German 113, 123, 213, 223, 303, 313, 323, 333.

REQUIREMENTS FOR THE BACHELOR OF ARTS
DEGREE WITH A MAJOR IN EITHER FRENCH
OR IN SPANISH

(Teacher Education Option)

Persons who plan to teach foreign languages should follow the Teacher’s Certification Program approved by the Texas Education Agency. The foreign language curricula are Plan I Programs making one eligible for certification for grades 7-12. For specifics, see Certificate Programs in the Teacher Education section of this catalogue.
## DESCRIPTION OF COURSES

### FRENCH

113. Elementary French. (Fren 113 Elementary) (3-0) Credit 3. I and II. The linguistic foundation of the French language; mastery of phonetics, verbs, grammar, and idiomatic usage.

123. Elementary French. (Fren 123 Elementary) (3-0) Credit 3. I and II. Continuation of French 113.

213. Intermediate French, Reading and Grammar Review. (Fren 213 Intermediate) (3-0) Credit 3. I and II. French conversation, idioms, and verb drill; reading material; principles of French grammar and syntax. Prerequisite: French 123.

### GERMAN

113, 123. Elementary German. (Germ 113, 123 Elementary) Credit 3. I and II. Ability to pronounce, read and understand simple and easy German; adequate basic vocabulary; fundamentals of grammar.

213, 223. Intermediate German. (Germ 213, 223 Intermediate) Credit 3. I and II. Reading, grammar review; idiomatic German, vocabulary development; selected readings from German newspaper. Prerequisite: German 123.
### Scientific German

283. Scientific German. (Germ 283 Scientific) (3-0) Credit 3. May be taken instead of Intermediate German 223. Readings and selected readings from German newspaper. Designed primarily for science majors and those students preparing to enter professional schools and higher institutions of learning. Prerequisite: German 213.

### German Composition and Conversation

303-313. German Composition and Conversation. (3-3) Credit 6. Prerequisites: German 213 and 223.

### Introduction to German Literature

323. Introduction to German Literature. (3-0) Credit 3. Selected reading in German Literature. Prerequisites: German 213-223.

### Recent German Literature I

333. Recent German Literature I. (3-0) Credit 3. Selected works from the rise of naturalism to the first world war. Lectures on the backgrounds of the literary movement. Prerequisites: German 213 and 223.

### Recent German Literature II

343. Recent German Literature II. (3-0) Credit 3. Continuation of German 333 to the present. Prerequisites: German 213 and 223.

### Russian

114 and 124. The Essentials of Russian. (Russian 114, 124) (3-2) Credit 8. First year college. The course advances through grading readings and composition. Three classes and two supervised laboratory periods a week. Pre-requisites: German 213 and 223.

213 and 223. Review Grammar, Selected Readings in Russian. Credit 6. Second Year College. I and II. The class periods and laboratory time as needed by the student.

### Spanish


333. A Survey of Spanish Literature II. (3-0) Credit 3. A representative selection and masterpieces of Spanish Literature from 1700 to the generation of 1898.

343. The Golden Age. (3-0) Credit 3. A comprehensive interpretation of the poetry and drama of this period. Intensive consideration of life and works of Lope de Vega, Cervantes, Calderon, and Tirso de Molina. Prerequisites: Spanish 323 and 333.
DEPARTMENT OF MUSIC

Robert A. Henry, Head
1972-73 Faculty

H. Edison Anderson, James Ashford, Thomas L. Davis, Conally S. Garrett,
*Katheryn Jordan, James P. Mosley, James Newson, and Rudolph von Charlton

The Department of Music offers one Bachelor of Arts Degree with a major in Music. Two options are available.

A. Music Education. This program is designed to prepare teachers of music in elementary and secondary schools, and for graduate study in music education. The program is approved by the Texas Education Agency as an All-Level Plan.

B. Performing Arts. Programs in piano, voice, and organ prepare students as professional musicians and for graduate studies in music.

OBJECTIVES OF DEPARTMENT

The Department of Music functions within the framework of the School of Arts and Sciences and according to mandates of the college in general. The departmental objectives are two fold—to prepare musicians according to their professional aspirations, and to provide cultural experiences and services to the college community and state at large.

Specifically the objectives are:

1. To offer state approved curricula for the preparation of music administrators, teachers, choral and instrumental conductors in public schools and institutions of higher education.

2. To offer music courses of interest and value to all students of the college, so that they may develop as appreciative consumers of music as well as trained participants.

3. To provide the necessary training for creativity in musical activities, and for the individual composer.

4. To provide professional services to communities of the state involving musical training and musical productions.

HONOR SOCIETY AND CLUBS

The Mu Alpha Sigma Honorary Society, organized in 1935-36, gives recognition for achievement in meritorious performance, scholarship, research and creative efforts in music, with an accumulative average of "B". Students are selected solely upon the foregoing qualifications, and not upon application for membership.

Local Chapters of Kappa Kappa Psi (National Band Fraternity), the Music Educators National Conference, the Texas Association of Music Schools, and the Music Club are active at the College.

PERFORMING ORGANIZATIONS

The College Chorale, A Cappella Concert Choir, Chamber Choir, Opera Guild, Marching Band, Concert Band, Military Band, Laboratory Jazz-Stage Band, Woodwind Ensemble, Brass Ensemble, and Percussion Ensemble.

*On leave
All music majors are required to:

1. Take a proficiency examination in piano after the sophomore year. Students who do not pass must continue the study of piano until the proficiency examination is passed.

2. Participate in vocal or instrumental organizations, regardless of the number of accumulated hours.

3. Make a grade of "C" or above in music subjects.

MAJOR: A minimum of 64 semester hours of Music courses, including Basic Music 012, 022, 032, 042, 052, 062, 072, 082; Music 151, 161, 251, 261, (Keyboard); Written Theory 152, 162, 252, 262, (Harmony); Aural Theory 172, 182, 272, 282, (Sight Singing); Music 223 (Literature) Music 411, 421, 431, 441, 451, 461, 471, 481, (Seminar); Music 413 (History); Music 332 (Conducting); Music 353 (Counterpoint); Applied Music 112, 122, 212, 222, 312, 322, 412, 422, 432, 442; Music 132 (Brasses, Percussion, Strings, and Woodwinds); Music 142 (Voice Methods); Music 373, 383, (Grade and High School Music); Music 393 (Instrumental); Music Ensemble 112, 122, 212, 222, 312, 322, 412, 422; or 111, 121, 211, 221, 311, 321, 411, 421.

MINOR: Nineteen hours of music are required for a minor, eight of which must be applied music. The minor may not be used as a second teaching field.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN MUSIC 12 Semester Hours

A total of twelve semester hours in one foreign language.

COLLEGE REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN MUSIC 45-53 Semester Hours

English 113, 123, 213, 223
Mathematics, Six (6) semester hours
Natural Science, Six (6) semester hours
Political Science 113, 123
History 173-183 or equivalents
Social Science, Three (3) semester hours
Nursing 111-121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
Military Science or Naval Science (men)

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN MUSIC (Music Education Option)

Music majors who plan to teach music, elementary or secondary schools, should follow the Teacher's Certification Program which is an All-Level Plan approved by the Texas Education Agency, and which makes one eligible for certification as a teacher in music, grades 1 through 12. In the music education curriculum, a performing concentration is required.
SUGGESTED PROGRAM FOR MUSIC EDUCATION OPTION

FIRST YEAR

English 113-123
Mathematics 173-183
Political Science 113-123
Music 161-161
Music 162-162
Music 172-182
Piano 112-122 or Organ 012-022
Voice 112-122

SECOND YEAR

English 213-233
Foreign Language 113-123
Music 251-261
Music 252-262
Music 253-263
Piano 212-222 or Organ 032-042
Voice 112-122

FOURTH YEAR

Music 431-441
Choir 212-222 or Band 211-221

NOTE: Voice majors must add Basic Music 012-022, 032-042.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN MUSIC
(Performing Arts Option)

FIRST YEAR

English 113-123
Mathematics 173-183
Political Science 113-123
Music 161-161
Music 162-162
Music 172-182
Piano 112-122 or Organ 012-022
Voice 112-122

SECOND YEAR

English 213-233
Foreign Language 113-123
Music 251-261
Music 252-262
Music 253-263
Piano 212-222 or Organ 032-042
Voice 112-122

FOURTH YEAR

Music 431-441
Choir 212-222 or Band 211-221

NOTE: Voice majors must add Basic Music 012-022, 032-042.
DESCRIPTION OF COURSES

THEORY


Music 251-261. (Music 251-261 Adv Keybd) Advanced Keyboard Harmony. 1 hour credit each. I and II. For Music Education majors and minors. Courses on the advanced level in functional keyboard performance, including transposition, modulation; development of skills in clef reading; improvising piano accompaniments to songs of junior, elementary and high school levels. Functional keyboard proficiency emphasized.

Written Theory 152. (Music 152 Elem Harmony) Elementary Harmony. (2-0) Credit 2. Harmonic phenomena of tones through scales, intervals and chords, and chordal progression; general harmonizations through the secondary triads; keyboard harmony.

Written Theory 162. (Music 162 Elem Harmony) Elementary Harmony. (2-0) Credit 2. Harmonizations through the inversions of the dominant seventh chord; simple harmonic dictation on materials related to the course; analysis of chorales of Bach and simple hymn tunes; keyboard harmony.

Aural Theory 172. (Music 172 Sight Sing) Elementary Sight Singing and Ear Training. (2-1) Credit 2. Drill in aural recognition and vocal execution of scales and intervals; sight reading in the treble and bass clefs; simple melodic dictation in the treble clef.
Aural Theory 182. (Music 182 Sight Singing) Elementary Sight Singing and Ear Training. (2-1) Credit 2. Drill in aural recognition of chords and intervals; the introduction of simple embellishments; vocal execution of technical exercises of moderate difficulty; melodic dictation in the bass and treble clefs.

Written Theory 252. (Music 252 Adv Harmony) Intermediate Harmony. (2-0) Credit 2. Secondary sevenths through the Meapolitan sixth chord, including the analysis of representative materials from the eighteenth and nineteenth centuries; continuation of harmonic dictation; keyboard harmony.

Written Theory 262. (Music 262 Adv Harmony) Intermediate Harmony. (2-0) Credit 2. Augmented sixth chords through chromatic alterations in general; and some modern harmony; analysis of works from the nineteenth and twentieth centuries; harmonic dictation continued; keyboard harmony.

Aural Theory 272. (Music 272 Sight Sing) Intermediate Sight Singing and Ear Training. (2-0) Credit 2. Vocal execution of intervals and embellishments, and melodic and harmonic dictation in the soprano, mezzo-soprano, alto and tenor clefs.

Aural Theory 282. (Music 282 Sight Singing) Intermediate Sight Singing and Ear Training. (2-0) Credit 2. Advanced work in singing intervals and embellishments; melodic and harmonic dictation involving transposition and modulation in all seven clefs.

Counterpoint 353. (Music 353 Counterpoint) (3-0) Credit 3. Two, three, and four-part counterpoint in all species; invertible counterpoint; canonic imitation and writing in the contrapuntal forms.

MUSIC HISTORY AND LITERATURE

Music 223. (Music 223 Music Lit) Music Literature. (3-0) Credit 3. The study of the life and works of various composers according to period, style, form, etc. through lectures, research, recordings and actual classroom performances.

Music History 413. (Music 413 History) (3-0) Credit 3. I and II. The great movements in the art of music from the Greek period to the present day.

Conducting 332. (Music 332 Conducting) (2-0) Credit 2. I or II. Baton technique, choral and instrumental conducting in the elementary and high school level.

Music 411-481. (Music 411-481 Seminar) Music Seminar. (1-0) Credit 1. A meeting, once a week, of each applied music student with his particular applied music teacher along with other applied music students of the teacher for the purpose of performing before each other, and discussing problems pertinent to the special area.

APPLIED MUSIC—Elementary Courses

Basic Music 012-022. Credit 2 hours each semester. Major and minor scales and arpeggios four octaves; Mendellssohn's "Song Without Words"; Beethoven's early sonatas, Chopin's easier Nocturnes and Preludes; Bach 2 part inventions; keyboard harmony emphasizing chord progressions, harmonization of melodies.

Clarinet 112-122. (Music 112-122 Clarinet or other woodwind instruments) (2-6) Credit 2. I and II. Tone production, embouchure, breathing, scales and articulation; methods of Rubank and Stubbins for clarinet; Weissenborn for bassoon; Rubank and Wagner for flute, and Barret and Gekeler for oboe, and Rubank and Deville for saxophone. Music fee: $12.00.

Cornet 112-122. (Music 112-122 Cornet or other brass instruments) (2-6) Credit 2. I and II. Fundamentals of a-tack; breath control; formation of embouchure; scale, methods of Arban and Goldman for cornet; Anton Horner and Oscar Franz for French horn; Simera-Hovey for trombone. Music fee: $12.00.
Violin 112-122. (Music 112-122 Violin or other stringed instruments) (2-6) Credit 2. I and II. Major and minor scales and arpeggios, first position methods of Gruenberg and Wohfahrt for violin; Krummer for violoncello; Primrose for viola and Butler and Simandl for bass. Music fee: $12.00.

Organ 112-122. (Music 112-122 Organ) (2-6) Credit 2. I and II. Preparatory manual exercises and pedal techniques; the playing of trios (two manuals and pedals); playing of chorales and preludes and shorter works for the organ. Organ students must demonstrate ability in piano before admittance to organ classes. Methods of Dickinson and Stainer. Music fee: $5.00 per month.

Piano 112-122. (Music 112-122 Piano) (2-6) Credit 2. I and II. Hannon, The Virtuoso Pianist, Part II; Czerny, The School of Velocity, first half; Bach, Two-part inventions; Chopin, Preludes; all major and minor scales in four octaves using double and triple rhythms in various accents. Music fee: $12.00.

Percussion 112-122. (Music 112-122 Percussion) Credit 2. I and II. An individual study of the basic fundamentals for playing the percussion instruments. Special emphasis being placed on correct posture while seated and standing, holding the mallets and sticks, and other rudimentary exercises. The main objective is to offer basic fundamentals in the basic beat patterns and simple rudimentary patterns and techniques. Working mainly with the snare drum.


APPLIED MUSIC—Intermediate Courses

Basic Music 032-042. Credit 2 hours each semester. Bach Three-part inventions; Scarlatti sonatas; Beethoven's early sonatas; Chopin's easier Polonaises; Schubert Impromptus; continuation of scales in varied rhythms; V7 and dim. 7 arpeggios.

Clarinet 212-222. (Music 212-222 Clarinet or other woodwind instruments) (2-6) Credit 2. I and II. Chromatic scales; sustained tones; broken chords in all keys; etudes for the instrument; tenor clef for the bassoon methods of Magnani, Klose and Rose for clarinet; F. Oubrodus and Weissenborn for bassoon; Markquarke and Pop-Pousman for flute and Barret and Ferling for oboe. Music fee: $12.00.

Cornet 212-222. (Music 212-222 Cornet or other brass instruments) (2-6) Credit 2. I and II. Double and triple articulations; legato techniques; transposition; methods and studies of Arban, Williams and Clarke for cornet; Koprasch, Oscar Franz and Gallay for French horn; Alban, Cimera and Endresen for Trombone, and Pares, Klose and Magnani for saxophone. Music fee: $12.00.

Violin 212-222. (Music 212-222 Violin or other stringed instruments) (2-0) Credit 2. I and II. Exercises in charge of position, Rode and Dancia, Oj 72 etudes for violin, Sophr Concerto No. 9 for violin; etc. Scales and arpeggios on the viola; three octaves; Gavinies, 24 etudes for the viola, etc. Duport and Popper etudes for cello; Sonatas by Breval, Sammortini or Eccles for cello; Bach, Suite D Minor for cello; position as far as the seventh for the double bass Watson method and Edmon Nanny, exercises for double bass; double bass methods by Simandl, Part II, etc. Music fee: $12.00.

Organ 212-222. (Music 212-222 Organ) (2-6) Credit 2. I and II. A continuation of technical exercises; the extension of repertory through Preludes and Fugues by Bach; work of Guilman, Carl Mendellsohn, etc.; use of organ for church and concert purposes. Music fee: $5.00 per month.

Piano 212-222. (Music 212-222 Piano) (2-6) Credit 2. I and II. Hannon, The Virtuoso Pianist completed; Czerny, The School of Velocity completed; Bach, Three-part invention; early keyboard music; Chopin, Waltzes; Haydn, Sonatas. Music fee: $12.00.
Percussion 212-222. (Music 212-222 Percussion) Credit 2. I and II. An
Further concentration on the basic rudimentary techniques. The main emphasis
is placed on the snare drum still, however, the student is being made aware
to the other instruments of the percussion family and other equipment of the
percussionist. Solo material for the percussionist is introduced and practical
experience is now gained from playing before the public.

Voice 212-222. (Music 212-222 Voice) (2-6) Credit 2. I and II. Diatonic
and chromatic scales; tone production, vocal embellishments, legato and stac­
cato style; the simple trill; additional songs from a selected list of English
songs; selections in Italian and French; and Italian aria from a Mozart opera
or another composer of Italian opera; recitatives and areas from such works as

APPLIED MUSIC—Advanced Courses

Basic Music 052-062; 072-082. (Music 052-062; 072-082. Credit 2 hours each
semester. Scales in thirds, sixths, and tenths; Bach Well Tempered Clavier;
Mozart sonatas; Brahms' intermezzi and music of composers of romantic and
contemporary periods; continuation of keyboard harmony. Public recital in
the senior year.

Clarinet 312-322; 412-422; 432-442. (Music 312-322; 412-422; 432-442 Clarinet
or other woodwind instruments) (2-12) Credit 2. I and II. Advanced tech­
nical studies; repertory, including sonatas and concertos; classical, romantic
and modern literature. Music fee: $12.00. Public recital in the senior year.

Cornet 312-322; 412-422; 432-442. (Music 312-322; 412-422; 432-442 Cornet
or other brass instruments) (2-12) Credit 2. I and II. Advanced technical
studies; repertory, including sonatas and concertos; classical, romantic and

Violin 312-322; 412-422; 432-442. (Music 312-322; 412-422; 432-442 Violin
or other stringed instruments) (2-12) Credit 2. I and II. Advanced tech­
nical studies; repertory including sonatas and concertos; classical, romantic and

Piano 312-322; 412-422; 432-442. (Music 312-322; 412-422; 432-442 Piano
(2-12) Credit 2. I and II. Advanced technical studies including Czerny, The
Art of Finger Dexterity; Beethoven, Sonatas; Chopin, Etudes and Ballads;
Bach, The Well-Tempered Clavichord, The English Suites and the French
Suites; repertory, including solos and concertos of classical, romantic and
modern composers. Music fee: $5.00 per month. Public recital in the senior year.

Organ 312-322; 412-422; 432-442. (Music 312-322; 412-422; 432-442 Organ
(2-12) Credit 2. I and II. Advanced technical studies; service playing ex­
temporization; repertory, including chorals sonatas, selected symphonic move­
ments and concertos; classical, romantic and modern literature. Music fee:
$5.00 per month. Public recital in the senior year.

Percussion 312-32; 412-422. (Music 312-322; 412-422 Percussion) Credit 2.
I and II. The students development should allow him to play well all the
instruments of the percussion family, including the snare drums, timpani and
melody instruments. A good knowledge of the methods and solos for the
percussion instruments, as well as practical experience from playing before a
live audience should insure a strong background in the playing of percussion
instruments. Public recital in the senior year.

Voice 312-322; 412-422; 432-442. (Music 312-322; 412-422; 432-442 Voice)
(2-12) Credit 2. I and II. Advanced technical studies; repertory, including
oratorio and opera recitatives and arias in English, Italian, French and German;
classical, romantic and modern literature. Music fee: $12.00. Public recital in
the senior year.
METHODS AND MATERIALS

Brasses 132. (Group Instruction) (Music 132 Brasses) (2-6) Credit 2. I and II. Fundamental technique for playing the percussion instruments as an aid in understanding how to organize bands and orchestras in the elementary and high school.

Percussion 132. (Group Instruction) (Music 132 Percussion) (2-6) Credit 2. I or II. Fundamental technique for playing the percussion instruments as an aid in understanding how to organize bands and orchestras in the elementary and high school.

Strings 132. (Group Instruction) (Music 132 Strings) (2-6) Credit 2. I or II. Fundamental technique for playing the stringed instruments as an aid to understanding how to organizes orchestras in the elementary and high school.

Woodwinds 132. (Group Instruction) (Music 132 Woodwinds) (2-6) Credit 2. I and II. Fundamental technique for playing the woodwind instruments as an aid in understanding how to organize bands and orchestras in the elementary and high school.

Music 142. (Music 142 Voice Meth) (Voice Class) (2-6) Credit 2. I and II. Basic principles and problems in vocal development as related to groups as well as the individual with emphasis on phonation, resonation, breath control, and diction.

Music 253-263. (Music 253-263 Elem Meth) Elementary School Methods. (Elementary Education Majors) (6-0) Credit 6. (Both semesters) Grade school music methods and materials, care and development of the child voice. Not open to music majors.

Music Workshop 311, 321, 331, 341, 351, 361, 371, 381, 391. Credit 1. A comprehensive four-day course offered the first six weeks of the summer school embracing the organization and conducting of bands, choirs and piano classes, and presenting evaluative criteria of music teaching in elementary and high schools. Music fee: $3.00.

Music 303. Music 303 Vocal Music Meth) (3-0) Credit 3. I or II. A detailed study of the organization and development of vocal groups, accompanied and unaccompanied. Voice production, balance, blend, diction, musicianship, dynamics, phrasing, rehearsal procedures, etc.

Education 383. (Music 373) Methods for teaching music in the elementary school. (3-0) Credit 3. A practical and electric approach to teaching music in the elementary school combining the development of musical concepts with planning of musical activities for children. For music majors.

Education 383. (Music 383) Methods for teaching music in the secondary school. (3-0) Credit 3. Instructional procedures for teaching music in the junior and senior high schools as related to the curricula with emphasis on the development of music skills and refined perception. An examination of current practices in music education, performing organizations, instructional tools, techniques, and materials.

Music 393. (Music 393 Instrumental Music Education) (3-0) Credit 3. I or II. Evaluation of current principles and procedures in the teaching of instrumental music in the elementary and high school including methods of instruction and organization of materials.

MUSIC ENSEMBLES

All music majors are required to participate in ensemble, regardless of accumulated ensemble credits.
SCHOOL OF ARTS AND SCIENCES


Military Band. (Music 111, 121, 211, 221) (1-4) Credit 1. I and II. All four years. A military concert organization for concert and military music. Experience in advanced band literature.

Music 420. (Music 420 Ensemble) (0-6) No Credit. I or II. A small ensemble serving as the nucleus for the symphony orchestra.

Concert Band. (Music 111-141, 211-241, 311-341, 411-441) Credit 1. I or II. Open to all students of the college. During the first semester the band performs at games, on and off campus, and represents the college in local and nationally televised activities. During the second semester the band performs standard band literature in concerts, college programs and annual tours.
DIVISION OF NATURAL SCIENCES

The Division of Natural Sciences includes the Departments of Biology, Earth Sciences, Chemistry and Physics. Each Department has a head and excluding Earth Sciences its respective requirements for major and minor students.

The division offers courses designed to prepare students for industry, the teaching profession, preprofessional studies in the sciences of medicine, and other sciences which require a scientific background. Credits earned here are accepted by all class A medical schools.
The Department of Biology offers the following curricula:

1. The Bachelor of Science Degree with a major in either pre-medicine or in pre-dentistry, for those students interested in the M.D. and/or D.D.S. as they relate to the diagnosis, prognosis, treatment and cure of diseases and research in these areas.

2. The Bachelor of Science Degree with a major in biology which is designed for persons interested in teaching biology. The Department’s Program is approved by The Texas Education Agency under Plan I, which certifies one for teaching biology in Texas High Schools. Under Plan I, one is required to have two teaching fields.

3. The Bachelor of Science Degree in Medical Technology is for students who are interested in laboratory medicine and medical laboratory procedures used in the diagnosis, study, and treatment of disease.

A minor in Biology is offered for Teacher Education majors.

OBJECTIVES OF DEPARTMENT

The department of Biology is concerned with facilitating learning through the analysis and synthesis of data as it relates to the intellectual, cultural, and personal development of its students. The department is obligated to provide students with a deep understanding of scientific processes and principles, as well as provide students with effective experiences in their professional and personal growth.

Through the execution of its functions the department of Biology offers programs of study leading to the B.S. and M.S. degrees. The department prepares students for careers in teaching, research and industry, and offers pre-professional training in the medical and allied sciences. The department of Biology has a further obligation to render services to other schools and departments of the College and to provide in-service programs for the citizens of the State and Nation.

The curriculum of the biology department is structured to implement the philosophy and objectives of the department as well as the College. In keeping with the interests of the students and demands of society, increased emphasis is being placed on development of quality programs in teacher preparation, technical training for research and industry, and pre-professional training.

HONOR AND PROFESSIONAL SOCIETIES

Beta Kappa Chi: The purpose of this society is to encourage and advance scientific education through original investigation, the dissemination of scientific knowledge, and the stimulation of high scholarship in pure and applied science. Any person who is in the upper fifth of his college class and who has completed at least sixty-four semester hours of college work, seventeen semesters hours of which shall be in one of the sciences recognized by this society with a grade average of at least "B" in the science area, and a general college average of at least "B".

Beta Beta Beta: The purpose of Beta Beta Biological Society is to stimulate sound scholarship, to promote the dissemination of scientific truth, and to encourage investigation in the life of sciences. To be eligible for election by any chapter the candidate must have a scholarship record superior to the average grade of the whole student body. He shall have completed at least
three courses in biology which must total not less than ten semester hours, or the equivalent of that amount, and must rank not lower than the fourth semester of his college course. In addition to these scholastic requirements, he must be a person of high ethical and moral ideals.

Para-Medical Club: The purpose of the Paramedical Club are to establish a rapport between our school and the various allied health schools, to establish a better relationship between our Para-medical students and our staff to provide opportunities for students to visit various medical schools for informal tours, chats, lectures, to assist our students in becoming test sophisticated relative to MCAT and DAT, and to strengthen our students in the fine arts. The Para-Medical club is open to all students in the para-medical sciences who have a "C" average or above.

Texas Academy of Science: The purpose of the Texas Academy of Science is to promote scientific interest among the colleges and universities of Texas and to assist the Texas Academy of Science in its program by constituting a division. Membership in the Texas Academy of Science is open to all Science majors of Sophomore level or above who maintain a minimum grade point average of 2.0 on the 4.0 point grading system.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PRE-MEDICINE OR PRE-DENTISTRY 8 Semester Hours

MAJOR: Thirty-eight hours of biology including Biology 115, 125, 134, 202, 314, 324, 414, 424, 451, 461
Chemistry 115, 125, 214, 315, 325, 434
Mathematics 113, 123
Physics 214, 224
English 343 or equivalent
Sociology 263

MINOR: Biology 115, 125, 134, 203, 314, 324
Chemistry 114, 124

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PRE-MEDICINE OR PRE-DENTISTRY 12 Semester Hours

Foreign Language—12 hours of one foreign language

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PRE-MEDICINE OR PRE-DENTISTRY 33-41 Semester Hours

English 113, 123, 213, 223
Political Science 113, 123
Social Science 113 or equivalent
History 173, 183 or equivalent
Nursing 111, 121
Physical Education 111, 121, 211, 221, or equivalent in restricted Physical Education
Military Science or Naval Science (men)

A minimum of 134 hours, excluding military science or naval science is required for graduation with the Bachelor of Science Degree with a major in Pre-Medicine or Pre-Dentistry.
CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE
WITH A MAJOR IN PRE-MEDICAL-PRE-DENTISTRY

FIRST YEAR

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<td>English</td>
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SECOND YEAR

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THIRD YEAR

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FOURTH YEAR

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MEDICAL TECHNOLOGY

A student who wishes to specialize in Medical Technology will be eligible to receive a Bachelor of Science Degree in Medical Technology from Prairie View A&M College when he satisfactorily completes the following program and the course in Medical Technology offered by the hospital approved by the Council on Medical Education and Hospitals of the American Medical Association in collaboration with the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists.

Within the first two (2) weeks of the second semester during the student’s junior year he or she will execute the following enrollment procedures for clinical training:

1. Secure an application blank from the Head of the Department of Biology, fill it out and send it to the School of Medical Technology, Ben Taub Hospital, Houston, Texas.

2. Secure two (2) transcripts of your academic training from the Registrar’s Office.
   a. One transcript will be attached to the application form.
   b. The second transcript along with five dollars will be forwarded to:
      Registrar’s Office
      Registry of Medical Technologists
      P.O. Box 2544
      Muncie, Indiana
      (1) The office in (b) above will evaluate the transcript and notify Ben Taub Hospital and the applicant of its findings.

3. Secure a letter of recommendation from the Head of the Biology Department (or a member of the local Medical Technology Committee which will be subject to the approval of the Head) attesting the character, academic ability and/or potentials of the applicant.

4. When all the credentials favorable to acceptance are submitted, the applicant will be invited to Ben Taub Hospital, Houston, Texas, for an interview with the committee on admission, which is composed of a cross-section of the faculty, the teaching supervisor and the director of the school of medical technology.

The twelve (12) month course at the Texas Medical Center of the Harris County Hospital District is designed to qualify a student to accurately perform upon a patient such tests as a complete blood count, urinalysis, serological
test for syphilis, morphology of blood cells, clinical chemistry, isolation and identification of pathogenic bacteria, and many other procedures. The student derives these skills partly through didactic lectures given throughout the year, but principally by practical experience through the repetitious performance of the tests under the guidance of a Registered Medical Technologist.

During the twelve months of clinical training in Houston, Texas, the students may reside in the Field Town Apartments on South McGregor or the Prairie View Nursing Students for approximately $30.00-$40.00 per month or the Hermann Hospital, The March Culmore Home or the Y.M.C.A.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY 76 Semester Hours

Thirty-six hours of biology, including Biology 115, 125, 134, 202, 324, 334, 354
Chemistry 115, 125, 204, 214, 224, 314, 434
Mathematics 113, 123
Physics 214, 224
Clinical courses

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY 12 Semester Hours

Foreign Language—12 hours of one language.

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY 33-41 Semester Hours

English 113, 123, 213, 223
Political Science 113, 123
History 173, 183 or equivalent
Social Science 113
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalent in restricted Physical Education
Military Science (Men) 112, 122, 212, 222

A total of 121 hours, excluding military science or naval science, and the clinical courses, is required for the Bachelor of Science Degree in Medical Technology.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY

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SCHOOL OF ARTS AND SCIENCES

REQUIREMENTS FOR THE BACHELOR OF SCIENCE
DEGREE WITH A MAJOR IN BIOLOGY

(Teacher Education Option)

TEACHER EDUCATION PROGRAM IN BIOLOGY:

Biology majors who plan to teach should follow the Teacher Certification Program which is a Plan I Program, approved by the Texas Education Agency, and which makes one eligible for certification as a teacher of biology, Grades 7 through 12. For specifics see Certificate Programs in the Teacher Education section of the catalogue.

DESCRIPTION OF COURSES

BIOLOGY

102-202. Laboratory Technique. (Biol 102-202 Lab Tech) (1-5) Credit 2. I or II. A training course in laboratory methods for prospective teachers of biology, pre-medical, medical techs., and etc. Required of students electing Biology as a major or minor field.

113. General Biology. (Biol 113 Gen Biology) (2-2) Credit 3. For students who plan to teach at the pre-school, elementary or at the secondary school level in a non-science-mathematics area; a study of the personal and social aspects of health promotion, disease prevention, hygiene, sanitation, heredity and physiology as they apply to man. Laboratory fee: $2.00.

114. General Zoology. (Biol 114 Gen Zoology) (2-4) Credit 4. Fundamental principles of biology from the study of embryology, structure and physiology of the frog. (For non-majors and minors.) Laboratory fee: $2.00.

115. General Zoology. (Biol 115 Gen Zoology) (3-4) Credit 5. For majors and minors in biology; a detailed study of morphology, physiology, ecology, and taxonomy of the vertebrates. Laboratory fee: $2.00.

123. General Biology. (Biol 123 Gen Biology) (2-2) Credit 3. A study of plants and animals and how they are related ecologically. Laboratory fee: $2.00.

124. General Zoology. (Biol 124 Gen Zoology) (2-4) Credit 4. Morphology, physiology and relationship in invertebrate groups. Prerequisite: Biology 114. (For non-majors and minors.) Laboratory fee: $2.00.

125. General Zoology. (Biol 125 Gen Zoology) (3-4) Credit 5. For majors and minors in biology; a detailed study of morphology, physiology, ecology, and taxonomy of the invertebrates. Laboratory fee: $2.00.


154-164. Anatomy and Physiology. (Biol 154-164 Anatomy-Phys) (2-2) Credit 4. I and II. Structure and functions of the human body; the structure of each of the systems demonstrated by models, charts and animal dissections; their functions studied by experiments. Laboratory fee: $2.00.


254. Genetics. (Biol 254 Genetics) (2-4) Credit 4. Laws and principles governing heredity in plants and animals; relation to plant and animal improvement and to Eugenics. Prerequisite: Biology 134, 114. Laboratory fee: $2.00.


334. General Microbiology. (Bacteriology) (Biol 334 Microbiology) (2-4) Credit 4. Morphology, physiology, classification, cultivation of the microorganisms, relation to agriculture, premedics and industry. Prerequisites: General Chemistry, Biology 314 and 114. Laboratory fee: $2.00.

354. General Parasitology. (Biol 354 Parasitology) (3-4) Credit 4. Morphology, life history, diagnosis, distribution, host parasite relationship and control of the important parasites affecting man and other animals.


414. Vertebrate Embryology. (Biol 414 Embryology) (3-5) Credit 4. Structure, principles and progress in vertebrate development; chicken and pig as principle laboratory material. Prerequisite: Biology 115-125. Laboratory fee: $3.00.


434. Practicum in Biology. (Biol 434 Rec Adv Biol) (0-4) Credit 4. Recent advances in biology, emphasis is placed on investigation and inquiry as a means of acquiring knowledge in biology. Materials will be drawn from current work in the fields of genetics, developmental growth biology. Prerequisites: Biology 115, 125, 134, 314, 324, 414. Laboratory fee: $3.00.

451-461. Research. (Biol 451-461 Research) (0-2) Credit 1. I or II. Library and laboratory work in specific problems studied for investigative paper (required of all majors).

DEPARTMENT OF CHEMISTRY

Talmage P. Bursch
1972-73 Faculty

The Department of Chemistry offers a Bachelor of Science Degree with a major in Chemistry. There are two options:

A. Liberal Arts Option: This program is designed for students who plan to be professional chemists, and to pursue graduate studies.

B. Teacher Education Option: This option is for students who plan to teach chemistry at the secondary level. The Department's Program is approved by The Texas Education Agency under Plan I which certifies one for teaching in Texas High Schools. Plan I requires a person to have two teaching fields.

A minor is also offered.

OBJECTIVES OF THE DEPARTMENT

The Department of Chemistry is concerned with facilitating learning through the analysis and synthesis of data as it relates to the scientific world. The Department is obligated to provide deep understanding of scientific processes and principles, which will enable students to develop intellectually, culturally, socially, morally, physically, and economically to their fullest.

Through the execution of its functions, the Department prepares students for careers in teaching, research, industry, and offers preprofessional training for medical and allied sciences. It also has a further obligation to render services to other schools of the college and to provide inservice programs for the citizens of Texas.

The program of the department is planned to keep in phase with the general objectives and philosophy of the college with the ultimate goal of giving each student the training and attention which will make him an over achiever and a leader in his community.

In 1959, a student affiliate Chapter of the American Chemical Society was established on this campus. Students who major in Chemistry or Chemical Engineering are eligible for membership upon the recommendation of a faculty member who holds membership in the American Chemical Society.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN CHEMISTRY 91 Semester Hours

(Liberal Arts Option)

MAJOR: The major requires 53 semester hours of Chemistry consisting of Chemistry 115, 125, 214, 315, 325, 401, 414, 424, 451, 454, 461, 463, 473, 474, and four hours of electives in Chemistry, Physics 215, 225, and 3 hours of electives in Physics. Math 125, 163, 214, 224, 413 plus 6 hours of electives in Mathematics.

MINOR: The minor requires 24 semester hours of Chemistry including Chemistry 115, 125, 214, 315, and 325. Departmental approval must be received to effect a substitution for any of the above courses. In any event the number of hours may not be less than 24.
DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN CHEMISTRY (WITH A MAJOR) (Liberal Arts Option)

German—Twelve Hours

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN CHEMISTRY (Liberal Arts Option)

English 113, 123, 213, 223
History 173-183 or equivalents
Political Science 113, 123
Military Science or Naval Science
Physical Education 111, 211, 221, 222 or equivalents in restricted Physical Education
Nursing 111, 121
Social Science 113

A minimum of 134 hours excluding Military Science or Naval Science is required for a B.S. degree with a major in Chemistry.

A Chemistry major who plans to teach should follow the Teacher Certification Program, which is Plan I Program, approved by The Texas Education Agency, and which makes one eligible for certification as a teacher in Chemistry, grades 7 through 12. For specifics, see Certificate Programs in Teacher Education Section of this catalog.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN CHEMISTRY (Liberal Arts Option)

FIRST YEAR

1st 2nd 1st 2nd 1st 2nd
Chemistry 114-124 115-125 214-315
Mathematics 125-214 125-214 224-
English 113-123 113-123 215-224
German 113-123 113-123 213-223
Nursing 111-121 112-122 211-221
Military Science (Men) 112-122 112-122 212-222
or Naval Science (Men) 153-

SECOND YEAR

1st 2nd 1st 2nd 1st 2nd
Chemistry 214-315 215-424 401-463
Mathematics 224- 461 461-461
Physics 215-224 473-474 473-474
English 213-223 173-183 473-474
Political Science 211-221 173-183 473-474
Mathematics 233-243 3- 3 3- 3

THIRD YEAR

1st 2nd 1st 2nd
Chemistry 325-454 414-424
Mathematics 414-424 414-424
Biology 115-

FOURTH YEAR

1st 2nd
Chemistry 461-463 473-474
Chemistry 451-461 473-474
History 173-183 473-474
Electives 3- 3 3- 3
Mathematics 3- 3 3- 3

DESCRIPTION OF COURSES

114-124. General Inorganic Chemistry. (Chem 114-124 Inorganic) (3-2) Credit 4. These courses are designed for non-majors and non-minors. The first semester deals chiefly with fundamental laws and theories, the periodic chart, formulas, equations, solutions, and elementary calculations. The second semester includes chemical equilibrium, detailed consideration of inorganic compounds and the introduction of Organic Chemistry. Laboratory fee: $2.00.

115-125. General Inorganic Chemistry. (Chem 115-125 Inorganic) (3-4) Credit 5. For students majoring or minoring in chemistry; composition, structure, changes of matter and the laws governing these changes; fundamentals of the most modern concepts. The second semester deals largely with properties and preparation and preparation of the elements and their inorganic compounds, and Qualitative Analysis. Laboratory fee: $2.00.
204. Qualitative Analysis. (Chem 204 Qual Anal) Credit 4. I or II. Analytical reactions from the point of view of the laws of chemical equilibrium applied to solution of electrolysis; laboratory work of the separation and detection of both metal and nonmetal; microqualitative laboratory techniques; prerequisites: Chemistry 115 and 125. Laboratory fee: $2.00.

214-224. Quantitative Analysis. (Chem 214-224 Quan Anal) (2-4) Credit 4. I or II. Volumetric and gravimetric analysis, stochiometrical relations practical applications. Laboratory work consists of the analysis of samples of salts, ores, water and limestone. Prerequisite: 204 or 125. Laboratory fee: $2.00.

244. Elementary Physiological Chemistry. (Chem 244 Physiological) Credit 4. II. For students of Home Economics and Agriculture. Study of the composition and metabolism of the fats, proteins, carbohydrates, and vitamins. Prerequisite: Chemistry 114, 124. Laboratory fee: $3.00.

314. Introductory Organic Chemistry. (Chem 314 Organic) (3-4) Credit 4. I or II. For students majoring in Agriculture, and Home Economics. An introduction to aliphatic and aromatic compounds, fats, carbohydrates, and protein. Prerequisites: Chemistry 114, 124. Laboratory fee: $3.00.

315-325. General Organic Chemistry. (Chem 315-325 Organic) (3-4) Credit 5. I and II. For Chemistry majors and minors, pre-medical, pre-dental, and student nursing. Aliphatic and aromatic compounds: preparation and testing of representative compounds of the aliphatic and aromatic substances. Prerequisite: Chemistry 115, 125. Laboratory fee: $3.00.

324. Introductory Biochemistry. (Chem 324 Biochemistry) Credit 4. I or II. For students of Home Economics and Agriculture. Study of the composition and metabolism of the fats, proteins, carbohydrates, nucleic acids, vitamins and minerals. The laboratory work deals with the examination of qualitative and quantitative tests for the above metabolites, for blood and for urine. Prerequisite: Chem 315 and 325. Laboratory fee: $3.00.

354. Nuclear and Radiochemistry. (Chem 354 Nuclear) (2-4) Credit 4. I or II. Study of radioactivity, nuclear structure, nuclear reactions, properties of radioisotopes and their application to chemistry, biology, agriculture, and related fields. Methods of detection and measurement of activity; methods of preparation and handling radioisotopes; methods of introducing such isotopes into certain types of compounds and materials. Prerequisites: Chem 214 or consent of instructor. Laboratory fee: $2.00.

401. Journal Reading and Chemical Literature. (Chem 401 Journals) (1-0) I or II. For Chemistry majors, reports and discussion on current chemical literature. Prerequisite: Major in Chemistry or permission of instructor.

402. Organic Preparations. (Chem 402 Organic Prep) (1-4) Credit 2. I or II. Preliminary work in the synthesis of organic compounds and a study of the reaction of compounds of the theoretical and industrial importance. Prerequisite: Chemistry 325. Laboratory fee: $3.00.

414-424. Physical Chemistry. (Chem 414-424 Physical) (3-1) Credit 4. I and II. Three one-hour lectures per week and one four-hour laboratory period (or two laboratory periods consisting of two hours each). Properties of gases, liquids and solids, solutions, thermodynamics and thermochemistry, homogeneous and heterogeneous chemical equilibrium, chemical kinetics, electrochemistry, atomic and molecular structure, elements of the quantum theory, and photochemistry. Prerequisites: Chem 224, Physics 224, Math 214 with an average of "C" or better. Laboratory fee: $2.00.

434. Biochemistry. (Chem 434 Biochemistry) (2-4) Credit 4. I or II. An introductory course on the chemistry of living matter, foods, metabolism and nutrition. The laboratory works deal with the examination of tests of foods,
nutritional studies and the qualitative and quantitative examination of blood and urine. Prerequisite: Chemistry 214, 315 and 325 or permission of instructor. Laboratory fee: $3.00.

451-461. Research. (Chem 451-461 Research) (0-2) Credit 1. I and II. Library and laboratory work in the specific problems to be studied for investigative paper required of all majors.

454. Instrumental Analysis. (Chem 454 Analysis) (3-2) Credit 4. I or II. An introduction to the theory and application of modern instruments to chemical analysis. Includes laboratory work with optical electrical and x-ray instruments. Prerequisites: Chem 414 or consent of instructor. Laboratory fee: $2.00.

463. Inorganic Chemistry. (Chem 463 Inorganic) (3-0) Credit 3. I or II. Modern atomic, theory, periodic classification of the elements, chemical bonding, coordination chemistry, nuclear structure. Prerequisite: Chem 424 or consent of instructor.

473. Topics in Physical Chemistry. (Chem 473 Topics) (3-0) Credit 3. I or II. Selected topics in modern physical chemistry. Prerequisite: Chem 424 or consent of instructor.


484. Nuclear Chemistry. (Chem 484 Nuclear) (3-4) Credit 4. I or II. A study of the theories of nuclear structure, radioactivity, nuclear reactions and nuclear energy. Prerequisite: Chem 424 and 463. Laboratory fee: $2.00.
The Department of Earth Sciences does not offer a major nor minor.

The objectives of the Department are:

1. To offer the student taking courses in the natural sciences in fulfilling the College's general education requirements a background in the role of science in everyday living.

2. To present future elementary and secondary science teachers appropriate methods for making the sciences relevant for students.

DESCRIPTION OF COURSES

113. College Science. (Sci 123 Survey) (3-0) Credit 3. General Studies Course—The course emphasizes insight into basic biological principles and practices; showing the relationship of Biology to other disciplines. It is primarily a terminal course for those who will not take additional work in this area. The course covers a general introduction to plant and animal biology. Some laboratory work required.

123. College Science. (Sci 113 Survey) (3-0) Credit 3. The Physical Sciences, a sequence to General Studies Course 123. This course stresses insight into basic physical science principles and practices. Emphasis is placed upon the earth science aspect dealing with the atmosphere, Hydrosphere, and lithosphere. As in College Science 123, the course is primarily designed for students who will not take further course work in this area; however, many students in the sciences elect both College Science 123 and 113. Some laboratory work required.

333. The Teaching of High School Science. (Sci 333 HS Methods) (3-0) Credit 3. Methods and materials in teaching of science in the junior and senior high school; training courses for prospective teachers of science; lectures or conferences and field and laboratory work. Required of students who expect to get a teacher's certificate in science.

473. Elementary School Science. (Sci 473 Elem Sch Sci) (3-0) Credit 3. Prerequisites: Ed. 343, Ed. 483 and Ed. 313, I and II Basic science concepts, the scientific attitude, and science method; methods of teaching, selecting and organizing subject matter and a variety of science experiences appropriate for elementary school age children through the use of simple materials, community resources, and visual material on science.
The Department of Physics offers the Bachelor of Science Degree with a major in Physics. The student is provided two options.

A. Liberal Arts Option: This program serves the needs of those students who are planning careers as professional scientists.

B. Teacher Education Option: This program is provided for the student who has an interest in teaching physics. The Department's Program is approved as a Plan I Program by the Texas Education Agency, which certifies one for teaching physics in Texas High Schools, grades 7-12. Persons enrolled in a Plan I Program are required to certify in two teaching areas.

The Department offers a Minor for those students who have elected to major in some other area.

OBJECTIVES OF DEPARTMENT

Students who are planning careers in industry, government, and the universities as professional physicists require, as part of their preparation, a strong background in this discipline. A primary objective of the Department is to provide this background. The members of the Department are keenly aware of the importance of providing secondary schools with physics teachers who are strongly motivated, and who are eager to share their enthusiasm with youngsters. The Department, therefore, attempts to satisfy this need by providing such teachers for the public schools. Because physics is closely related to all of the other sciences, engineering, and mathematics, students planning to major in one of these related areas are required to take at least a course in General Physics. The Department provides these students with the necessary background to facilitate their understanding of their own disciplines, especially as they relate to physics.

The Department is well equipped to carry out the objectives indicated above. The physics laboratories are well equipped to carry out experiments in the classical areas of mechanics, heat, sound, light, and electricity and magnetism. In the areas of modern and nuclear physics, the Department has a 13,000 gauss water-cooled, research electromagnet, various types of counting equipment and a 14 Mev neutron generator. A well-equipped machine shop is used to construct unique and novel apparatus for use in the various experiments and in basic research.

DEPARTMENT REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICS

(Liberal Arts Option)

MAJOR: A minimum of 38 semester hours of Physics courses are required. These must include: Physics (215-225), (303-393), (or equivalent), (314-424), and 402.

Chemistry 115, 125
Mathematics 125, 214 or 124E, 214E and 113, 123 (if necessary)

MINOR: A minimum of 24 semester hours of Physics courses are required. These must include: One year of General Physics, and 303-393, or 314-424.

Note: Mathematics 125, 214 or 124E, 214E and 113, 123 (if necessary).
### SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICS

(Liberal Arts Option)

- 12 hours of one foreign language

### COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICS

33-41 Semester Hours

- English 113, 123, 213, 223
- History 173-183
- Political Science 113, 123
- Social Science 3 Hours
- Nursing 111, 121
- Physical Education 111, 121, 211, 221 or equivalents in Restricted Physical Education
- Military Science or Naval Science (men)

A minimum of 120 semester hours excluding Military Science or Naval Science is required for graduation with a major in physics. It should be noted however, that only the highly prepared student who selects his program with this objective in mind will be able to complete it with the minimum number of semester hours. For example, a good background in algebra and trigonometry (as determined by entrance tests where necessary) is an essential prerequisite to mathematics 125 and 214. Unless the student possesses this required knowledge, he will be obliged to take mathematics (113-123), which will increase his requirements. The average male student should expect to complete approximately 125-135 semester hours prior to graduation.

### REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICS

(Teacher Education Option)

Physics majors who plan to teach physics at the secondary school level should follow the Teacher's Certification Program which is a Plan I Program, approved by the Texas Education Agency. For specifics see Certificate Programs in the Teacher Education section of the catalogue.

### CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICS

(Liberal Arts Option)

#### FIRST YEAR

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#### SECOND YEAR

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#### THIRD YEAR

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#### FOURTH YEAR

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<td>Physics</td>
<td>411-421</td>
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<td>Electives (Minor)</td>
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DESCRIPTION OF COURSES

Note: Mathematics (214-224) required for all courses numbered 300 or above.

Introductory mechanics, heat, sound, light, electricity and magnetism. This course is intended primarily for non-science majors. Prerequisites: Mathematics 113 and 123 or equivalent.

Introductory mechanics, heat, sound, light, electricity and magnetism, and modern physics. This is an intensive course in basic physics designed for science and engineering majors. Prerequisites: Mathematics 113, 123 or equivalent. Mathematics 214 and 224 should be taken concurrently.

Discussion of the treatment of data in experimental physics. Probability theory, random errors, and distribution functions are treated. Also, standard deviation, least squares, goodness of fit and numerical methods. Prerequisite: Concurrent enrollment in Mathematics 214 and 224.

Vector algebra, differentiation and integration, generalized coordinates, dyadics; examples from mechanics and electricity. Prerequisite: Mathematics 214, 224 or equivalent.

Elements of Vector Analysis, kinematics of particle motion, Newton's Laws, motion of a rigid body, La Grange's Equations.

333. Electricity and Magnetism. (Phys 333 Magnetism) (3-0) Credit 3.
Basic theory of electrostatics; Coulomb's Law, Gauss' Theorem, simple potential theory, La Place's and Poisson's equations. Calculation of electric fields and potentials for point and distributed charge distributions.

Theory of Metallic conduction of electricity, Ohm's Law, Kirchoff's Law, electromagnetic induction, Maxwell's Equations, A. C. circuits and electromagnetic radiation; appropriate experiments to complement the theory.

Experiments and theory of modern electrical and electronic measurements: D. C. and A. C. circuits, electrical resonance, vacuum tube characteristics, rectifiers, solid state devices; pulse circuits, oscillators, amplifiers, and counters.

Advanced mathematics for physicists and engineers; multiple integrals, infinite series, La Place Transforms, differential equations, partial differential equations, complex variables; emphasis throughout is on practical applications of the theory and techniques as applied to problems in physics and engineering.

Review of classical physics and introduction to modern physics; photoelectric effect, x-rays, atomic physics, radioactivity and nuclear structure, elementary nuclear theory.

Introduction to modern physics; photoelectric and Compton effects, x-rays, atomic physics, radioactivity and nuclear structure, elementary nuclear theory; appropriate laboratory experiments to complement the theory; this course or Phys. 303-393 required for all physics majors, and minors.

Introduction to the problems encountered in physics research; vacuum techniques, leak detection methods and difficulties associated with making precise measurements at low temperatures and pressures. The student selects a problem for investigation, and reports the results as a thesis; required course for all physics majors. This course may be repeatedly taken for credit.

413. Heat and Thermodynamics. (Phys 413, Thermodyn) (2-3) Credit 3. Measurement of temperature and heat transfer; simple thermodynamic systems, ideal gases; experiments to complement the theory.


474. Optics. (Phys 474 Optics) (3-3) Credit 4. Simple optical systems and instruments; Ray tracing, Geometrical optics, principle and nodal points, lens aberrations; experiments based on the theory.


513-523. Physics for In-Service Teachers. (Phys 513, 523 Phys In-Serv Teach) (2-3) Credit 3. Designed primarily for secondary school teachers of physics; graduate credit may be obtained; offered usually during the summer; theoretical and experimental techniques of teaching physics in secondary schools, including those developed by the PSSC group at MIT and the Harvard Project Physics group at Harvard.
Degree with a major in Political Science. The degree has two options.

A. Liberal Arts Option: This program is designed for students who have an interest in law, public service, diplomatic service, politics, or government.

B. Teacher Education Option: This program is designed for students who have an interest in teaching government or social studies. The Department’s Program is approved by The Texas Education Agency under Plans I and II, certifying one for teaching political science in Texas High Schools. Under Plan II one is required to have one teaching field only.

A minor is offered in political science.

The Department cooperates with the other social science areas in offering an integrated social science minor. The program's emphasis is interdisciplinary and is designed to provide a basic functional knowledge of the ideas and interrelationship of the social science disciplines.

1. The Department seeks to provide effective Instruction to all Prairie View students regarding the theory, constitutional development, functions, processes, and problems of American National and Texas Government in keeping with the residential college concept.

2. The Department seeks to provide effective under-graduate majors and minor instructional programs in Political Science.
3. The Department seeks to develop the citizenship, interest, attitudes and skills of all of its students, in keeping with the standards of the residential college.

4. The Department conducts research in Political Science as a means of strengthening the academic work of its students, and teachers in the study of Political Phenomena.

5. The Department seeks to develop understanding of international politics and the comparative operation of non-American Political systems.

6. The Department seeks to contribute substantially to cultural development of Prairie View students by educating them regarding politics.

DEPARTMENTAL CLUB

The Political Science Club is an organization in which all political science majors are required to be members. The primary purpose of this organization is to promote an awareness of politics on all levels. The purpose is implemented through field trips, seminars, guest speakers, and other educational activities.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN POLITICAL SCIENCE 42 Semester Hours

(Liberal Arts Option)

MAJOR: A minimum of 36 semester hours of Political Science, including Political Science 113, 123, 213, 223 and 24 semester hours of additional courses.

Economics 403
Economics 413

MINOR: A minimum of 24 semester hours of Political Science including 113, 123, 213, 223, and 12 semester hours of additional courses.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN POLITICAL SCIENCE 12 Semester Hours

(Liberal Arts Option)

12 hours of one Foreign Language

COLLEGE REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN POLITICAL SCIENCE 39-47 Semester Hours

(Liberal Arts Option)

English 113, 123, 213, 223
Mathematics 173, 183 or 113, 123
Natural Science 113, 123
History 173, 183 or equivalents
Social Science 113
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted Physical Education
Military Science or Naval Science (men)

A minimum of 120 hours excluding military science or naval science required for graduation with the B. A. Degree with a major in political science.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN POLITICAL SCIENCE (Teacher Education Option)

Persons planning to teach political science may follow either a Plan I or Plan II Program, both of which are approved by the Texas Education Agency for certification in grades 7-12. For specifics see certification programs in the Teacher Education Section of this catalogue.
### CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN POLITICAL SCIENCE

#### FIRST YEAR

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### DESCRIPTION OF COURSES

123. American Government II. (PoSc 123 Amer Govt II) (3-0) Credit 3. National and Texas legislative and executive institutions and processes, local government, governmental service and regulatory functions, and foreign affairs.


223. Bibliography and Methods in Political Science. (PoSc 223 Bibliography) (3-0) Credit 3. The discipline, its authorities and its methodology; use of public documents and other source materials. (Required of all majors in political science.)


303. Ancient and Medieval Political Theory. (PoSc 303 Ancient Thry) (3-0) Credit 3. Political theories of the Greek, Roman and medieval European thinkers; special attention to Plato, Aristotle, Cicero, St. Augustine, John of Salisbury, St. Thomas Aquinas and Dante.

313. Modern Political Theory. (PoSc 313 Modern Thry) (3-0) Credit 3. Political theories from the Reformation to the present; special attention to Machiaveli, Bodin, Hobbes, Montesquieu, Locke, Rousseau, Jefferson, the Mills, Hegel, Marx and socialist theories.

323. Comparative Government. (PoSc 323 Comparative) (3-0) Credit 3. Comparison of the organization, functions, and processes of governments of the world; special attention to Great Britain, France, Germany and the Soviet Union.


373. U. S. Foreign Policy. (PoSc 373 Foreign Policy) (3-0) Credit 3. The study of decision making processes and the factors conditioning American Foreign Policy: Geographic and economic position, defense needs and dispositions, ideologies, technological revolution, public opinion, and interest groups.

383. International Law and Relations. (PoSc 383 Intrnatl Law) (3-0) Credit 3. Nature, function and enforcement of international law; and historical and analytical study of the politics of international affairs.

403. Urban Government and Politics. (PoSc 403 Urban) (3-0) Credit 3. A study of the structure and functions of urban government. Considerable attention will also be given to the politics and current problems of metropolitan areas.

413. American Constitutional Law. (PoSc 413 Coast Law) (3-0) Credit 3. Basic principles of the American constitution system; judicial interpretation and application of these principles in construing the powers of government and the rights of persons.


433. The Presidency. (PoSc 433 Presidency) (3-0) Credit 3. Evolution of the office of the president of the United States; his powers in the areas of politics, administration, legislation, war and foreign affairs.

The Department of Sociology and Social Work offers the Bachelor of Arts Degree with a major in social work, and the Bachelor of Arts Degree with a major in sociology.

The major in social work is designed for the student whose interest is in the helping professions and prepare him for employment with social agencies, and for admission to a graduate school of social work.

The major in sociology has two options:

A. Liberal Arts Option: This option is designed for the student whose primary objective is other than teaching. The program is planned to give the student an adequate background for graduate school, and for employment with agencies and occupations considering training in the behavioral sciences as valuable. The student following this option may choose between a sequence in corrections or a sequence in urbanization.

B. Teacher Education Option: This option is designed for the student having an interest in teaching social studies. The Department’s Program is approved by the Texas Education Agency under Plan II, which certifies one for teaching social studies in Texas High Schools, grades 7 through 12. Under Plan II, one is required to have one teaching field only. A minor is not required for the student meeting the requirements for certification.

Minors are offered both in social work and in sociology. Neither of these minors are teaching areas at the secondary level, however the sociology minor may be used as a resource area by persons majoring in elementary education under Plan I.

The Department cooperates with the other social science areas in offering an integrated social science minor. The program’s emphasis is inter-disciplinary and is designed to provide a basic functional knowledge of the ideas and interrelationship of the social disciplines.

OBJECTIVES OF THE DEPARTMENT

The two options offered by The Department are not regarded as mutually exclusive, but as compatible. Thus, in essence the general objectives are basically the same for each of the two categories of students. The objectives are:

1. To assist students in developing sufficient competence in sociology and/or social work to enable them to compete effectively for employment in positions where rational criteria for job placement exist.

2. To develop students possessing the depth and breadth in sociology and/or social work to give a high probability for doing creditable graduate work.

3. To develop students capable of rational and critical thinking in order that they may be able to engage in sound decision making and action as they become involved with contemporary social issues.

4. To assist students to see and accept the relationship of middle-class values to achievement in the American Society.
5. To develop students with a deep sense of self-respect based on a clear awareness of their intrinsic worth, dignity and responsibility as human beings and American Citizens.

6. To develop students who possess substantial understanding of other cultures, their heritage as members of Western civilization, and the immediate and underlying forces which significantly influence contemporary human efforts.

7. To develop students with a keen desire to fulfill their obligations as active, constructive, and responsible students, the citizens of the community, state and nation.

8. To develop students with the necessary skills and motivation for becoming leaders in their generation.

HONOR SOCIETY AND CLUB

Pi Chapter of Phi Alpha, National Social Work Honorary Society is active on the campus. An undergraduate student is eligible for active membership when he has achieved junior status, earned twelve hours in the Social Work Sequence, has achieved an all-college grade point average of 2.5 and an average of 2.8 in social work courses.

Sigma Omicron Chi is a departmental club open to any student having an interest in sociology or social work.

All courses taken in The Department must be passed with a grade of “C” or higher to be counted towards the major or the minor.
DEPARTMENTAL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SOCIAL WORK*

48 Semester Hours

MAJOR: A minimum of 34 hours of courses in The Department including Sociology 263, 303, 333, 343, 373, 421, 433, 453, 463, and one of the following 473, 483, 493
Psychology 113, 123
Economics 213, 223
Crafts 4 hours

MINOR: The following 18 semester hours of Departmental Courses are required: Sociology 263, 333, 373, 403, 433, and one of the following: 303, 473, 483, 493. (NOTE: The Sociology major may not elect the social work minor.)

*The program in social work is approved by the Council on Social Work Education.

SCHOOL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SOCIAL WORK

12 Semester Hours

12 Semester hours in one foreign language

COLLEGE REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SOCIAL WORK

45-53 Semester Hours

English 113, 123, 213, 223
Mathematics, Six (6) Semester Hours
Natural Science, Six (6) Semester Hours
Political Science 113, 123
History 173, 183 or equivalents
Sociology 123
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted Physical Education
Military Science or Naval Science (men)

A minimum of 20 hours excluding military science or naval science is required for graduation with the Bachelor of Arts Degree with a Major in Social Work.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SOCIAL WORK

FIRST YEAR

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THIRD YEAR

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THIRD YEAR (Summer) 453-

FOURTH YEAR

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SCHOOL OF ARTS AND SCIENCES
DEPARTMENTAL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SOCIOLOGY

(Liberal Arts Option)

MAJOR: A minimum of 30 hours in sociology are required for a major. Specifically required are Sociology 263, 303, 333, 343, 373, 463 and the courses constituting either the corrections sequence or the urbanization sequence.

Psychology 113, 123
Economics 213-223

MINOR: Eighteen semester hours of sociology courses numbered 200 or above are required for the minor. Specifically required are sociology 263, 303, 333, 343, 463.

All courses taken in The Department must be passed with a grade of “C” or higher to be counted towards the major or minor in sociology.

The Integrated Social Science Minor consists of the following 21 hours:

History 143 or 153
Geography 163
Economics 213, 223
Sociology 343
Political Science 213, 383

SCHOOL REQUIREMENTS FOR
THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN SOCIOLOGY

(Liberal Arts Option)

12 Semester Hours in one foreign language
COLLEGE REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

45-53 Semester Hours

English 113, 123, 213, 223
Mathematics, Six (6) Semester Hours
Natural Science, Six (6) Semester Hours
Political Science 113, 123
History 173, 183 or equivalents
Sociology 123
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted Physical Education
Military Science or Naval Science (men)

A minimum of 20 hours excluding Military Science or Naval Science is required for graduation with the Bachelor of Arts Degree in sociology.

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN SOCIOLOGY

(Liberal Arts Option)

FIRST YEAR

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THIRD YEAR

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</table>

*The major in sociology is expected to choose one of the following sequences:
**CORRECTIONS: Sociology 323, 363, 453, 483
**URBANIZATION: Sociology 353, 383, 393
**The Corrections Sequence is required for persons participating in the Law Enforcement Education Program (LEEP).

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN SOCIOLOGY

(Teacher Education Option)

Persons desiring to teach sociology and other social studies areas are to follow the Teacher's Certification Program which is a Plan II Program, approved by the Texas Education Agency, and which makes one eligible for certification as a teacher of social studies, grades 7 through 12. For specifics, see the section of the catalogue relative to Teacher Certification Programs.

DESCRIPTION OF COURSES

SOCIOLOGY

123. Minorities in American Society. (Soc 123 Minorities) (3-0) Credit 3.

I and II. A consideration of the significance to American Society of the presence of minorities, with special emphasis upon its meaning in relation to the present situation of the United States in world affairs. The course is an introduction of the sociology of dominant-minority statuses, and efforts both at maintaining and changing the status quo. The course is offered at the freshman level as one of the approved social science courses for fulfilling the general education requirement of the college. A basic text and extensive references are used.
262. Principles of Sociology. (See 262 Principles) (2-0) Credit 2. I and II. A survey of elementary sociological principles, geared to persons not selecting sociology as a major area for concentration. The course is open to persons of any classification, and no prerequisite is required.

263. General Sociology. (Soc 263 General) (3-0) Credit 3. I or II. This course is offered at the sophomore level and is considered as the basic course for majors in sociology and social service. Attention is given to effects of group life on human behavior as well as portraying the interrelations of personality, group and culture. Emphasis is given to sociology as a specific study of society, and as one of the backgrounds upon which areas of applied sociology, such as social work are built. A basic text and extensive references are used; these serve as sources for assigned oral and written reports.

273. Rural Sociology. (Soc 273 Rural) (3-0) Credit 3. I or II. The course aims at analyzing the structure and function of rural society, its people, institutions, communities, and problems. Students taking the course are majors in sociology and agriculture, and are of junior or senior classification. It is the intent of the course to give the students adequate background for working with people who live in rural areas toward a solution of their social and economic problems. Federal and state programs designed to ameliorate the conditions of rural living are introduced to the student. A basic text and extensive references are used.

302. Sociology of Religion. (Soc 302 Religion) (2-0) Credit 2. I. General principles concerning the relationship of religion to society and morals. Religion is viewed as a product of the culture, and a contributor to the development of culture. Particular reference is made to the manner in which American culture has been influenced by the Judaic-Christian heritage. The course is open to persons of junior and senior classification.

303. The Family. (Soc 303 Family) (3-0) Credit 3. I and II. A required course for sociology majors offered at the sophomore level. The family as a universal social institution is the emphasis of the course; such implies an analysis of family organization in various societies and groups. Special attention is given to the American family; family size, member relationships, economic problems, divorce, desertion, and status of women and children. Attention is given to the American family as a primary factor in personality development. A basic text and references are used.

323. Probation and Parole. (Soc 323 Prob & Parole) (3-0) Credit 3. I and II. Probation and parole as forms of treatment in the correctional process. Emphasis on current objectives and practices. For majors and minors, Sociology 263 and Sociology 373 are prerequisites.

333. Social Psychology. (Soc 333 Social Psych) (3-0) Credit 3. I and II. This course is offered at the junior-senior levels and is required for majors and minors in sociology and social service and minors in social psychology. The prerequisite for this course is either an introductory course in sociology or one in psychology. The course is a study of the social factors in personality that analyzes the relationships between social structure and personality. The socialization process including the learning of motives and social roles, and personality development, organizations, and disorganization. Different schools of sociological, psychological, and psychoanalytic thought are given attention. A basic text and extensive reference are used.

343. Modern Social Problems. (Soc 343 Mod Prob) (3-0) Credit 3. II. An analysis of the processes of personal, social, and community disorganization. The course presents the three major points of view for studying social problems; social disorganization approach, individual deviation approach, and conflict of values approach. Contemporary social problems in America are analyzed in terms of contributory factors and programs of reform. Major problems considered are those in the areas of family life, crime and delinquency, minority relations, education, mental health, and poverty. The course is open to persons of junior and senior standing. A basic text and extensive references are used. A paper and report on a major problem area are required.
353. Contemporary Urban Communities. (Soc 353 Urban Comm) (3-0) Credit 3. I or II. A study of the modern city in terms of its social structure and institutional patterns; demographic features and ecological processes. Urbanism as a way of life. Emphasis is given to the social and physical correlates of urbanization. The course is open to persons of junior or senior standing. A basic text and extensive references are used.


372. Social Stratification in America. (Soc 372 Stratification) (2-0) Credit 2. I or II. A consideration of the research findings describing the American class structure. Special attention is given to the various strata, the determinants of membership in these strata, and the motives and attitudes that go with social position and with changes in position.

383. Community Organization. (Soc 383 Community Org) (3-0) Credit 3. I and II. The local community as a social system. The emphases of the course are on techniques for studying the community, and strategies for planned social change. Prerequisite: Sociology 263 and Sociology 343.

401-411. Readings in Sociology. (Soc 401-411 Readings) (1-0) Credit 1. Some of the classical essays and studies in sociology and selected readings in the field.

402. Sociology Seminar. (Soc 402 Seminar) (2-0) Credit 2. Course designed to integrate the major principles and areas of sociology to which the student has been exposed. The course is required for all majors and minors in the department and may not be taken prior to the senior year. Two papers are required.

463. Social Research. (Soc 463 Research) (3-0) Credit 3. II. Techniques of social investigation. Sociology as a science is the theme of the course. Experimental designs are emphasized along with social surveys and case histories as forms of research. Attention is given to library research and the writing of research reports. The student is required to do one piece of research which may be accepted in lieu of the investigative paper required for graduation. The course is open to juniors and seniors.

473. Social Gerontology. (Soc 473 Gerontology) (3-0) Credit 3. I or II. Aging and years of later maturity with respect to social and personal difficulties and opportunities. Aging process and implications for social services. The course is open to persons of junior and senior standing. A basic text and extensive references are used.

483. Juvenile Delinquency. (Soc 483 Delinquency) (3-0) Credit 3. I or II. The nature, extent and conditions giving rise to juvenile delinquency, and actual and proposed corrective programs. Emphasis is placed on the relationship of delinquency to such factors as the home, the school, and community. Sociological, psychological and psychoanalytic theories of causation are considered, sociological approaches viewing the delinquent as a product of delinquent society are emphasized. A basic text and extensive references are used.

SOCIAL SERVICE

373. Introduction to the Field of Social Work. (Soc 373 Social Work) (3-0) Credit 3. I or II. Orientation course in the history and field of social work; casework, group work, community organization, and general social welfare planning. Settings, objectives, and processes of the various areas of casework are given emphasis; emphasis also placed on programs provided under the Social Security Act. Social work as a growing profession accelerated by anti-poverty programs. A basic text and extensive references are used. A paper focusing on an area of social work is required.
403. Introduction to Social Casework. (Soc 403 Casework) (2-2) Credit 3. I or II. The point of view of the social caseworker regarding human relationships; appreciation of needs and problems causing individuals to seek help of social agencies; some understanding of the basic process of social casework practice. Actual cases are assigned as a means of gaining experience in the taking and writing of case histories. A basic text and extensive reference are used.

421. Casework Activities. (Soc 421 Casework Actves) (0-2) Credit 1. II. Planned experiences for working with persons on an individual basis. Required for students having completed Sociology 403.

433. Introduction to Social Group Work. (Soc 433 Group Work) (3-0) Credit 3. I or II. Fundamentals of professional group work; group processes and behavior; interpersonal relations; the contribution of allied fields, leadership programs, and agencies as a background for employment, in-service training, or professional education. Field trip to group work agencies; each student is assigned to a community organization (Boy Scouts, Girl Scouts, Hi-Y). A basic text and extensive references are used.

441. Group Work Activities. (Soc 441 Gr Wk Actves) (0-2) Credit 1. II. Planned experiences for working with groups. A continuation of Sociology 433. Required for students having completed Sociology 433.

453. Supervised Field Work. (Soc 453 Field Work) (3-0) Credit 3. I or II. Limited individual experience and controlled observation with established social agencies where social work techniques previously learned can be applied. Students majoring in social service curriculum and are not applying for teacher certification are assigned to a social agency in the state. A written report of the student’s experiences with the agency is required. Offered at completion of junior year.

The School of Engineering offers four degree granting programs. They are as follows:

1. The Bachelor of Science in Architectural Engineering is provided for the student who has an interest in the theoretical and practical training in Architecture, Planning and Building Construction.

2. The Bachelor of Science in Civil Engineering is provided for the student who completes the curriculum in Civil Engineering. The Civil Engineering Curriculum is organized to provide the student with a thorough foundation in the underlying principles of the basic sciences and the engineering sciences. The curriculum is planned to provide students for design, construction, management and administration of complex engineering systems.

3. The Bachelor of Science in Electrical Engineering is provided for the student who has an interest in understanding and applying electrical, electronic and electro-magnetic phenomena, in the processing of energy to do man's work, in the processing of information to convey man's thoughts and the combination of these processes to increase his effectiveness in the use of available resources. The study of Electrical Engineering is designed to provide a background of basic sciences, engineering sciences, and the analysis and design of representative systems essential to the development of engineering competence.

4. The Bachelor of Science in Mechanical Engineering is provided for the student who is concerned with the management, design, development and manufacture of equipment for energy conversion, and for manufacture of products, tools, vehicles, space systems and a variety of complex mechanisms and systems which affect given tasks. The curriculum includes a strong foundation in the fundamental sciences of chemistry, mathematics and physics, as well as a strong foundation in the engineering sciences.

OBJECTIVES OF THE SCHOOL OF ENGINEERING

The School of Engineering is a community of students, faculty, and administrators dedicated to the advancement and communication of knowledge in the field of engineering. The central activity of the School of Engineering is learning. This is compatible with the official concept and practice of the College. It offers undergraduate programs which are structured for discovery, interpretation and communication of knowledge which are focused upon the development of the potential capabilities and insights in the individual via a mutually shared activity between students and faculty.

The basic philosophy of the School of Engineering is embodied in the commitment of the College to an educational policy in which the complete development of the student as a person is regarded as paramount. What the student knows and what he is and he can do by virtue of his capacities, both tangible and intangible, are regarded as the controlling viewpoints in the educational process.

The goals and major objectives of the School of Engineering are:

1. To provide an engineering education of excellence, for the individual student, by considering his needs and interests as well as societal needs.
2. To undergird engineering education with a strong foundation in the liberal arts; so that the education of the student will prepare him to become a responsible member and leader of society and cause him to achieve a progressive maturity, intellectual, emotional, professional, and social.

3. To search for students and to serve students who have a desire for knowledge and show promise in being innovative as well as being creative and who have the potential for intellectual leadership.

4. To prepare the student for leadership in the practice of his profession by extending his engineering competence into areas of current and societal importance, particularly in those areas for which methodologies and techniques are not yet developed.

5. To attract to an already competent faculty, men and women, who by their distinguished and professional accomplishments, will bring new life and vigor to the process of engineering education and through their research, add to the rapidly growing structure of knowledge.

6. To explore and develop the opportunity for meaningful educational relations for interdepartmental collaboration and interdisciplinary programs throughout the College.

7. To provide programs in education and opportunities which will serve the College community by generating a better understanding of the impact of technology upon society and its future, and to equip young men and women to cope with it.

8. To serve the state and national welfare by raising the general level of engineering competence and achievement, through instruction, research, design and development.

PROFESSIONAL SOCIETIES

The School of Engineering sponsors the following student chapters of the national founding societies which are designed to support; to augment and supplement the educational and professional development of the engineering students. They are as follows:

1. The American Society of Civil Engineers.
2. The Institute of Electrical and Electronic Engineers.
3. The Mechanical Engineering Club of the American Society of Mechanical Engineers.
4. The C. L. Wilson Chapter of the Texas Society of Professional Engineers.

The Prairie View A&M College Branch of the American Society of Civil Engineers (A.S.C.E.) is the student chapter and a part of the national professional society for Civil Engineers. It is open to membership to all engineering students who are majoring in Civil Engineering or to those engineering students who have an interest in Civil Engineering.

The Institute of Electrical and Electronic Engineers (I.E.E.E.) is the professional society which is open for membership, to engineering students who are majoring in Electrical Engineering and to other engineering students who have interests in Electrical Engineering. The chapter is affiliated with the national professional Engineering Society of the Institute of Electrical and Electronic Engineers (I.E.E.E.).

The Mechanical Engineering Club is the student branch which is affiliated with the national professional society of the American Society of Mechanical Engineering (A.S.M.E.). Its membership is comprised of students who are majoring in Mechanical Engineering as well as other engineering students who are interested in Mechanical Engineering.
The C. L. Wilson Chapter of the Texas Society of Professional Engineers is a part of the Student Section of the Texas Society of Professional Engineering (T.S.P.E.) and is affiliated with the National Society of Professional Engineering (N.S.P.E.). Membership is open to all students who are majoring in Engineering.

DEPARTMENT REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING

**MAJOR:** A minimum of 42 semester hours of Architectural Engineering courses including 132, 212, 222, 213, 313, 323, 333, 343, 353, 352, 372, 383, 452, 432, 473, 482 and 6 hours of technical electives which must be numbered 300 and above. Technical electives must be approved by the Department of Chairman and the Dean of Engineering.

Civil Engineering: 321, 373, 413, 433 and 483.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN ARCHITECTURAL ENGINEERING

A minimum of 42 semester hours including General Engineering 113, 132; Civil Engineering 243, 253, 313 and Mathematics 124, 214, 224; Physics 215, 225 and 6 hours of non-technical electives which shall be taken in the humanities and social sciences. Non-technical electives are to be chosen from the approved list of electives and must be approved by the faculty adviser and the department chairman.
COLLEGE REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE
IN ARCHITECTURAL ENGINEERING

A minimum of 46 semester hours from the general education program, including Chemistry 114, 124, English 113, 123, 213, History 173, 183; Political Science 113, 123; Economics 213; Military Science 112, 122, 212, 222, or Naval Science 153, 233, 243, Nursing 111, 121 and Physical Education 111, 121, 211, 221.

A total of 135 semester hours, excluding Military Science 112, 122, 212 and 222 or Naval Science 153, 233, 243 are required for graduation with the Bachelor of Science Degree in Architectural Engineering.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN ARCHITECTURAL ENGINEERING

FIRST YEAR

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SUMMER

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ARCHITECTURAL ENGINEERING TECHNICAL ELECTIVES

- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- General Engineering

DEPARTMENT REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING:

MAJOR: A minimum of 42 semester hours of Civil Engineering courses including 122, 212, 321, 323, 343, 363, 373, 413, 424, 433, 483 and 492, and 10 hours of technical electives which must be numbered 300 and above. Technical electives must be approved by the Department Chairman and the Dean of Engineering.

Mathematics: 413

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN CIVIL ENGINEERING:

A minimum of 50 semester hours including General Engineering 113, 122, 132; Civil Engineering 243, 253, 313, Electrical Engineering 223, Mechanical Engineering 313, and Mathematics 124, 214, 224, Physics 215, 225, and 6 semester hours of non-technical electives which shall be taken in the humanities and social sciences. Non-technical electives are to be chosen from the approved list of electives and must be approved by the faculty adviser and the department chairman.

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COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN CIVIL ENGINEERING:  

46 Semester Hours

A minimum of 46 semester hours from the general education program including Chemistry 114, 124, English 113, 123, 213, History 173, 183, Political Science 113, 123, Economics 213, Military Science or Naval Science, Nursing 111, 121, and Physical Education 111, 121, 211 and 221.

A total of 133 semester hours excluding Military Science or Naval Science are required for graduation with the Bachelor of Science degree in Civil Engineering.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN CIVIL ENGINEERING

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CIVIL ENGINEERING TECHNICAL ELECTIVES

| Civil Engineering | 322 | Civil Engineering | 453 |
| Civil Engineering | 353 | Civil Engineering | 462 |
| Civil Engineering | 362 | Civil Engineering | 463 |
| Civil Engineering | 422 | Civil Engineering | 493 |
| Civil Engineering | 442 | Mechanical Engineering | 443 |

DEPARTMENT REQUIREMENTS FOR THE DEGREE BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING:  

45 Semester Hours

MAJOR: A minimum of 39 semester hours of Electrical Engineering courses including 311, 313, 321, 323, 333, 343, 411, 413, 421, 423, 433, 473, 483, 492, and 6 hours of technical electives which must be numbered 300 and above. Technical Electives must be approved by the Department Chairman and the Dean of Engineering.

Mathematics: 413, 473

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING:

47 Semester Hours

A minimum of 47 semester hours including General Engineering 113, 122, 132; Civil Engineering 243, 253, Electrical Engineering 223, Mechanical Engineering 313, and Mathematics 124, 214, 224, Physics 215, 225, and 6 semester hours of non-technical electives which shall be taken in the humanities and social sciences. Non-technical electives are to be chosen from the approved list of electives and must be approved by the faculty advisor and the department chairman.
COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING:

A minimum of 46 semester hours from the general education program, including Chemistry 114, 124, English 113, 123, 213, History 173, 183, Political Science 113, 123, Economics 213, Military Science or Naval Science, Nursing 111, 121, and Physical Education 111, 121, 211, 221.

A total of 136 semester hours, excluding Military Science or Naval Science are required for graduation with the Bachelor of Science degree in Electrical Engineering.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING

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<td>Economics</td>
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<td>Non-Technical Elective</td>
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ELECTRICAL ENGINEERING TECHNICAL ELECTIVES

| Electrical Engineering | 353 |
| Electrical Engineering | 383 |

| DEPARTMENT REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING: | 43 Semester Hours |

MAJOR: A minimum of 34 semester hours of Mechanical Engineering courses including 112, 223, 321, 323, 333, 412, 413, 442, 453, 463, 473, 492 and 6 hours of technical electives which must be numbered 300 and above. Technical Electives must be approved by the Department Chairman and the Dean of Engineering.

Mathematics: 413
Electrical Engineering 413
Civil Engineering 363

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGINEERING: 50 Semester Hours

A minimum of 50 semester hours including General Engineering 113, 122, 132; Civil Engineering 243, 253, 313; Electrical Engineering 223, Mechanical Engineering 313, and Mathematics 124, 214, 224; Physics 215, 225, and 6 semester hours of non-technical electives which shall be taken in the humanities and social sciences. Non-technical electives are to be chosen from the approved list of electives and must be approved by the faculty adviser and the department chairman.
A minimum of 46 semester hours from the general education program including Chemistry 114, 124, English 113, 123, 213, History 173, 183, Political Science 113, 123, Economics 213, Military Science or Naval Science, Nursing 111, 121, and Physical Education 111, 121, 211 and 221.

A total of 133 semester hours excluding Military Science or Naval Science are required for graduation with the Bachelor of Science degree in Civil Engineering.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN CIVIL ENGINEERING

FIRST YEAR

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<tr>
<td>Chemistry</td>
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<td>English</td>
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<td>General Engineering</td>
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<td>or Naval Science</td>
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<td>Nursing</td>
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SECOND YEAR

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<td>123-212</td>
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<td>History</td>
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<td>or Naval Science</td>
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<td>Political Science</td>
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FOURTH YEAR

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<td>Economics</td>
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CIVIL ENGINEERING TECHNICAL ELECTIVES

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DEPARTMENT REQUIREMENTS FOR THE DEGREE BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING: 45 Semester Hours

MAJOR: A minimum of 39 semester hours of Electrical Engineering courses including 311, 313, 321, 323, 333, 343, 411, 413, 421, 423, 433, 473, 483, 492, and 6 hours of technical electives which must be numbered 300 and above. Technical Electives must be approved by the Department Chairman and the Dean of Engineering.

Mathematics: 413, 473

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING: 47 Semester Hours

A minimum of 47 semester hours including General Engineering 113, 122, 123; Civil Engineering 243, 253, Electrical Engineering 223, Mechanical Engineering 313, and Mathematics 124, 214, 224, Physics 215, 225, and 6 semester hours of non-technical electives which shall be taken in the humanities and social sciences. Non-technical electives are to be chosen from the approved list of electives and must be approved by the faculty advisor and the department chairman.
COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGINEERING:

A minimum of 46 semester hours from the general education program, including chemistry 114, 124; English 113, 123, 213, History 173, 183; Political Science 113, 123; Economics 213; Military Science 112, 122, 212, 222; Nursing 111, 121 and Physical Education 111, 121, 211, 221.

A total of 125 semester hours, excluding Physical Education 111, 121, 211, 221; Military Science or Naval Science and Nursing 111 and 121, are required for graduation with the Bachelor of Science Degree in Mechanical Engineering.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGINEERING

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<td>Non-Technical Elective</td>
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DESCRIPTION OF COURSES

ARCHITECTURAL ENGINEERING

132. Architectural Graphics. (AE 132 Arch Graphic) (0-6) Credit 2. II. Introduction to architectural drawings; preparation for graphically presenting subsequent drawing and design problems; emphasis placed on the study of shades and shadows of geometrical solids and architectural elements; the study of the theory of perspectives as related to architectural presentation. Prerequisite: General Engineering 113.

212-222. Freehand Drawing. (AE 212-222 Frhd Drawing) (0-6) Credit 2. I and II. Development of the student's sensitivity to form. Space, structure, light texture, scale, proportion, and color and of the discipline of rapid, accurate, and explicit visual communication through the various drawing media with subjects taken from architecture, landscape architecture and life models.

213. Elements of Architecture. (AE 213 Elements) (0-9) Credit 3. II. A study of the fundamentals of architectural design by their application and presentation in the original solutions to simple problems in space organization. Prerequisite: Architectural Engineering 212.

313-323. Architectural Design. (AE 313-323 Design I and II) (0-9) Credit 3. I and II. A study of the principles of architectural design, program analysis, the relation of function, structure and methods of construction to architectural space through the original solutions to advanced problems in design.

333-343. History of Architecture. (AE 333-343 History I-II) (3-0) Credit 2. I and II. The development of architecture as related to human habitation; and ancient, medieval, and modern architecture, with special attention to their relevance to current problems in the design of the urban environment. Prerequisites: Junior Standing.

353. Materials and Methods of Building Construction I. (AE 353 Construc­tion) (3-0) I. An introduction course devoted to the properties and uses of traditional, natural and manufactured building materials; a study of the standard methods of construction; to the effect which the nature of materials has upon architectural design; the future possibilities arising from new methods and materials. Visits to buildings under construction are conducted. Prerequisite: Enrollment in Civil Engineering 313.

362. Building Equipment I. (AE 362 Bldg. Equip I) (2-0) Credit 2. I. Fundamentals of mechanical and electrical equipment for buildings and other various mechanical systems that constitute a necessary part of modern buildings. Emphasis is placed upon the house water supply distribution, cold and hot water distribution system, plumbing fixtures, and sanitations. The theoretical and practical consideration of heating and air conditioning are also stressed. Discussion of theory is followed by the application in the form of problems and layouts of equipment and systems for various construction. Prerequisite: Physics 225.

372. Building Equipment II. (AE 372 Bldg. Equip II) (2-0) Credit 2. II. Continuation of Architectural Engineering 362. A study of the principles and characteristics of lighting and light sources, lighting design; electric circuits; electric materials and installation methods; electric wiring design; machinery; sound systems and signaling devices. An introduction to the principles of Acoustics. Prerequisite: Architectural Engineering 362.
383. Materials and Methods of Building Construction. (AE 383 Construction) (3-0) Credit 3. II. As to the fundamentals of the various structural systems; including their structural, economic, and aesthetic values as applied to architecture; the design and drawing of the structural parts of building in wood, steel, masonry and concrete with stress on the usage of various structural forms and materials. Prerequisite: Architectural engineering 353.

432. Architectural Design. (AE Design III) (0-6) Credit 2. II. Advanced Architectural Design and Thesis; the thesis problem summarizes all the student's architectural experiences as an undergraduate; and includes a complete analysis of building types, library research, design presentation and the related structural and mechanical drawings. Prerequisite: Architectural Engineering 323 and Senior Standing.

452. Professional Practice. (AE 452 Practice) (2-0) Credit 2. I. Business and Professional relations in Engineering, the law of Contracts, Agency and the Contractor, Types of Construction Contracts, Bidding Procedures, Analysis and Office Organization, Principles of Comprehensive Engineering Architectural Services, professional ethics and public relations. Prerequisite: Senior Standing.


473. Working Drawings II. (AE 473 Drawings II) (0-9) Credit 3. II. Preparation of complete working drawings in steel and reinforced concrete with stress upon the architectural, structural and mechanical sections of drawings; detailed specifications, quantity surveys, costs estimates, and construction procedures and methods. Prerequisites: Architectural Engineering 462 and enrollment in Civil Engineering 424.

482. Specifications. (AE 482 Specifications) (2-0) Credit 2. A study of the fundamental principles underlying the development of specifications; the purpose and objectives of specifications; the general aspects of Specifications as they relate to Construction Specifications, guide or master specifications, standard specifications, manufacturer's specifications and outline specifications. Emphasis will be placed on the general aspects of specification writing “Construction Specifications.”


CIVIL ENGINEERING

122. Surveying I. (CE 122 Survey I) (0-6) Credit 2. I and II. Use of tape and chain, engineer's level and transit; methods of surveying in field practice. Prerequisites: General Engineering 113 and Mathematics 124. Lab fee: $2.00.

212. Surveying II. (CE 212 Survey II) (0-6) Credit 2. II. Use of tape, transit and level; complete topographic surveys, using the stadia methods and plane table; astronomical observations for azimuth, time and latitude; drafting to topographic maps from field notes. Prerequisite: Civil Engineering 122. Lab. fee: $2.00.

243. Engineering Mechanics I. (CE 243 Mechanics I) (3-0) Credit 3. I and II. Fundamental concepts and principles; vector algebra; and applications; equilibrium of particles and rigid bodies in two and three dimensions, moments
and couples; distributed forces; centroids; moments of inertia, friction, introduction to analysis of structures; cables, virtual work. Prerequisites: Enrollment in Physics 215 and Mathematics 214.

253. Engineering Mechanics II. (CE 253 Mechanics II) (3-0) Credit 3. II. Kinematics and Kinetics of particles and of bodies as applied to engineering problems—Newton's laws of motion; work and energy; impulse and momentum; translations; rotations, plane motion, motion about a point; general motion, periodic motions. Prerequisite: Civil Engineering 243.

273. Shelter Survey Technique I. (CE 273 Shelter I) (2-1) Credit 3. II. Civil Defense Policy and Goals; Role of SST; Problem of Fallout Radiation; Basic Concepts in Structure Shielding; Types and Characteristics of Buildings; Calculating Mass Thickness; Use of Shielding Analysis Methods; Collecting Construction Date and Interpretation of Construction Data; A Field Exercise and Evaluating Shelter Potential (ESP).

313. Mechanics of Materials I. (CE 313 Mechanics) (3-0) Credit 3. I and II. Engineering properties and behavior of standard engineering materials; simple stress and simple strain, stress, strain relationship; torsion and flexure behavior; shear and moment in beams; deflection, double integration and moment area methods; conjugate beams; restraining beams; continuous beams; combined stresses; stress at a point—Mohr's circle of stress. Prerequisites: CE 243 and Mathematics 224.

321. Mechanics of Materials Laboratory. (CE 321 Mec Lab) (0-3) Credit 1. I and II. Determination of selected mechanical properties of several engineering materials including iron-carbon alloys, aluminum alloys, bricks; wood, and plastics; relationship between structure and mechanical properties of these materials; elementary procedures, instrumentation and interpretation of results. Prerequisite: Enrollment in Civil Engineering 313. Lab. fee: $2.00.

322. Mechanics of Materials II. (CE 322 Materials II) (2-0) Credit 2. II. Introduction of bi-axial and tri-axial stress and strain; Mohr's circle of stress; theories of failure; thick wall cylinders; unsymmetrical bending; shear center; columns Euler's formula, other approaches of analysis, energy methods principles of rivet and weld connections, elements of plates and shells analysis; introduction of inelastic behavior. Prerequisite: Civil Engineering 313.

323. Soil Engineering and Foundations. (CE 323 Soil Engr.) (2-3) Credit 3. II. Introduction to soil engineering; identification, classification of soils and application of soil engineering for engineering purposes. Methods of exploration and soil testing required for design of foundations; piles, retaining wall and techniques of soil mechanics measurement. Identification and classification soil; moisture-density relationships, shearing strength, permeability, capillarity and consolidation.

343. Materials Science. (CE 343 Materials) (3-0) Credit 3. I and II. The atomic, molecular and crystalline structure of solids, including description of x-ray analysis, metallography and other methods for determining structure; correlation of structure with the electric, magnetic and mechanical properties and the electronic behavior of both metallic and nonmetallic materials. Prerequisites: Chemistry 124, Physics 225 and enrollment in Civil Engineering 313.


362. Surveying III. (CE 362 Survey III) (1-3) Credit 2. II. Horizontal and vertical alignment for railways and highways, grades reduction; curves, turnouts and earth work, principles of economic location surveys, plans and estimates. Prerequisite: Civil Engineering 212. Lab. fee: $2.00.
363. Fluid Mechanics and Transport Process. (CE 363 Fluids) (2-3) Credit 3. I and II. Fundamentals of fluid mechanics, properties of fluids, conversion principles, fluid statics, basic flow equations, viscous and inviscid flow, laminar and turbulent flow; boundary layer theory; basic concepts of heat transfer; fundamental modes; Conduction, convection, and thermal radiation; application of problems of engineering interests. Prerequisites: ME 313 and Mathematics 413.

373. Structural Analysis I. (CE 373 Analysis I) (2-3) Credit 3. II. Introduction to structural systems; history of structural engineerings; analysis of determinate structures; loads; reaction; stresses; analytical and graphical solutions, trusses and frames of buildings and bridges; influence lines; elements long span structures and cables. Prerequisite: Civil Engineering 313.

413. Reinforced Concrete. (CE 413 Rein Concrete) (2-3) Credit 3. I. Concrete; Ingredients; the effect of water-cement ratio and time; design and analysis of columns; simple beams; T-beams; double reinforced beams; USD and WSD methods; introduction to design of footings; retaining walls and dams; laboratory participation on testing of concrete and its ingredients. Prerequisite: Civil Engineering 313. Lab. fee: $2.00.

422. Hydrology. (CE 422 Hydrology) (2-0) Credit 2. II. Introduction to fundamentals of climate, precipitation, run off, seepage, hydrograph analysis, flood frequency and flood forecasting. Prerequisite: Civil Engineering 364.

424. Sanitary Engineering. (CE 424 San Engr.) (3-3) Credit 4. II. Water requirements and water waste volumens; water sources development of surface and ground water supplies; pumping, transportation and distribution of water, sewerage and drainage systems, examination of water and waste; laboratory testing of water and sewerage; design of treatment plants and systems; treatment processes of water and sewerage; pollution problem. Prerequisite: Civil Engineering 364. Lab. fee: $2.00.

433. Structural Analysis II. (CE 433 Analysis II.) (3-0) Credit 3. I. Continuation of Civil Engineering 373; indeterminate structures; approximate methods of analysis; the principles of virtual work; elastic load method Willhoit-Mohn diagram; Castiglian’s theorems, Maxwell’s law; movement distribution methods, secondary stresses; introduction to modern analysis. Prerequisites: Civil Engineering 373.

442. Engineering Construction. (CE 442 Constr) (2-0) Credit 2. I. Modern Methods of construction history, organization, management, planning and construction machinery; importance of working drawings, programming and economy of good planning; importance of inspection and checks; including visits to works and reports on such visits. Prerequisite: Senior Standing.

453. Transportation Engineering. (CE 453 Transportation) (2-3) Credit 3. I. Transportation development; history; types; highways; investigation geometrical hydraulic, and structural design of highways; construction practices; maintenance laboratory participation on testing of bituminous products and aggregates; Introduction to elements of railways, airways, and waterways. Prerequisite: Civil Engineering 323. Lab. fee: $2.00.

462. Elementary Prestressed Concrete. (CE 462 Pe Concrete) (2-0) Credit 2. II. Introduction to fundamentals of prestressed concrete and modern practice. Prerequisite: Civil Engineering 414.

463. Hydraulic Engineering. (CE 463 Hydraulic) (3-0) Credit 3. I. Application of the principles of fluid mechanics to the control and utilization of water; river flood control, dams, power development, pipe network open channel flow, uniform and non-uniform flow, spillways, and culvert design, and hydraulic model studies. Prerequisite: Senior Standing and Civil Engineering 364.
483. Structural Design. (CE 483 Design) (2-3) Credit 3. II. Continuation of Civil Engineering 433; design of tension and compression members, trusses of building and bridges, rolled steel beams, plate girders, riveted welded and pinned joints; introduction to design of multi-storey frames and plastic analysis; timber; timber structures. Prerequisite: Civil Engineering 433.

492. Senior Engineering Project. (CE 492 Engr. Proj.) (0-6) Credit 2. I and II. Independent work on advanced laboratory projects; topics to be chosen by the student in consultation with his major professor. Problems of limited scope, designed primarily to develop research technique. Results of study presented in a formal written report. Prerequisite: Senior Classification and approval of Department Head.

493. Systems Engineering. (CE 493 Systems) (2-3) Credit 3. I and II. Theory of Engineering systems; application of the fundamental principles and techniques of system design; emphasis on parameter optimization as a design method; over-all planning, economy; emphasis given to use of teamwork in system design. Prerequisite: Senior Classification.

ELECTRICAL ENGINEERING


311. Electrical Engineering Laboratory I. (EE 311 EE Lab I) (3-0) Credit 1. I. Operation of basic laboratory-type test and measurement equipment, verification of basic network theorems, volt-ampere characteristics of Semiconductors. Prerequisite: EE 223, Prerequisite or Parallel: EE 313.

313. Network Theory II. (EE 313 Network II) (3-0) Credit 3. I. Lumped parameter linear electrical and analogous system description by differential equations. Classical method of solution; Fourier methods; LaPlace transform methods. Prerequisite: EE 223, Prerequisite or Parallel: Mathematics 413.

321. Electrical Engineering Laboratory II. (EE 321 EE Lab II) (0-3) Credit 1. II. Operational characteristics of transistor amplifier (inverter, emitter-follower, difference, etc.) and special pulse and digital circuits (gates, clocks, multivibrators, Schmitt trigger, etc.). Prerequisite: EE 311, EE 343.


333. Physical Electronics. (EE 333 Phys Elec) (3-0) Credit 3. I. Basic laws of electron motion, physical behavior of charges in solids. Treatment of pn-junction devices, such as the pn diode and the junction transistor. Development of electrical circuit models for the diode and transistor. Prerequisite: EE 223, Prerequisite or Parallel: Mathematics 413.

343. Electronics I. (EE 343 Electronics I) (3-0) Credit 3. II. Diode and transistor, device representation and equivalent circuits. Single-stage amplifier design. Prerequisite: EE 313, Prerequisite or Parallel: EE 333.

383. Pulse and Digital Circuits. (EE 383 Digital) (3-0) Credit 3. I or II. Switching characteristics of devices, clipping and comparator circuits, clamping and switching circuits, monostable multivibrators, negative-resistance devices, astable multivibrators. Prerequisite or Parallel: EE 443 and Senior standing.

411. Electrical Engineering Laboratory III. (EE 411 EE Lab III) (0-3) Credit 1. I. Operational characteristics of D. C. and A. C. machines; rotating amplifiers used for voltage regulation, wave filters, and loss-less transmission lines. Prerequisite or Parallel: EE 413.

413. Electromechanical Energy Conversion I. (EE 413 Conversion I) (3-0) Credit 3. I. Theory of AC DC generators and motors, the operating characteristics and efficiencies of these machines in both single phase and poly-phase categories. Prerequisite or Parallel: Mathematics 413 and Senior Standing.

421. Electrical Engineering Laboratory IV. (EE 421 EE Lab IV) (0-3) Credit 1. II. Operation of laboratory-type microwave equipment and techniques of microwave measurements. Prerequisite or Parallel: EE 483.

423. Electromechanical Energy Conversion II. (EE 423 Conversion II) (3-0) Credit 3. II. Theory of transformer, induction motors and voltage regulators, the operating characteristics and efficiencies of these devices. Prerequisite: EE 413.

433. Electromagnetic Field Theory. (EE 433 Fields) (3-0) Credit 3. I. Vector Analysis, Coulomb's law and electric field intensity, electric flux density, Gauss's law, divergence, energy and potential, conductors and dielectrics, Poisson's and LaPlace's equations. Prerequisite: Mathematics 473 and Senior Standing.

443. Electronics II. (EE 443 Electronics II) (2-3) Credit 3. I or II. Four-terminal active networks transistor as a control device, small signal amplifiers, feedback amplifiers. Prerequisite: EE 343 and Senior Standing.


463. Logic Circuits. (EE 463 Logic) (3-0) Credit 3. I or II. Number systems and codes, Boolean Algebra, logic design, minimization method, NOR and NAND logic implementation, sequential circuits. Prerequisite: EE 343 and Senior Standing.

473. Servomechanisms and Control Systems. (EE 473 Servo) (3-0) Credit 3. II. Dynamic response of physical systems, complex plane analysis, automatic feedback control, stability analysis and control loop design. Prerequisite: Mathematics 473 and Senior Standing.

483. Microwave Circuits. (EE 483 Microwaves) (3-0) Credit 3. II. Wave equation and its solution in waveguides, boundary conditions for electromagnetic fields, discontinuities and impedances in waveguides, microwave resonators, klystron, magnetron and traveling-wave tube. Prerequisite: EE 433.

492. Senior Engineering Project. (EE 492 Engr Proj) (0-6) Credit 2. I and II. Independent work on advanced laboratory projects; topics to be chosen by the student in consultation with his major professor. Problems of limited scope, designed primarily to develop research technique. Results of study presented in a formal written report. Prerequisite: Senior Classification and approval of Department Head.

GENERAL ENGINEERING

112. Engineering Problems. (GE 112 Engr. Prob) (2-0) Credit 2. I. An introduction to the engineering profession; the development of skills and orderly methods of solving problems, emphasizing the engineering methods of
analysis and the use of idealized model systems as the basis for engineering analyses; the application of mathematics to the solution of engineering problems; programming digital computers, using procedural language.


212. Engineering Graphics III. (GE 212 Graphics III) (0-6) I. Technical sketching, advanced study of auxiliary views and sectioning, threads and fasteners, limit dimensioning, drafting standards, working drawings, assembly drawing, graphical design, team problems.

223. Technical Illustration. (GE 223 Illustration) (1-6) Credit 3. II. Principles of translating, orthographic drawings into three dimensional illustration. Freehand techniques and templates are used in developing axonometrics, oblique and perspective illustrations. Techniques of dimensioning and delineations are studied. Shop drawings, catalogue illustrations, exploded view and display assembly drawings are developed. Airbrush techniques. Prerequisites: Drafting 123, 203.

243. Electromechanical Drafting. (GE 243 Electro.) (1-6) Credit 3. II. Electrical and electronic graphic symbols and terminology, study of the basic types of electronic drawing diagrams, block, single line, and schematic lines, values for electronic drawing diagrams and electrical drafting, neatness simplicity and clearness of layout are stressed, development of mechanical chassis and housings are included. Prerequisites: Electronics 113.

313. Structural Drafting. (GE 313 Structural) (1-6) Credit 3. I. The study of structural designs, details and methods of presentation of structural systems that are generally standardized for construction. Principles and methods involved in preparation of working drawings for wood, steel and concrete structures. Prerequisites: Drafting 263.

323. Engineering Economy. (GE 323 Economy) (3-0) Credit 3. I. Evaluation of engineering, alternatives, economic significance of engineering proposals; interest, depreciation, fixed, operating, and other costs, capital management, risks, elements of economic analysis, and forecasting. Prerequisite: Economics 213.

343. Piping Drafting. (GE 343 Piping Dfrt.) (0-6) Credit 3. II. Vocabulary and definition of pipe drafting; fundamental pipe symbols and single and double line drawings, including standard equipment and fittings; dimensioning and isometric pipe drafting; study of flow sheets as related to piping systems; structural systems for pipe supports, and problems in development of a pipe system to include plans, sections, and detail drawings. Prerequisites: Drafting 373.

413. Topographical Drafting. (GE 413 Topo.) (1-6) Credit 3. II. Types of map drawings, symbols, terms, and data used by surveyor's field notes in plotting open transverses; plotting and calculating closed transverses; contour and profile drawings; study of map projection systems. Prerequisites: Senior Standing.

423. Technical Writing and Reports. (GE 423 Tech. Wrtig.) (3-0) Credit 3. I and II. Advanced writing in scientific and technical fields; business correspondence; technical reports and papers. Prerequisite: Senior Standing.
MECHANICAL ENGINEERING


223. Physical Metallurgy. (ME 223 Metallurgy) (2-3) Credit 3. I. Studies of the structure and properties of engineering alloys, physical changes occurring during heat treatment and fabrication of metals. One hour recitation and two hours laboratory a week. Prerequisite: Chemistry 124. Lab fee: $2.00.

313. Thermodynamics I. (ME 313 Thermodyn I) (3-0) Credit 3. I. Transformation of energy, theoretical limitations, second law, absolute temperature, entropy and available energy; properties of gases, liquids, vapors and vapor mixtures. Prerequisites: Mathematics 224 and Physics 215.


323. Thermodynamics II. (ME 323 Thermodyn II) (3-0) Credit 3. II. Continuation of Thermodynamics I, including modern power cycles, fluid flow gas turbine cycles and jet propulsion, refrigeration, and an introduction to heat transfer. Prerequisite: Mechanical Engineering 313.

333. Mechanics of Machinery. (ME 333 Mechanism) (3-0) Credit 3. I. Elements of machinery with references to the transmission of motion, and forces, cams, gears; graphical construction; kinetics; balancing; arrangement in actual machines; velocities, accelerations, working and inertia forces in machine parts; critical speeds and vibrations. Prerequisite: Civil Engineering 253.

343. Internal Combustion Engines. (ME 343 Engines) (3-0) Credit 3. II. Fundamentals of internal combustion engines; cycles capacity, efficiency, thermodynamics, combustion and operating conditions. Prerequisite: Mechanical Engineering 313.

412. Mechanical Engineering Laboratory II. (ME 412 Engr. Lab. II) (0-6) Credit 2. I. Analysis of heat transfer and fluid flow processes, mechanical systems, automatic control, instrumentation, design of experiments and testing mechanical equipment. Prerequisites: Mechanical Engineering 321 and 323. Lab. fee: $2.00.


421. Mechanical Engineering Laboratory III. (ME 421 Engr. Lab. III) (0-3) Credit 1. II. Continuation of Mechanical Engineering 412; Experimental and development testing of Mechanical Equipment. Prerequisite: Mechanical Engineering 412. Lab. fee: $2.00.

423. Thermodynamic Systems Analysis. (ME 423 Thermo Syst) (3-0) Credit 3. II. A study of the thermodynamic analysis of energy conversion with emphasis on design of power plants including the selection of equipment. The course deals basically with the steam plant but also covers gas, hydroelectric and nuclear plants with special emphasis on the economic aspects of the design. Prerequisite: Mechanical Engineering 323.
433. Environmental Engineering. (ME 433 Environmental) (3-0) Credit 3. II. A study of heat transmission, psychometrics, ventilation, air analysis and air conditioning including the design of heating, ventilating, and air conditioning systems. Prerequisite: Mechanical Engineering 313.

442. Machine Design II. (ME 442 Mach Design II) (0-6) Credit 2. II. Design of more complex mechanism, stresses, vibrations, deflections and critical speeds of shafts, gears, cams, springs, bearings, and fasteners; power and motion transmission devices, and an introduction of system design concepts.

443. Engineering Analysis. (ME 443 Engr. Anal.) (3-0) II. The application of fundamental concepts from several areas to the solution of engineering problems. Mathematical statement of the problems. Introduction to analogies and dimensional analysis in problem solving. Analog and digital computer methods.

453. Mechanical Vibration. (ME 453 Vibration) (3-0) Credit 3. I. A general consideration of free and forced vibration of linear and non-linear systems for various degrees of freedom, undamped and damped system, critical speeds, and vibration isolation, and vibration of elastic bodies. Prerequisite: Junior Standing in Engineering.

463. Industrial Management. (ME 463 Ind. Man.) (3-0) Credit 3. II. Problems of Industrial Executive; Organization, plant location; selection and Arrangement of buildings and Equipment; production planning and control; Simplification and standardization; control of inventory and cost; personnel problems, and business policy.


492. Senior Engineering Project. (ME 492 Engr. Proj.) (0-2) Credit 2. I and II. Independent work on advanced laboratory projects, topics to be chosen by the student in consultation with his major professor. Problems of limited scope designed primarily to develop research technique. Results of study presented in a formal written report. Prerequisite: Senior Classification and approval of Department Head.

493. Aircraft and Missile Propulsion. (ME 493 Propulsion) (3-0) Credit 3. II. Analysis of aircraft and missile propulsion systems; fundamentals of jet propulsion, including rocket engines. Prerequisites: Mechanical Engineering 323 and Mathematics 413.
The School of Home Economics offers two undergraduate degree programs.

1. The Bachelor of Science degree in Dietetics is provided for the student who has an interest in therapeutic and administrative dietetics, and the planning, organization and administration of food services. This degree program meets the American Dietetic Association requirements for hospital internship and American Dietetic Association Membership.

2. The Bachelor of Science degree in Home Economics is provided for the students with a major interest in Child Development and Family Relationships, Clothing and Textiles and Home Economics Education. The program in Home Economics Education is approved by the Texas Education Agency under Plan III which certifies one for teaching the broad field of homemaking in Texas high schools. Under Plan III, one is required to have one teaching field, only.

The School of Home Economics offers two graduate degree programs, the Master of Education and the Master of Science Degree with a major in Home Economics Education. Students desiring to do so may elect a graduate minor in Home Economics. These degree programs are administered through the Graduate School. Consult the Graduate School Catalog for specifics regarding these programs.

OBJECTIVES OF THE SCHOOL OF HOME ECONOMICS

The purpose of the program in the School of Home Economics is threefold in nature: (1) to provide a liberal education in the social and natural sciences, and the humanities; (2) to provide specialized instruction based upon a synthesis of knowledge from these areas of learning as preparation for professional careers primarily concerned with the well-being of individuals, families, and homes; and (3) to provide instruction in a common comprehensive core of subject matter important to the development of understandings and appreciations which undergird the students' special contribution to the program.

The Home Economics program offers students specialization leading to a profession, graduate study or personal satisfaction. Many students, both men and women, apply their unique training in meeting the challenge of family life today and tomorrow through business and industry, science, communications, design, service to children and families, education and research. These areas offer a wide choice of employment opportunities as related to the basic needs of people and creative work designed to help meet these needs.

PROFESSIONAL SOCIETIES

Beta Epsilon Chapter of Kappa Omicron Phi National Home Economics Honor Society was installed on the College campus in 1963. All students with a major or minor in Home Economics who are second semester sophomores, juniors or seniors, have completed eight semester hours in home economics subjects with a grade point average of 3.00 or higher and a general scholastic average of 2.75 or higher with no grade less than "C", and in the top thirty-five percent of their class are eligible for membership.

The College Chapter of the American Home Economics Association is open to all Home Economics majors, providing membership in the national, state and local organization.
SCHOOL REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS:

**MAJOR:** A minimum of 30 semester hours of Home Economics courses including Art 113; Home Economics 103, 133, 143, 223, 243, 283, 313, 353, 403.

A minimum of 38 semester hours of Child Development and Family Relationships courses including Child Development 223, 302, 323, 342, 363, 403, 414, 433, 453; Home Economics 123, 303, 373, 483 and 6 additional hours of electives.

Education 313, 343
Sociology 303, 493

**MINOR:** A minimum of 18 hours in Child Development and Family Relationships courses consisting of Child Development 323, 453; and Home Economics 123, 303, 373, 483.

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Mathematics 173, 183</td>
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<tr>
<td>Chemistry 114, 124</td>
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<tr>
<td>History 173, 183</td>
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<tr>
<td>Political Science 113, 123</td>
<td></td>
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<tr>
<td>Economics 203</td>
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<tr>
<td>Nursing 111, 121</td>
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<tr>
<td>Physical Education 111, 121, 211, 221</td>
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</table>

A total of 129 hours, excluding physical education practice and Military Science or Naval Science, is required for graduation with the Bachelor of Science degree in Home Economics with a major in Child Development and Family Relationships.

Students interested in teacher certification in homemaking may complete additional courses as listed in Home Economics Education. For specifics use Certificate Programs in the Teacher Education section of the catalog.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

**FIRST YEAR**

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<td>Home Economics</td>
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<tr>
<td>Mathematics</td>
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<td>Nursing</td>
<td>111-</td>
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<tr>
<td>Physical Education</td>
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**SECOND YEAR**

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<td>Economics</td>
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<td>Home Economics</td>
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**THIRD YEAR**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Child Development</td>
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<td>Child Development</td>
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<td>Economics</td>
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<tr>
<td>Special Education</td>
<td>313-</td>
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<tr>
<td>Electives</td>
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</tbody>
</table>
SCHOOL REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN CLOTHING AND MERCHANDISING 96-97 Semester Hrs.

MAJOR: A minimum of 24 semester hours of Home Economics courses including Home Economics 113, 103, 143, 223, 283, 313, 353, 373. A minimum of 28 semester hours of Clothing and Merchandising courses including Clothing 103, 133, 312, 343, 403, 423, 433, 443; Design 213, 322; and 17-18 additional hours in a minor area.
Architectural Engineering 212
Business Administration 213, 323, 343
English 373
Biology 304
Chemistry 314
French 113
Summer Field Experience at end of Junior Year

MINOR: A student may choose from among the following.

1. A minimum of 18 hours in Clothing courses consisting of Home Economics 113; Clothing 103, 133, 303, 403, 443. This minor may not be elected by Clothing and Merchandising majors.

2. A minimum of 17 hours in Visual Communication Design courses including Home Economics 113 or Design 123, 133, 243, 253; Printing 102; Crafts 113. Clothing and Merchandising majors should substitute Design 123 for Home Economics 113.
3. A minimum of 18 hours in Interior Design courses consisting of Design 203, 243, 303, 313, 403, 423.

4. A minimum of 16 hours in Related Act courses consisting of Home Economics 113, Design 123, 243, 313, 322. Clothing and Merchandising majors should substitute Crafts 113 and Design 133 for Home Economics 113 and Design 322.

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN CLOTHING AND MERCHANDISING

<table>
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<tr>
<th>Subject</th>
<th>Hours</th>
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<tr>
<td>English</td>
<td>113, 123, 213, 223</td>
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<td>Mathematics</td>
<td>173, 183</td>
</tr>
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<td>Chemistry</td>
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<td>History</td>
<td>173, 183</td>
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<td>Political Science</td>
<td>113, 123</td>
</tr>
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<td>Economics</td>
<td>203</td>
</tr>
<tr>
<td>Nursing</td>
<td>111, 121</td>
</tr>
<tr>
<td>Physical Education</td>
<td>111, 121, 211, 221 or equivalent in Restricted Physical Education</td>
</tr>
<tr>
<td>Military Science</td>
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<tr>
<td>Physical Education</td>
<td></td>
</tr>
<tr>
<td>Naval Science (men)</td>
<td></td>
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</table>

A total of 139-140 hours excluding physical education practice, military science, and summer field experience is required for graduation with the Bachelor of Science degree in Home Economics with a major in Clothing and Merchandising.

Students interested in Teacher certification in homemaking may complete additional courses as listed in Home Economics Education. For specifics see Certificate Programs in Teacher Education section of the catalog.
CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN CLOTHING AND MERCHANDISING

FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Chemistry</td>
<td>114-</td>
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<tr>
<td>Clothing</td>
<td>103-</td>
<td>133</td>
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<tr>
<td>Home Economics</td>
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<td>English</td>
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<td>123</td>
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<tr>
<td>Home Economics</td>
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<td>143</td>
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<tr>
<td>Mathematics</td>
<td>173-</td>
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<tr>
<td>Nursing</td>
<td>111-</td>
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<tr>
<td>Physical Education</td>
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SECOND YEAR

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<tbody>
<tr>
<td>Architecture</td>
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<td>223-</td>
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<tr>
<td>French</td>
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<td>113-</td>
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<tr>
<td>History</td>
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<td>173-</td>
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<tr>
<td>Mathematics</td>
<td></td>
<td>183-</td>
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<tr>
<td>Political Science</td>
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<td>113-</td>
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<tr>
<td>Psychology</td>
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<td>113-</td>
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<tr>
<td>Physical Education</td>
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THIRD YEAR

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<tbody>
<tr>
<td>Biology</td>
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<tr>
<td>Business Administration</td>
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<tr>
<td>Chemistry</td>
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<tr>
<td>Design</td>
<td>213-</td>
<td>322</td>
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<tr>
<td>English</td>
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<tr>
<td>Home Economics</td>
<td>313-</td>
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<tr>
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<td>Home Economics</td>
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FOURTH YEAR

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<tr>
<td>Clothing</td>
<td>312-</td>
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<tr>
<td>Clothing</td>
<td>403-</td>
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<tr>
<td>Clothing</td>
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<td>433-</td>
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<tr>
<td>Electives</td>
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<td>443-</td>
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SCHOOL REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN DIETETICS WITH A MAJOR IN FOOD NUTRITION AND INSTITUTIONAL ADMINISTRATION

MAJOR: A minimum of 30 semester hours of Home Economics courses including Art 113; Home Economics 103, 123, 133, 283, 313, 353, 373, 403; Home Economics Education 363. A minimum of 34 semester hours of Food, Nutrition and Institutional Administration courses including Home Economics 143, 223, 423; Foods 303, 422, 403, 443; Commercial Foods 215, 233; and 3 additional hours of electives. Biology 304, 334 Business Administration 253 Chemistry 314, 434 Economics 343 Education 343 Sociology 303

MINOR: A minimum of 17 hours of Food and Nutrition courses consisting of Foods 143, 223, 243, 413, 422, 423.

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN DIETETICS WITH A MAJOR IN FOOD NUTRITION AND INSTITUTIONAL ADMINISTRATION

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<tr>
<th>Course</th>
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<td>Mathematics</td>
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<td>Chemistry</td>
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<td>History</td>
<td>173, 183</td>
</tr>
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<td>Political Science</td>
<td>113, 123</td>
</tr>
<tr>
<td>Economics</td>
<td>203</td>
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<tr>
<td>Nursing</td>
<td>111, 121</td>
</tr>
<tr>
<td>Physical Education</td>
<td>111, 121, 211, 221</td>
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<tr>
<td>Military Science or Naval Science (men)</td>
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A total of 135 hours excluding physical education practice and military science is required for graduation with the Bachelor of Science degree in Dietetics.
The program in Food, Nutrition and Institutional Administration meets American Dietetic Association requirements for hospital internship and American Dietetic Association membership.

Students interested in teacher certification in homemaking may complete additional courses as listed in Home Economics Education. For specifics see Certificate Programs in the Teacher Education section of the catalog.

**CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN DIETETICS WITH A MAJOR IN FOOD, NUTRITION AND INSTITUTIONAL ADMINISTRATION**

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
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<tbody>
<tr>
<td>Art</td>
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<td>-113</td>
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<td>Chemistry</td>
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<td>English</td>
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<td>Home Economics</td>
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<td>Physical Education</td>
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<tbody>
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<td>Biology</td>
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<td>Commercial Foods</td>
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REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN HOME ECONOMICS WITH A MAJOR IN HOME ECONOMICS EDUCATION

Home Economics majors who plan to teach homemaking should follow the Teacher Certification Program which is a Plan III program, approved by the Texas Education Agency, and which makes one eligible for certification in the broad field of homemaking, grades 7-12. For specifics see Certificate Programs in the Teacher Education section of the Catalog.

DESCRIPTION OF COURSES

EARLY CHILDHOOD EDUCATION

Specialization in this department prepares students for nursery school and elementary school teachers, supervisors, and directors.

The purpose of this department is to give students an understanding and appreciation for children. The nursery school children, ages two to five, kindergarten and elementary school children, offer unique opportunities to observe child life at the various age levels.

It is recommended that the student have a general background in home economics, but students with training in psychology, sociology, elementary education, and nursing may be accepted.

Students are advised to select courses with assistance of their advisers or the Dean.

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

223. Expressive Materials. (Ch Dv 223 Materials) (3-0) Credit 3. Principles underlying the selection and use of materials for children to 12 years of age; evaluation and utilization of varied media; the creative process as seen in the various development stages. Experimentation with paint, clay, chalk, crayon, paper, wire and other materials.

302. Children's Literature. (Ch Dv 302 Literature) (2-0) Credit 2. II. Literature as a resource in the child's life; evaluation of pictures, books, stories, poetry and verse for children two to twelve years of age; an analysis of principles involved in guiding children in experiences in literature.

303. Nursery School Observation and Participation. (HE 303 Observation) (1-4). Credit 3. I or II. Study, observation and evaluation of changing practices in nursery school activities and procedures; an analysis of relationships between individual needs and group structure, analysis of current techniques for teachers and parents; emphasis on theories and trends guiding early childhood education curriculum; practical experiences in working with parents, record and reports; directed observation and laboratory experience in guiding young children.

323. Parent Education. (Ch Dv 323 Parent Edu) (3-0) Credit 3. II. A study of parent needs in relation to children; consideration of child rearing practices, group experiences for parent and child, and role performance of the parent-teacher; analyses of methods, materials and literature used in working with parents; description and analysis of parent education activities; principles and procedures in instruction and evaluation in parent education; planning and organizing parent education.

342. Space and Equipment for Preschool Education. (Ch Dv 342 Pre-Sch Equip) (2-0) Credit 2. Principles underlying provision and utilization of space; selection and use of equipment for indoor and outdoor activity; consideration of the effect on the development of children.

363. Theory and Guidance of Play. Ch Dv 363 Play Theory) (3-0) Credit 3. Theory of guidance of play activities with special emphasis on art, music, drama and science. Laboratory experiences with young children.
373. Child Development and Guidance. (HE 373 Ch Guidance) (3-0) Credit 3. A study of the physical and behavioral aspects of development; an analysis of changes in child's use of psychological equipment; study of the influence of interpersonal relationships—home, family and community—upon child behavior and development; analysis of the influence of social structure and cultural values upon attitudes toward child-bearing and child-rearing, study of developmental tasks of infancy and early childhood; the significance of those characteristics in changing behavior and shaping the individual personality; study of the implications of these aspects of development for guidance; emphasis on the child from conception to five years. Open to non-majors.

414. Problems in Observation and Participation in Nursery School. (Ch Dv 414 Problems) (1-6) Credit 4. I or II. Supervised participation and teaching experience with growing children in nursery school; some experience to be earned in selected off-campus nursery schools and organized groups in the community. Continuation of Ch Dv 303.

433. Principles of Nursery-Kindergarten Education. (Ch Dv 433 Principles) (3-0). Trends, basic principles and curriculum planning for the group education of preschool children.

453. Problems in Child Development. (Ch Dv 453 Child Dvlp) (3-0) Credit 3. I. A study of the development of the child from five to twelve years of age; and analysis of essential features of an expanded social environment; a study of family influence and sources of anxiety and conflict, consideration of factors instrumental in adjustment to school and intellectual development; emphasis upon techniques of child guidance and adult interaction; a brief overview of adolescence. Prerequisite: Ed 343, Ch Dv 373.

463. Program Organization, Methods and Materials. (Ch Dv 463 Program Org) (3-0). Essential procedures in administration and programming for young children (including space, equipment, health protection and supervision); methods and materials appropriate to preschool education; relating theoretical knowledge concerning children to educational techniques; differences between individual children and between children of different backgrounds as these affect the methods used with them. Field trips to selected children's centers.

CLOTHING AND MERCHANDISING

103. Elementary Textiles. (HE 103 Elem Text) (1-4) Credit 3. I. A study of fibers, yarns and fabric structure, dyes and finishes of fabrics; analysis of recent fiber and finish developments; analysis of properties of textiles in relation to use with emphasis on aesthetic qualities, mechanical properties, degradation factors, launderability and clearability; analysis of art and economic principles applicable to a survey of textiles; considerations of trends in textile consumption. Open to non-majors. Lab. fee: $2.00.

133. Clothing for the Family. (HE 133 Family Clo) (1-4) Credit 3. A study of aesthetic and economic factors in the selection of clothing designs, fabrics and colors for the individual and the family; principles of clothing construction and their application to various fabrics and designs; concepts essential for application of psychological and sociological significance of clothing; experience in the use of commercial patterns and a variety of construction techniques; use and care of clothing construction equipment. Open to non-majors. Lab. fee: $2.00.

312. Fabric in Home Furnishings. (Clo 312 Fabrics) (1-2) Credit 2. A study of the use of color, design, textures, and accessories in household fabrics; a survey of types and qualities of widely used textile furnishings such as sheets, blankets, towels, table linen, drapery and upholstery fabrics, and curtains; analysis of manufacturing and marketing methods essential to production and distribution of textile furnishings; consideration of federal and state legislation pertaining to specifications, standards, sale and use of textile furnishings; application of knowledge of the fiber, finish and processing to questions of price, end-use and maintenance. Offered alternate years. Lab. fee: $2.00.
343. Advanced Clothing Problems. (HE 343 Adv Problems) (1-4) Credit 3. Pattern study, selection and fitting for individuality in dress using a variety of fabrics; techniques of tailoring and consideration of criteria for selection of ready-made tailored garments; an analysis of the place of construction as a form of creative expression; some experience with power sewing equipment.

402. Clothing Clinic. (Clo 402 Clinic) (0-4) Credit 2. I or II. Experience in clothing construction, fitting and designing for customers; use of line, color and texture in developing becoming costumes for different types of individuals; manipulation of fabrics to complement individual personality; analysis of problems involved in professional clothing construction.

Clothing 403. Clothing Design Analysis. (Clo 403 Design Anal) (0-6) Credit 3. I or II. Adaptation of standard patterns to individual proportions, creative interpretation and application of dress design terminated in finished garments through the media of flat pattern and draping.

Clothing 433. Fashion Merchandising. (Clo 433 Fashion) (3-0) Credit 3. Fashion as a social force, the ready-to-wear market, current developments in the field of textiles and clothing and their relation to satisfying consumer needs.

423. Advanced Textiles. (Clo 423 Adv Textiles) (1-4) Credit 3. A study of the nature of raw materials; economic, chemical and physical applications involved in their manufacture and use; methods and significance of physical testing; discussion and use of equipment for evaluation of physical and chemical properties of fibers and fabrics; comparison of properties of contemporary evaluation of textiles with emphasis on legislation and trade practices. Prerequisites: Chem 114, 124, 314. Offered alternate years. Lab. fee: $2.00.

443. Economics of Clothing. (Clo 443 Economics formerly Consumer Economics) (3-0) Credit 3. A study of consumer problems in textiles and clothing; problems in clothing for the family; patterns of expenditures for apparel and their significance for consumption, distribution and production of clothing; use of family resources to meet clothing and textile needs to secure maximum satisfaction and serviceability. Prerequisites: Clo. 103, H.E. 283, Econ 203 or 213. Required for senior level clothing and textiles majors; may be elected by other students.

DESIGN

113. Design. (HE 113 Design I) (1-4) Credit 3. I. Basic design principles applied to everyday living; a study of relationship of sociological, anthropological and psychological principles to current perspective in related art; emphasis on art appreciation; translation of theoretical concepts of space, pattern, texture, line and color into practice by relating clothing and textiles, house planning, furnishings and equipment, foods and nutrition, child development, home management and family living to art in daily life. Open to Non-Majors. Lab. fee: $2.00.

123. Design. (Design 123 Design II) (1-4) Credit 3. II. Basic design principles applied to composition; the importance of good design, materials and techniques; a study of form and function, applied design; a study of color properties, pigments, mixture, accents, dominance, subordination; an analysis of design motifs and organization; planning the design and expanding design experiences through compositions. Open to Non-Majors.

133. Crafts. (Design 133 Crafts) (0-4) Credit 2. II. Creative design through a variety of crafts; a study of periods, cultures, techniques and forms of craft design; emphasis on the relationship of design quality to workmanship; illustration of an experimentation with craft techniques. Open to non-majors. Lab. fee: $2.00.

Design 203. Fundamentals of Space Planning (203 Space PI) (1-4) Credit 3. The interrelationship of fundamental principles of design and human and
social factors as applied to the planning of interiors for residential and related uses; principles of space arrangement as influenced by needs and function.

213. Figure Drawing. (Design 213 Figures) (0-6) Credit 3. I. Fundamentals of structure and anatomy; a study of the human figure to establish a sense of proportion and relationships; treatment of volume as related to figure; a study of perspective, balance, action, and of figure variations; consideration of figures at various age levels; a study of use of photography and models. Lab. fee: $2.00.

Design 243. Visual Communication Design I. (Design 243 V Com I) (1-4) Credit 3. Development of knowledge and skills in the application of color, lettering, typography, and graphic technology to diverse two and three-dimensional graphic communication problems; and introduction to portfolio layout.


Design 303. Fundamentals of Interior Design. (Design 303 Fund Int) (1-4) Credit 3. Problems in color, scale, texture and design applied to planning residential interiors as influenced by individual and family needs. Problems in materials selection, space planning, selection and arrangement of furniture, lighting and color.

Design 313. Form, Structure and Space. (Design 313 Form) (1-4) Credit 3. Form development and relationships, basic structural systems, the characteristics of volumes and space; problem solving through the use of simple materials, paper, wood, metal, and plastics. An introduction to functional problems in interiors, housing and furniture.

322. Costume Design. (Design Costumes) (0-4) Credit 2. I. A flexible survey of essentials of costume designing; analysis of the fashion figure and features; a study of the history of dress as associated with art, history and ethnology; an analysis of national costumes as sources of inspiration for design; study of fashion layout and design. Offered alternate years. Lab. fee: $2.00.

Design 403. Historic Furniture and Interior Design. (Design 403 Hs Furn) (3-0) Credit 3. A study of the historical development and change in furniture and interiors from man's earliest expressions to the present as they reflect the changing cultural patterns of Western civilization. Field trip.

Design 423. Environmental Analysis: Person, Activity, Space (Design Env Anal) (3-0) Credit 3. The study of the ways in which the physical aspects of the spaces of personal territory of the individual affect one's effort and pattern of activities; human costs of work and the relation of these to the reduction of quantitative adaptation to man-made objects and environments. Implications for interior space, activities and choice of products for efficient, safe and comfortable human use.

FOOD AND NUTRITION

143. Food and Nutrition. (HE 143 Nutrition) (2-2) Credit 3. Fundamental knowledge of nutrition and its relation to the total health picture of the individual, the family, and community health; an analysis of the functions and interrelationships of nutrients in metabolism and their sources in food as it is consumed; discussions of the food needs of persons of different ages; analysis of dietary requirements for maintenance and growth; application of nutrition principles to the significant relationships between food habits and health. Open to non-majors. Laboratory experiences involve application of nutrition principles in solving selected problems. Lab. fee: $2.00.

223. Food Principles and Preparation. (HE 223 Preparation—formerly Family Nutrition) (1-4) Credit 3. I or II. Study and discussion of current nutrition concepts in relation to family food needs; study of basic ingredients,
techniques and scientific principles such as hydration, crystalization, leavening and emulsions, underlying the preparation of foods to yield standard quality products; study of fundamental processes of cookery. Prerequisite: Food 143. Lab. fee: $2.00.

243. Meal Management. (HE 243 Meal Plan) (1-4) Credit 3. II. Management principles applied to planning, marketing, preparing and serving palatable, nutritious and attractive meals for families and guests at various economic levels; application of work simplification techniques including convenient arrangement of work areas, organization of work methods, simplification of standards and short cuts to management problems in family and guest meals; study of table service and appointments. Prerequisites: Ed 143, 223. Lab. fee: $2.00.

303. Techniques and Principles of Demonstration. (Fds 303 Demonstrat) (1-4) Credit 3. I or II. A study of purposes, techniques, uses and values of the lecture-demonstration in foods and nutrition; analysis of fundamental factors in planning, organizing and presenting a demonstration, application to teaching, business, hospital dietetics. Lab. fee: $2.00.

403. Experimental Cookery. (Fds 403 Cookery) (1-4) Credit 3. I or II. A study of the influence of temperature, time, kind and proportion of ingredients, and manipulative methods on foods; readings and reports of scientific literature in experimental foods; special units on food experimentation and comparison of commercial and home products; application of scientific principles in the interpretation and evaluation of products. Primarily for senior food and nutrition, institutional administration majors; other students with instructor's permission. Prerequisites: Fd 223, Chem 114, 124. Lab. fee: $2.00.

413. Individual Problems in Foods and Nutrition. (Fds 413 Problems) Credit 3. II. Advanced course for students wishing to conduct studies or experiments in special phases of Foods and Nutrition. Proposals prepared by students and presented to instructor for approval. Students work independently seeking guidance as necessary. For seniors. Lab. fee: $2.00.

423. Advanced Nutrition. (HE 423 Adv Nutritn) (2-2) Credit 3. II. A review of the fundamentals of human nutrition; a comprehensive study of the value of carbohydrates, fats, proteins, minerals and vitamins in metabolism; dietary calculations and evaluation of nutritional status; a study of newer developments in nutritional science and their effects on health and efficiency; considerations of the significance of dealing with international nutrition problems in health education; readings and reports on current research literature. Prerequisites: Fds 113, Biol 304, Chem 434 (or concurrent). Lab. fee: $2.00.

443. Diet in Health and Disease. (Fds 443 Diet) (2-2) Credit 3. A study of principles involved in diet for healthy and abnormal individuals; emphasis on selection and quality of nutrients in the normal general diet or modified therapeutic diet to meet the physiological and psychological needs of the patient and to conform to his sociological background; a study of the relationship of diet care to total nursing care, preparation of students to interpret principles of good nutrition to patients in both preventive and therapeutic situations including standards of good nutrition, marketing of food, budgeting the food dollar, and the preparation and service of food. Prerequisites: Fds 113, Fds 223, Fds 423, Chem 434, Biol 304.

HOME ECONOMICS EDUCATION

313. Developing a Functioning Program in Home Economics. (HE Ed 313 Program Dvlp) (3-0) Credit 3. A study of the features of general and vocational home economics program at the secondary level; procedure involved in planning, managing and financing departments; evaluation of services rendered in-school and out-of-school youth and adults; determining scope and sequence of content in home economics classes, and the choice of essential learnings appropriate for use in secondary school; analysis of space and equipment needs and utilization to maximize student learnings.
363. Special Methods. (HE Ed 363 Spec Methods) (3-0) Credit 3. I or II. A study of methods and materials for teaching secondary home economics; development and organization of materials; selection, use, and evaluation of teaching techniques utilizing basic tenets of the concept approach as criteria; emphasis on psychological principles with educational application. Prerequisites: Ed 334; HE Ed 313; Ed 313 (Concurrent).

406. Student Teaching in Home Economics. (HE Ed 406 Student Tchg) (6-0) Credit 6. I or II. Supervised teaching of home economics in assigned teaching centers for a period of nine (9) weeks.

GENERAL HOME ECONOMICS

123. Family Life. (HE 123 Family Life) (3-0) Credit 3. II. A study of the interpersonal relationships of the individual and his family through various stages of the life cycle; a functional approach to the study of courtship, marriage, and parenthood in modern American society; and examination of the foundation and characteristics of the American family; family interaction with social agencies and the community. Open to non-majors.


283. Personal and Family Finance. (HE 283 Finance) (3-0) Credit 3. Specific finance problems confronting individuals and families as social and economic units in the community; analysis of problems related to various stages of the family life cycle, and effect upon managing practices; a study of problems inherent in planning, controlling and evaluating income and expenditures with emphasis on consumer credit, insurance and investment; personal and financial advantages and disadvantages of homemakers employed outside the home. Open to non-majors.

313. General Home Management. (HE 313 Home Mgt) (3-0) Credit 3. Principles of management applied to individual and home problems; a study of the theory of home management and managerial processes; analysis of societal and economic influences on individual and family management; emphasis on effective elements in management including human and non-human resources, values, standards and goals; a study of use of consumer goods and services for effective management; experimentation with work simplification techniques.

353. Housing and Man. (HE 353) (3-0) Credit 3. A study of the physical psycho-social and aesthetic relationships between man and his environment with specific reference to housing; an introduction to research and studies in sociology, psychology and aesthetics correlated with understandings from child development and family relationships; a study of the potentials for enrichment of man’s environment and exploration of developments and trends in housing, building and equipment, living patterns and design. Field trip to furniture mart, home building show, model home displays when feasible. Students are responsible for field trip expenses.

403. Home Management Residence. (HE 403 Residence) (1-4) Credit 3. I or II. Supervised residence laboratory in group living, management concepts and decision-making; specific emphasis upon managerial problems requiring application of principles of effective home management. Experiences include budgeting, food selection, preparation and service, entertainment of guests, providing for purchase and maintenance and efficient use of household equipment, furniture and furnishings; experiences planned at three income levels. Lab. fee: $2.00.

483. The Disadvantaged Family. (HE 483 Disadvantaged) (3-0) Credit 3. Family functioning and role performance in the disadvantaged household; an examination of theories and research. Opportunity for small scale investigation of problem areas.
SCHOOL OF INDUSTRIAL EDUCATION AND TECHNOLOGY

S. R. Collins, Dean
1972-73 Faculty

The School of Industrial Education and Technology offers degrees and certificates in curricula as designated below:

Teacher Education Curricula:
1. Bachelor of Science Degree: Major in Industrial Arts
2. Bachelor of Science Degree: Major in Vocational-Industrial Education
3. Master of Science Degree: Major in Industrial Education
4. Master of Education Degree: Major in Industrial Education
5. Special Certification Courses for Trade and Industrial Teacher
6. Special Certification Courses for Vocational Counselors
7. Special Certification Courses for Vocational Supervisors

Industrial Technology Curricula:
1. Bachelor of Science Degree: Majors in Industrial Technology (4 years non-teaching) in the following curricula:
   - Automotive
   - Building Construction
   - Drafting and Design
   - Electrical
   - Electronics
   - Metal
2. Associate of Science Degree (two-year): Major in the following:
   - Airconditioning and Refrigeration
3. Certificate of Proficiency (two-year): Offering the following curricula:
   - Automotive
   - Building Construction
   - Drafting and Design
   - Electrical
   - Electronics
   - Metal

Technical Education Curricula:
1. Bachelor of Science Degree: Offerings in Industrial Education (non-teaching) in the following curricula:
   - Commercial Foods
   - Food Service Administration
   - Printing
2. Certificate of Proficiency (two-year): Offerings in the following curricula:
   - Brickmasonry
   - Carpentry
   - Commercial Foods
   - Printing
   - Plumbing
3. Certificate of Apprenticeship (one-year vocational rehabilitation): Offerings in the following curricula:
   - Commercial Foods
   - Printing
OBJECTIVES OF THE SCHOOL OF INDUSTRIAL EDUCATION AND TECHNOLOGY

TEACHER EDUCATION CURRICULA

Industrial Arts Teacher Education

The Industrial Arts Curricula are designed to offer experiences for the following purposes: (1) To prepare young men and women as teachers of Industrial Arts Education at the elementary, junior or senior high school levels, (2) To assist persons to become supervisors, coordinators and directors of Industrial Arts programs, and (3) To assist students who might wish to develop a hobby, develop elementary skill in using tools and industrial materials or increase their general understanding, knowledge and appreciation of the industrial world in which they live.

Upon the completion of the prescribed undergraduate curriculum, the student will receive the Bachelor of Science degree. He will be entitled to make application and receive a certificate valid to teach Industrial Arts in any public school in the State.

VOCATIONAL INDUSTRIAL TEACHER EDUCATION

The vocational-industrial program is organized for the following purposes: (1) to prepare teachers of trade and industrial education for the secondary schools; (2) to offer courses to in-service trade and industrial teachers to enable them to meet the certificate requirements under the Texas State Plan for Vocational Education and (3) to provide teacher trainer services in trade and industrial education on a contractual basis for the Texas Education Agency.

A student may qualify for the Bachelor of Science degree with a major in vocational-industrial education by showing satisfactory proof of having three years of experience as a journeyman in a recognized trade or technical field.

INDUSTRIAL TECHNOLOGY CURRICULA

The Industrial Technology Curricula are organized to provide training for students to become technicians and technologists in industry and manufacturing occupations. Students graduating from the two year program are technicians and the technologists are those students graduating from the degree program. Technicians and technologists are employed in positions of technical and semi-professional nature which are found in the area between the skilled crafts and highly scientific professions.

Nature of the Work of a Technician and Technologist

The technician or technologist is an individual who works at a job which requires applied knowledge and applied technical skill. His job usually requires some manipulative skills—those necessary to handle properly the tools and instruments needed to perform the technical task. The technician or technologist is not an engineer nor is he a mechanic. The technician is a specialist who translates the ideas of the scientist into the actual products of industry. The technologist is a foreman, an inspector, a contractor, a proprietor, a supervisor or a manager. They construct, operate, install, maintain, and test those units of industry which require technical skill and a knowledge of basic science beyond that possessed by a mechanic or a machine operator but not as extensive as that which is possessed by the engineer.

Two-Year Technology Program

To earn the Associate Degree or Certificate of Proficiency the student must enroll in one of the courses approved for technician training and complete all of the courses listed in the suggested curriculum outline. Curriculum outlines for each industrial technology curriculum are described on following pages. The normal length of the technician training program is two years.
Upon completion of the certificate program, a student may transfer into one of the four-year programs and earn the Bachelor of Science Degree by fulfilling all requirements of the degree program.

TECHNICAL EDUCATION CURRICULA

The Technical Education Curricula are organized to offer instructional programs for the following purposes: (1) To prepare students to enter various skilled trades and manufacturing industries as foremen, workers, supervisors, technicians or sales personnel; (2) To allow students who cannot afford time or expense of taking a four-year course to take a two-year course and apply their limited time directly to acquiring skill in some industry in order to enable them to enter the labor force as quickly as possible; (3) To provide trade extension or refresher courses to those who wish to extend their knowledge, skill, and efficiency for the purpose of personal improvement, professional advancement, and job promotions, and (4) To provide special technical courses for individuals who have special needs, i.e., industrial rehabilitation students or students who wish to learn only part of a trade such as linotype operation, lettering, motor winding, etc.

One-Year Programs

Special one-year technical training programs are offered to meet the needs of students who are under contract with the Vocational Rehabilitation Division, Texas Education Agency. All rehabilitation students will enroll for a minimum of 14 semester hours during each semester of the regular session and six semester hours during each term of the summer session. Students may earn a Certificate of Apprenticeship in the following technical fields:

- Brickmasonry
- Commercial Foods
- Carpentry
- Metal
- Printing

STUDENT ORGANIZATIONS

The major function of student organizations is to provide opportunities for students to participate and affiliate in local, state and national organizations related to industrial education. In keeping with this purpose, the several student organizations attempt to foster the type of service that will help bridge the gap between the social aspect of living and that of educational attainment. In addition, the student activity programs seek to provide opportunities in organized social outlets which are conducive to the basic philosophy of the School of Industrial Education and Technology. The general objectives of all student organizations and extra-curricular activities within the School are listed as follows:

1. To provide training which allows students to realize the full potentiality in group participation.
2. To provide opportunities for students to increase their abilities to function in the community, the state and the nation.
3. To stimulate a desire for participation in organized activities.
4. To help students realize their potentialities as leaders in a modern industrial society.

HONOR SOCIETIES AND CLUBS

Student organizations currently operating in the School of Industrial Education and Technology are listed below with a brief description of each.

The American Association of Industrial Arts College Student is an affiliate association of the American Industrial Arts Association. The purposes are to promote leadership, fellowship and scholarship through Industrial Arts, and to establish continuity between the Industrial Arts organizations, from the local to the national level.

Membership classifications are Active, Alumni, and Honorary.
American Foundrymen's Society is an industrial society which is based upon developing research, providing technical publications; assistance to members.

Student membership in the American Foundrymen's Society is open to all individuals who are full-time students who have not yet reached their twenty-fifth birthday.

American Society for Metals is an industrial society to further the dissemination of the knowledge of metals to all those interested in any phase of the metal-making or metal-working industries.

Epsilon Pi Tau is an honorary prestige, leadership, and professional fraternity. Membership in Epsilon Pi Tau is open to students and teachers of Industrial Education; administrators in Industrial Education and executives from industry. Undergraduate members are selected from the top ten (10) percent of the junior and senior classes.

The Industrial Education Honor Society is an organization for freshman and sophomore students. Membership qualifications are (1) maintain a high scholastic average, (2) show signs of good leadership.

Prairie View Student Industrial Education Association is an organization which provides professional leadership for all I.E. students. Membership is open to anyone interested in Industrial Education. Membership classifications are: Regular active; Alumni; Honorary.

The Pantheronic Amateur Radio Club is open to all majors in electronics; its purpose is to provide recreational activities in Amateur Communication, and introduce students to amateur communications. Membership classifications are: Temporary (beginning student), regular (students must hold amateur license).
Texas College Industrial Arts Association is an organization for college students majoring in Industrial Arts Teacher Education. One of the chief purposes of the T.C.I.A.A. is to promote good fellowship and a professional attitude among college students.

The major purpose of the Electronics Technology Association is to foster the improvement of baccalaureate degree-level and two-year curricula of Electronics Technology within institutions of higher education. The objectives are: (1) To increase and deepen the interest and knowledge of students enrolled in Electronics Technology, (2) to provide professional orientation to the students so as to enlarge their perspective and appreciation of Electronics Technology, and (3) to make the students aware of more conditions and opportunities in Electronics Technology. Membership is open to students enrolled in Electronics Technology.

The National Association of Industrial Technology shall be to foster the improvement of baccalaureate degree level curricula of Industrial Technology within institutions of higher education. The objectives are: (1) To provide students with opportunities for the development of leadership in the Department, School, College, Civic and Community activities, (2) to widen and deepen the interest and knowledge of students in Industrial Technology, and (3) to provide professional orientation to the students so as to enlarge their perspective and appreciation of Industrial Technology as a profession. Membership is open to all students enrolled in Industrial Technology.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL EDUCATION

Industrial Education majors who plan to teach Industrial Arts should follow the Teacher's Certification Program which is a plan III Program, approved by the Texas Education Agency, and which makes one eligible for certification as a teacher in Industrial Arts, grades seven (7) through twelve (12). For specifics, see Certificate Programs in the Teacher Education Section of the catalogue.
DEPARTMENT REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN
INDUSTRIAL EDUCATION

MAJOR: A minimum of 39 semester hours of Industrial Arts courses, including Drafting 113, 123, 313, 403; Metalwork 113, 123, 313, 343, and Woodwork 121, 113, 214, 223, 314, and a minimum of 12 additional hours taken from: Crafts 153, 233, 243, 313, Electronics 114, 102, 134, 303, Graphic Arts 113, 213, 323, 413, and Power Mechanics 123, 153, 213, 314.

SCHOOL REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN
INDUSTRIAL EDUCATION

Industrial Education 111, 121, 273, 323
Free Electives (6) Minimum may be selected from any academic area.

COLLEGE REQUIREMENT FOR THE
BACHELOR OF SCIENCE DEGREE IN
INDUSTRIAL EDUCATION

A total 134 hours, excluding Physical Education practices and Military Science 112, 122, 212, and 222 or Naval Science 153, 233, 243 is required for graduation with a Bachelor of Science Degree in Industrial Education.

*Home Economics 123, Sociology 123 or Economics 203.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL EDUCATION

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<tr>
<th>FIRST YEAR</th>
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<tr>
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<td>Industrial Education</td>
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<td>112-223</td>
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<td>Sheetmetal</td>
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<tr>
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DEPARTMENTAL REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN VOCATIONAL
INDUSTRIAL TEACHING EDUCATION

MAJOR: A minimum of 24 semester hours of technical courses, including Drafting 113, a Drafting elective and 18 semester hours of technical courses selected from the following technical areas: Automechanics, Building Construction, Crafts, Drafting, Electricity, Electronics, Graphic Arts, and Metal Work.

SCHOOL REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN VOCATIONAL
INDUSTRIAL TEACHER EDUCATION

Industrial Education 273, 323
Audio Visual Education 303
Education 313, 343, 383, 483, 406

COLLEGE REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN VOCATIONAL
INDUSTRIAL TEACHER EDUCATION

English 113, 123, 213, 223
Mathematics 113-123
Natural Science
  Chemistry 114-124, Physics 214, 224
History 173-183 or equivalents
Political Science 113, 123
*Social Science
  Nursing 111, 121
  Physical Education 111, 121, 211, 221
  or equivalents in restricted physical education
  Military Science or Naval Science (men)
*The Social Science requirement is to be selected from one of the following:
  Home Economics 123
  Social Science 113
  Sociology 123

A total of 103 hours, excluding physical education practice and Military Science or Naval Science, is required for graduation with a Bachelor of Science Degree in Vocational-Industrial Education.

CURRICULUM TO BE ARRANGED TO MEET THE NEEDS OF THE STUDENTS, STUDENTS ENROLLING IN VOCATIONAL INDUSTRIAL TEACHER EDUCATION ARE ADULTS WHO WISH TO EARN THE BACHELOR OF SCIENCE DEGREE.

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
AUTOMOTIVE TECHNOLOGY OPTION

MAJOR: A minimum of thirty-two (32) semester hours of technical courses, including Automotive 123, 133, 153, 163, 213, 233, 243, 263, 314, and 324. Also six (6) semester hours of related technical courses.

MINOR: A minimum of twenty-one (21) hours of Automotive Technology drafting courses.
  1. The minor in Industrial Technology consists of Automotive 123, 133, 153, 213, 223, and Drafting 113-123.
SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, AUTOMOTIVE TECHNOLOGY OPTION

**42 Semester Hrs.**

- Drafting 113, 123, 403
- Industrial Education 111, 121
- Applied Science 303
- Mechanical Engineering 463
- Economics 343
- Business Education 132
- Business Education 142
- Business Administration 143
- Business Administration 253
- Business Administration 263
- Business Administration 343
- Business Administration 373
- Business Administration 383


**College Requirements for the Bachelor of Science Degree in Industrial Technology, Automotive Technology Option**

**65 Semester Hrs.**

- English 113, 123, 213, 223
- Mathematics 162, 113, 123
- Natural Science
  - Chemistry 114-124, Physics 214, 224
  - History 173-183 or equivalents
  - Political Science 113, 123
- Business Administration
  - 143-253
  - 263
- Business Administration 343
- Business Administration 373
- Business Administration 383
- Business Administration 313, 403

A total of 133 hours, excluding physical education practice and military science or Naval Science is required for graduation with a Bachelor of Science Degree in Industrial Technology.

**Curriculum for the Bachelor of Science Degree in Industrial Technology, Automotive Technology Option**

### FIRST YEAR

<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
<tr>
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<tr>
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<td>162-113</td>
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<tr>
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<td>112-122</td>
<td>112-122</td>
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<tr>
<td>Military Science (Men) or Naval Science (Men)</td>
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### SECOND YEAR

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<td>123-</td>
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<tr>
<td>Physical Education</td>
<td>211-221</td>
<td>211-221</td>
</tr>
<tr>
<td>Military Science (Men) or Naval Science (Men)</td>
<td>212-222</td>
<td>212-222</td>
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<tr>
<td>Automotive Technology</td>
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<td>153-123</td>
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### THIRD YEAR

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<td>Business Education</td>
<td>123-263</td>
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</tr>
<tr>
<td>Automotive Technology</td>
<td>3 hrs.</td>
<td>3 hrs.</td>
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*Or Equivalents

**HE. 123, Social Science 113, Sociology 123**

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DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF
SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
BUILDING CONSTRUCTION TECHNOLOGY OPTION  
MAJOR: A minimum of forty-two (42) semester hours of technical courses, selected from Carpentry 204, 117, 127, 227, Masonry 113, 123, 227, Drafting 303, 353, 352, Plumbing 113 and Electricity 113. Also three (3) semester hours of related technical courses.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF
SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
BUILDING CONSTRUCTION TECHNOLOGY OPTION  
MAJOR: A minimum of forty-two (42) semester hours of technical courses, selected from Carpentry 204, 117, 127, 227, Masonry 113, 123, 227, Drafting 303, 353, 352, Plumbing 113 and Electricity 113. Also three (3) semester hours of related technical courses.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF
SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
BUILDING CONSTRUCTION TECHNOLOGY OPTION
Drafting 113, 123, 263
Industrial Education 111, 121
Applied Science 303
Mechanical Engineering 463
Economics 343
*Business Education 132
*Business Education 142
Business Administration 143
Business Administration 253
**Business Administration 263
Business Administration 343
Business Administration 373
**Business Administration 383

COLLEGE REQUIREMENTS FOR THE BACHELOR OF
SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
BUILDING CONSTRUCTION TECHNOLOGY OPTION
English 113, 123, 213, 233
Mathematics 162, 113, 123
Natural Science
Chemistry 114-124, Physics 214, 224
History 173-183 or equivalents
Political Science 113, 123
**Social Science
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
Military Science or Naval Science (men)
**Home Economics 123
Social Science 113
Sociology 123

A total of 140 hours, excluding physical education practice and military science or Naval Science, is required for graduation with a Bachelor of Science Degree in Industrial Technology.

*Equivalents: Mathematics 112, Economics 213, Psychology 113, General Engineering 112, and Business Education 312, 322
**Equivalents: Business Administration 313, 403
**SCHOOL OF INDUSTRIAL EDUCATION AND TECHNOLOGY**

**CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, BUILDING CONSTRUCTION TECHNOLOGY OPTION**

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<td>Physical Education</td>
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<td>153-</td>
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<td>or Naval Science (Men)</td>
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<td>153-</td>
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<td>Masonry</td>
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<tr>
<td>Carpentry</td>
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*Or Equivalents
**H.E. 123, Social Science 113, Sociology 123
SCHOOL OF INDUSTRIAL EDUCATION AND TECHNOLOGY

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, DRAFTING & DESIGN TECHNOLOGY OPTION

42 Semester Hours

MAJOR: A minimum of twenty-seven (27) semester hours of technical courses, selected from Drafting 203, 263, 303, 313, 353, 373, 383, 393, 403, 423, and fifteen (15) semester hours of additional courses selected from: Mathematics, Electronics, Metal Technology and Building Construction.

†Required of all Majors (24 Semester Hours)

MINOR: A minimum of twenty-one (21) semester hours of Drafting and Design.

1. The minor in Industrial Technology consists of Drafting 113, 123, 263, 383, 393, 403 and 423.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, DRAFTING & DESIGN TECHNOLOGY OPTION

39 Semester Hours

Drafting 113, 123
Industrial Education 111, 121
Applied Science 303
Mechanical Engineering 463
Economics 343
*Business Education 132
*Business Education 142
Business Administration 143
Business Administration 253
**Business Administration 263
Business Administration 343
Business Administration 373
**Business Administration 383

*Equivalents: Mathematics 112, Economics 213, Psychology 113, General Engineering 112, and Business Education 312, 322

**Equivalents: Business Administration 313 and 403

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, DRAFTING & DESIGN TECHNOLOGY OPTION

65 Semester Hours

English 113, 123, 213, 223
Mathematics 162, 113, 123
Natural Science
Chemistry 114-124, Physics 214, 224
History 173-183 or equivalents
Political Science 113, 123

**Social Science
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
Military Science
or Naval Science (Men)
*Home Economics 123
Social Science 113
Sociology 123

A total of 134 hours, excluding physical education practice and military science or naval science 153, 233, 243, is required for graduation with a Bachelor of Science Degree in Industrial Technology.

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**CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, DRAFTING & DESIGN TECHNOLOGY OPTION**

**FIRST YEAR**

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<td>or Naval Science (Men)</td>
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**THIRD YEAR**

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<td><em>Business Education</em></td>
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**FOURTH YEAR**

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**DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, ELECTRONICS TECHNOLOGY OPTION**

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<th>Requirement</th>
<th>Hours</th>
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<tbody>
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<td>Major</td>
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</table>

**MAJOR:** A minimum of thirty (30) semester hours of technical courses, including Electronics 113, 134, 121, 123, 144, 211, 214, 224, 253, and 263. Also nine (9) semester hours of Mathematics or related technical courses.

**MINOR:** A minimum of twenty-four (24) semester hours of Electronics and drafting courses.

1. The minor in Industrial Technology consists of Electronics 113, 134, 123, 214, 224, and Drafting 113-123.

*Or Equivalents
**H.E. 123, Social Science 113, Sociology 123

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SCHOOL REQUIREMENTS FOR THE BACHELOR OF
SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
ELECTRONICS TECHNOLOGY OPTION

42 Semester Hours

Drafting 113, 123, Drafting 393
Industrial Education 111, 121
Applied Science 303
Mechanical Engineering 463
Economics 343
*Business Education 132
*Business Education 142
Business Administration 143
Business Administration 253
**Business Administration 263
Business Administration 343
Business Administration 373
**Business Administration 383

**Equivalents: Business Administration 313 and 403
COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, ELECTRONICS TECHNOLOGY OPTION

65 Semester Hours

English 113, 123, 213, 223
Mathematics 162, 113, 123
Natural Science
  Chemistry 114-124, Physics 214, 224
History 173-183 or equivalents
Political Science 113, 123
**Social Science
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
Military Science
or Naval Science (Men)
  *Home Economics 123
  Social Science 113
  Sociology 123

A total of 134 hours, excluding physical education and military science or naval science is required for graduation with a Bachelor of Science Degree in Industrial Technology.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, ELECTRONICS TECHNOLOGY OPTION

FIRST YEAR

<table>
<thead>
<tr>
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<tbody>
<tr>
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</tr>
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<td>162-113</td>
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<td>Drafting</td>
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<tr>
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<tr>
<td>Physical Education (Men)</td>
<td>111-121</td>
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<tr>
<td>Military Science</td>
<td>112-122</td>
</tr>
<tr>
<td>or Naval Science (Men)</td>
<td>153-</td>
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<tr>
<td>Business Administration</td>
<td>143-</td>
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<td>Electronics</td>
<td>115-134</td>
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SECOND YEAR

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<tbody>
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<td>Chemistry</td>
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<td>General Engineering</td>
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<tr>
<td>or Naval Science (Men)</td>
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<tr>
<td>Electronics</td>
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THIRD YEAR

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FOURTH YEAR

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<tr>
<td>History</td>
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<tr>
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<td>Applied Science</td>
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<tr>
<td>Electronics</td>
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<tr>
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*Or Equivalents
**H.E. 123, Social Science 113, Sociology 123

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, METAL TECHNOLOGY OPTION

36 Semester Hours

MAJOR: A minimum of thirty (30) semester hours of technical courses, including Machine Shop 113, 123, 213, 343, Welding 113, 123, 213, 223, Foundry 213 and 223. Also six (6) semester hours of related technical courses.

MINOR: A minimum of twenty-one (21) hours of Metal Technology and drafting courses.

1. The minor in Industrial Technology consists of Machine Shop 113-123, Welding 113-123, Foundry 213 and Drafting 113-123.
SCHOOL REQUIREMENTS FOR THE BACHELOR OF
SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY,
METAL TECHNOLOGY OPTION  

Drafting 113, 123, 403  
Industrial Education 111, 121  
Applied Science 303  
Mechanical Engineering 463  
Economics 343  
*Business Education 132  
*Business Education 142  
Business Administration 143  
Business Administration 253  
**Business Administration 263  
Business Administration 343  
Business Administration 373  
**Business Administration 383
SCHOOL OF INDUSTRIAL EDUCATION AND TECHNOLOGY

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, METAL TECHNOLOGY OPTION

65 Semester Hours

English 113, 123, 213, 223
Mathematics 162, 113, 123
Natural Sciences
   Chemistry 114-124, Physics 214, 224
History 173-183 or equivalents
Political Science 113, 123

**Social Science
   Nursing 111, 121
   Physical Education 111, 121, 211, 221 or equivalents in restricted physical education
   Military Science
   or Naval Science (Men)
*Home Economics 123
Social Science 113
Sociology 123

A total of 131 hours, excluding physical education practice and military science or naval science, is required for graduation with a Bachelor of Science Degree in Industrial Technology.

**Equivalents: Business Administration 313 and 403

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY, METAL TECHNOLOGY OPTION

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<tr>
<td>Machine Shop</td>
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SECOND YEAR

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<tr>
<td>or Naval Science (Men)</td>
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<tr>
<td>Welding</td>
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THIRD YEAR

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FOURTH YEAR

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DEPARTMENTAL REQUIREMENTS FOR THE ASSOCIATE OF SCIENCE DEGREE IN AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

36 Semester Hours

MAJOR: A minimum of thirty-six (36) semester hours of Air Conditioning and Refrigeration technology courses, including air conditioning 113, 123, 143, 213, 223, 233, 243, 253, 263, and 9 hours of additional courses which must be Electricity 113, and 123, and Drafting 113.
SCHOOL REQUIREMENTS FOR THE ASSOCIATE OF SCIENCE DEGREE IN AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

43 Semester Hours

Industrial Education 111-121
English 113-123
Mathematics 113-123
Physics 214-224
Nursing 111-121
Political Science 113-123
Sociology 263
Military Science
or Naval Science (Men)
Physical Education 111, 121, 211, 221

CURRICULUM FOR THE ASSOCIATE OF SCIENCE DEGREE IN AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

FIRST YEAR

<table>
<thead>
<tr>
<th>1st</th>
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<tbody>
<tr>
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<tr>
<td>Electricity</td>
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<td>Industrial Education</td>
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<tr>
<td>Military Science (Men)</td>
<td>112-122</td>
</tr>
<tr>
<td>or Naval Science (Men)</td>
<td>153-253</td>
</tr>
<tr>
<td>Nursing</td>
<td>111-121</td>
</tr>
<tr>
<td>Physical Education</td>
<td>111-121</td>
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<tr>
<td>Physics</td>
<td>214-224</td>
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<td>Sociology</td>
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<td>Air Conditioning</td>
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<tr>
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<td>212-222</td>
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<tr>
<td>or Naval Science (Men)</td>
<td>233-243</td>
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<tr>
<td>Physical Education</td>
<td>211-221</td>
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</table>

DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN COMMERCIAL FOODS (VOCATIONAL INDUSTRIAL EDUCATION)

MAJOR: A minimum of twenty-nine (29) semester hours of technical courses, including Commercial Foods 113, 115, 242, 123, 125, 233, 283, 263, 212 and 11 semester hours of additional courses including Foods 143, 423, and 443 Animal Husbandry and summer internship.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN COMMERCIAL FOODS (VOCATIONAL INDUSTRIAL EDUCATION)

35 Semester Hours

Industrial Education 111, 121
Industrial Education 273, 323
Business Administration 143
Psychology 113
Economics 343
Education 313, 343, 383, 406, and 483
SCHOOL OF INDUSTRIAL EDUCATION AND TECHNOLOGY

COLLEGE REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN COMMERCIAL
FOODS (VOCATIONAL INDUSTRIAL EDUCATION) 68 Semester Hours

English 113, 123, 213, 223
Mathematics 113-123
Natural Science
   Chemistry 114-124, Biology 334-304
   History 173-183 or equivalents
Political Science 113, 123
*Social Science
Nursing 111, 121
Physical Education 111, 121, 211, 221 or equivalents in restricted physical
   education
Military Science
or Naval Science (Men)
*Home Economics 123
Social Science 113
Sociology 123

A total of 131 hours, excluding physical education practice and military
science or naval science 153, 233, 243, is required for graduation with a
Bachelor of Science Degree in Industrial Technology.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN
COMMERCIAL FOODS (VOCATIONAL INDUSTRIAL EDUCATION)

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<td>Mathematics</td>
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<td>Physical Education</td>
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<tr>
<td>Nursing</td>
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<tr>
<td>Foods</td>
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<td>116-125</td>
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<tr>
<td>Commercial Foods</td>
<td>115-125</td>
<td>116-125</td>
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<tr>
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FOURTH YEAR

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<tbody>
<tr>
<td>Biology</td>
<td>212-222</td>
<td>213-223</td>
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<tr>
<td>Foods</td>
<td>234-283</td>
<td>214-223</td>
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<tr>
<td>Chemistry</td>
<td>235-283</td>
<td>215-223</td>
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<tr>
<td>Economics</td>
<td>236-283</td>
<td>216-223</td>
</tr>
<tr>
<td>Foods</td>
<td>237-283</td>
<td>217-223</td>
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<tr>
<td>Commercial Foods</td>
<td>238-283</td>
<td>218-223</td>
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<tr>
<td>Industrial Education</td>
<td>239-283</td>
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<td>220-223</td>
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<td>Animal Husbandry</td>
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<tr>
<td>Summer Intern</td>
<td>322-283</td>
<td>323-283</td>
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DEPARTMENTAL REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE IN
FOOD SERVICE ADMINISTRATION*

MAJOR: A minimum of twenty-nine (29) semester hours of Commercial
   Foods, including Commercial Foods 113, 115, 242, 123, 125, 233, 283, 263, 212 and 11 semester hours of additional courses includ­ing
   Foods 143, 423 and 443, Animal Husbandry 412 and summer
   Internship.

*Or Equivalents
**H.E. 123, Social Science 113, Sociology 123

205
SCHOOL REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE
IN FOOD SERVICE ADMINISTRATION

<table>
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<tr>
<td>Psychology 113</td>
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<tr>
<td>Business Administration 143</td>
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<td>Business Administration 253</td>
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<td>Business Administration 263</td>
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<td>Business Administration 373</td>
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<td>Business Administration 383</td>
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<td>Business Administration 343</td>
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<td>Business Education 132-142</td>
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<td>Economics 343</td>
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*Students completing this curriculum meet the requirements of the American Dietetic Association for dietetic intern training.

COLLEGE REQUIREMENTS FOR THE
BACHELOR OF SCIENCE DEGREE
IN FOOD SERVICE ADMINISTRATION

<table>
<thead>
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<td>English 113, 123, 213, 223</td>
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<tr>
<td>Natural Science</td>
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<tr>
<td>Chemistry 114-124, 314, Biology 334-304</td>
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<td>History 173-183 or equivalents</td>
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<td>Political Science 113, 123</td>
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<td>Social Science</td>
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<td>Nursing 111, 121</td>
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<tr>
<td>Physical Education 111, 121, 211, 221 or equivalents in restricted physical education</td>
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<tr>
<td>Military Science (Men) or Naval Science (Men)</td>
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<td>*Home Economics 123</td>
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<td>Sociology 123</td>
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</table>

A total of 130 hours, excluding physical education practice and military science or naval science, is required for graduation with a Bachelor of Science Degree in Industrial Technology.

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE
IN FOOD SERVICE ADMINISTRATION

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<tr>
<th>Year</th>
<th>Course</th>
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<td>Nursing -121</td>
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<td>Military Science (Men) 111-121</td>
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<td>Summer Intern (440 hours) 111-</td>
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<td>Foods -143</td>
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</table>
DEPARTMENTAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN VOCATIONAL INDUSTRIAL EDUCATION (PRINTING) 40 Semester Hours

MAJOR: A minimum of forty (40) semester hours of technical courses, including Printing 117, 127, 217, 227, and twelve (12) semester hours of technical electives.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN VOCATIONAL INDUSTRIAL EDUCATION (PRINTING) 33 Semester Hours

Industrial Education 111, 121
Applied Science 303
Mechanical Engineering 463
Economics 343
*Business Education 132
Business Education 142
Business Administration 143
Business Administration 253
Business Administration 263
Business Administration 343
Business Administration 373
Business Administration 383


COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN VOCATIONAL INDUSTRIAL EDUCATION (PRINTING) 64 Semester Hours

English 113, 123, 213, 223
Mathematics 113-123
Natural Science
   Chemistry 114-124, Physics 214, 224
   History 173-183 or equivalents
Political Science 113, 123
*Social Science
Nursing 111, 121
Physical Education 111, 121, 211, 221
   or equivalents in restricted physical education
Military Science
or Naval Science (Men)
   *Home Economics 123
   Social Science 113
   Sociology 123

A total of 132 hours, excluding physical education practice and military science or naval science, is required for graduation with a Bachelor of Science Degree in Industrial Technology.
CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN VOCATIONAL INDUSTRIAL EDUCATION (PRINTING)

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THIRD YEAR

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DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN AUTOMOTIVE TECHNOLOGY

MAJOR: A minimum of thirty-one (31) semester hours of Automotive courses, including Automotive 133, 153, 123, 163, 213, 233, 263, courses, which must be Drafting 113 and 123, and a related technical course Welding 113.

SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN AUTOMOTIVE TECHNOLOGY

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CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN AUTOMOTIVE TECHNOLOGY

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DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN BUILDING CONSTRUCTION TECHNOLOGY

MAJOR: A minimum of thirty-three (33) semester hours of Carpentry, Masonry and Drafting courses, including Carpentry 204, 117, 127, Masonry 113, 123, 213, 223, Drafting 303, and 9 semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Drafting 263.
SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN BUILDING CONSTRUCTION TECHNOLOGY

36 Semester Hours

- Industrial Education 111-121
- English 113-123
- Mathematics 113-123
- Physics 214
- *Elective 3
- Mechanical Engineering 463
- Military Science
- or Naval Science (Men)
- Physical Education 111, 121, 211 & 221
- *Sociology 123, Home Economics 123

CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN BUILDING CONSTRUCTION TECHNOLOGY

FIRST YEAR

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DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN DRAFTING AND DESIGN TECHNOLOGY

39 Semester Hours

MAJOR: A minimum of thirty (30) semester hours of Drafting 373, 383, 393, courses, including 203, 263, 313, 353, 403, 423, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course in Masonry 113 or Carpentry 204.

SCHOOL REQUIREMENT FOR THE CERTIFICATE OF PROFICIENCY IN DRAFTING AND DESIGN TECHNOLOGY

36 Semester Hours

- Industrial Education 111-121
- English 113-123
- Mathematics 113-123
- Physics 214
- *Elective 3
- Mechanical Engineering 463
- Military Science
- or Naval Science (Men)
- Physical Education 111, 121, 211 & 221
- *Sociology 123, Home Economics 123
### CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN DRAFTING AND DESIGN TECHNOLOGY

**FIRST YEAR**

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**DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN ELECTRONICS TECHNOLOGY**

**MAJOR:** A minimum of thirty (30) semester hours of Electronics courses, including 113, 134, 121, 123, 144, 211, 214, 224, 253, 263, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Mathematics 153.

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**CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN ELECTRONICS TECHNOLOGY**

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**DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN ELECTRICAL TECHNOLOGY**

**MAJOR:** A minimum of thirty-one (31) semester hours of Electrical courses, including 114, 113, 124, 123, 232, 242, 241, 217, 227, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Carpentry 204.
SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN ELECTRICAL TECHNOLOGY

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*Sociology 123, Home Economics 123

CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN ELECTRICAL TECHNOLOGY

FIRST YEAR

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DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN METAL TECHNOLOGY

MAJOR: A minimum of thirty (30) semester hours of Machine Shop, Welding and Foundry courses, including Machine Shop 113, 123, 213, 223, Welding 113, 123, 213, 223, Foundry 213, 223, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related course Machine Shop 343.

SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN METAL TECHNOLOGY

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<td>123</td>
</tr>
<tr>
<td>Mathematics</td>
<td>113-</td>
<td>123</td>
</tr>
<tr>
<td>Physics</td>
<td>214</td>
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<tr>
<td>*Elective 3</td>
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</tr>
<tr>
<td>Mechanical Engineering</td>
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<tr>
<td>Military Science</td>
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<tr>
<td>or Naval Science (Men)</td>
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</tr>
<tr>
<td>Physical Education</td>
<td>111,</td>
<td>121,</td>
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<tr>
<td></td>
<td>211</td>
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</tr>
<tr>
<td>Machine Shop</td>
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</tr>
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</table>

CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN METAL TECHNOLOGY

FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
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<td>121</td>
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<tr>
<td>Nursing</td>
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<tr>
<td>or Naval Science</td>
<td>155-</td>
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<tr>
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<td>111-</td>
<td>121</td>
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<td>Machine Shop</td>
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SECOND YEAR

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<tr>
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<tr>
<td>Mechanical Engineering</td>
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<td>463</td>
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<tr>
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<td></td>
<td>212-</td>
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<td>211-</td>
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<tr>
<td>Machine Shop</td>
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<td>213-</td>
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<tr>
<td>Foundry</td>
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<tr>
<td>Machine Shop</td>
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</table>
DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN BRICKMASONRY 41 Semester Hours

MAJOR: A minimum of thirty-two (32) semester hours of Masonry courses, including Masonry 117, 127, 217, 227, and Carpentry 204, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Drafting 263.

SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN BRICKMASONRY 36 Semester Hours

Industrial Education 111-121
English 113-123
Mathematics 123
*Elective 3
Mechanical Engineering 463
Military Science
or Naval Science 153, 233, 243
Physical Education 111, 121, 211 & 221
*Sociology 123, Home Economics 123

CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN BRICKMASONRY

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>or Naval Science (Men)</td>
<td>163-</td>
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<tr>
<td>Physical Education</td>
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<td>Masonry</td>
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<tbody>
<tr>
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<tr>
<td>Military Science (Men)</td>
<td>212-222</td>
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</tr>
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<tr>
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<tr>
<td>Masonry</td>
<td>217-227</td>
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</tr>
<tr>
<td>Drafting</td>
<td>-263</td>
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</tr>
<tr>
<td>Carpentry</td>
<td>264-</td>
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</table>

DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN CARPENTRY 40 Semester Hours

MAJOR: A minimum of thirty-one (31) semester hours of Carpentry courses, including Carpentry 117, 127, 217, 227, and Masonry 113, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Drafting 263.

SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN CARPENTRY 36 Semester Hours

Industrial Education 111-121
English 113-123
Mathematics 113-123
Science 123
*Elective 3
Mechanical Engineering 463
Military Science
or Naval Science (Men)
Physical Education 111, 121, 211 & 221
*Sociology 123, Home Economics 123
### CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN CARPENTRY

<table>
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<tr>
<th>First Year</th>
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<tbody>
<tr>
<td>Mathematics</td>
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<td>English</td>
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<td>113-123</td>
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<td>Industrial Education</td>
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<td>111-121</td>
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<tr>
<td>Nursing</td>
<td>111-121</td>
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<td>112-122</td>
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#### SECOND YEAR

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<td>Elective</td>
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<td>Science</td>
<td>- 3</td>
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<tr>
<td>Mechanical Engineering</td>
<td>- 463</td>
</tr>
<tr>
<td>Military Science (Men)</td>
<td>212-222</td>
</tr>
<tr>
<td>or Naval Science (Men)</td>
<td>233-243</td>
</tr>
<tr>
<td>Physical Education</td>
<td>211-221</td>
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<tr>
<td>Carpentry</td>
<td>217-227</td>
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<tr>
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<td>- 263</td>
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<td>Masonry</td>
<td>113-</td>
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### DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN COMMERCIAL FOODS


### SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN COMMERCIAL FOODS

<table>
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<th>29 Semester Hours</th>
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<tbody>
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<td>English 113-123</td>
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<tr>
<td>Mathematics 113-123</td>
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<td>*Elective 3</td>
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<tr>
<td>or Naval Science (Men)</td>
</tr>
<tr>
<td>Physical Education 111, 121, 211 &amp; 221</td>
</tr>
<tr>
<td>*Home Economics 123 or Sociology 123</td>
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### CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN COMMERCIAL FOODS

<table>
<thead>
<tr>
<th>First Year</th>
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</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>113-123</td>
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<tr>
<td>English</td>
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<td>Nursing</td>
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<td>or Naval Science (Men)</td>
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<tr>
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### DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN PAINTING

**MAJOR:** A minimum of thirty-one (31) semester hours of Painting courses, including Painting 117, 127, 217, 227, 213, and ten (10) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Carpentry 204.

### SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN PAINTING

<table>
<thead>
<tr>
<th>36 Semester Hours</th>
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<tbody>
<tr>
<td>Industrial Education 111-121</td>
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<tr>
<td>Mathematics 113-123</td>
</tr>
<tr>
<td>Science 123</td>
</tr>
<tr>
<td>*Elective 3</td>
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<tr>
<td>Mechanical Engineering 463</td>
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<tr>
<td>Military Science</td>
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<tr>
<td>or Naval Science (Men)</td>
</tr>
<tr>
<td>Physical Education 111, 121, 211 &amp; 221</td>
</tr>
<tr>
<td>Home Economics 123, Sociology 123</td>
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CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN PAINTING

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
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<th>SECOND YEAR</th>
<th>1st 2nd</th>
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<tbody>
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<td>Elective</td>
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<td>113-123</td>
<td>Mechanical Engineering</td>
<td>3-</td>
</tr>
<tr>
<td>Drafting</td>
<td>113-123</td>
<td>Military Science (Men)</td>
<td>-463</td>
</tr>
<tr>
<td>Industrial Education</td>
<td>111-121</td>
<td>or Naval Science (Men)</td>
<td>212-222</td>
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<tr>
<td>Nursing</td>
<td>111-121</td>
<td>Physical Education</td>
<td>233-243</td>
</tr>
<tr>
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<td>or Naval Science (Men)</td>
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<td>112-122</td>
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<td>Painting</td>
<td>117-127</td>
<td>Carpentry</td>
<td>-204</td>
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DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN PLUMBING 40 Semester Hours

MAJOR: A minimum of thirty-one (31) semester hours of Plumbing courses, including Plumbing 117, 127, 217, 227 and Welding 113, and nine (9) semester hours of additional courses, which must be Drafting 113 and 123, and a related technical course Sheet Metal 113.

SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN PLUMBING 36 Semester Hours

Industrial Education 111-121
English 113-123
Physics 214
*Elective 3
Mechanical Engineering 463
Military Science
or Naval Science (Men)
Physical Education 111, 121, 211 & 221
*Home Economics 123, Sociology 123

CURRICULUM FOR THE CERTIFICATE OF PROFICIENCY IN PRINTING

<table>
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<td>111-121</td>
<td>Physical Education</td>
<td>233-243</td>
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<td>217-227</td>
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<td>Plumbing</td>
<td>213-</td>
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<tr>
<td>Plumbing</td>
<td>117-127</td>
<td>Sheet Metal</td>
<td>113-</td>
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DEPARTMENTAL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN PRINTING 40 Semester Hours

MAJOR: A minimum of forty (40) semester hours of Printing courses, including Printing 117, 127, 217, 227, and twelve (12) semester hours of technical electives.

SCHOOL REQUIREMENTS FOR THE CERTIFICATE OF PROFICIENCY IN PRINTING 31 Semester Hours

Industrial Education 111-121
English 113-123
Mathematics 113-123
*Elective 3
Military Science
or Naval Science
Physical Education 111, 121, 211 & 221
Home Economics 123, Sociology 123
DESCRIPTION OF COURSES

INDUSTRIAL EDUCATION

111-121. Philosophy of Industrial Education. (I E 111-121 Philosophy) (1-0) Credit 1. Nature and purpose of Industrial Education. Influence of Industrial Technology upon individuals and society. Factors which influence success in industrial education.

273. Classroom Organization and Management. (I E 273 Classrm Organ) (3-0) Credit 3. Planning, management, organization of industrial arts classroom at secondary school level. Types of organization, arrangement of equipment, pupil personnel management. Records, including school registry, progress charts, reports, requisitions, inventories, etc.

323. Curriculum Construction and Course Making in Industrial Education. (I E 323 Curriculum) (3-0) Credit 3. A study of industrial education curricula as used throughout leading high schools; analytical technique in curriculum construction; course making and syllabus construction.

403. Workshop and Institutes in Industrial Education. (I E 403 Workshop) Credit 3. I and II. A study of and the development of solutions for problems in Industrial Education.
   A. Cosmetology Institute
   B. Industrial Arts Teacher Workshop
   C. Vocational-Industrial Teacher Workshop

406. Student Teaching in Industrial Education. (I E 406 Student Tchg) (2-12) Credit 6. I and II. Problems that confront beginning industrial education teachers; brief historical study of industrial education; relationship of industrial education to other phases of education; election of subject matter; preparation and presentation of instructional materials; teaching plans, tests, and standard evaluation devices for measuring results. Directed observation of teaching, followed by actual supervised teaching for the individual student. Prerequisite: I. E. 413.

413. Methods in Industrial Education. (I E 413 Methods) (3-0) Credit 3. I. Methods, devices, techniques as applied to teaching industrial subjects; analysis and evaluation of student learning difficulties and teaching responsibilities in industrial classes; nature, preparation and use of instruction sheets.

The following courses are designed to meet the certificate requirements of Vocational-Industrial Education teachers under the Texas State Plan for Vocational Education. College credit may be arranged for these courses with the written approval of the teacher-trainer for Vocational Industrial Education and the Dean of the School of Industrial Education and Technology.

IE 412 Development and Effective Use of Industrial Instructional Materials. (IE 412 Ind. Materials) 45 clock hours. Study of available instructional material and its adaption; development and preparation of teaching aids; organization and material for effective coordination with courses of study.
IE 422 Instructional Methods in Industrial Education. (IE 422 Methods) 45 clock hours. Brief review of how people learn; evaluation of various teaching methods; adaptation of methods to types of lessons for effective instruction; "4-step method" of presenting lessons; analysis for lesson content; preparation of lesson plans and practice teaching.

IE 432 Shop Organization and Classroom Management. (IE 432 Organization) 45 clock hours. Organization plans for classrooms and shops for efficient instruction and management, including roll-keeping, grading, recording, and reporting systems; specifying, purchasing, receiving, storing, installing, and inventorying tools, equipment, and supplies; heating, lighting, ventilation, sanitation, and accident prevention; recitation and library centers; tool, supply and project storing and issuing systems.

IE 442 Occupational Analysis and Course Making. (IE 442 Course Making) 45 clock hours. A study of analysis available in the teacher's field of work; reviewing systems of analysis; adaption of principles of analysis to fit the teacher's needs; the organization of a course of study to fit the teacher's specific needs developed from the adopted, modified, or developed analysis.

IE 462 Aims and Objectives of Vocational Education (IE 462 Vocational Educ) 45 clock hours. A basic course for administrators, supervisors, and teachers; history and aims of vocational education; its economic, social, and educational values; different phases of vocational education; Federal and State laws; training of teachers.

IE 472 Selection, Placement, and Follow-up in Vocational Education. (IE 472 Placement) 45 clock hours. Factors which affect selection, advisement, work opportunities, and educational objectives of young people; techniques of interviewing and advising young people in regard to occupational choices; factors affecting placement, training stations, follow-up and coordination; advisory committee; related study materials; child labor laws and regulations; wages and hour laws.

IE 482 Audio-Visual Materials in Instruction. (Av 482 AV Materials) 45 clock hours. The study of visual aids on the commercial market and their adaptability to vocational education; the development of types of visual aids and techniques teachers can use for more effective teaching. These are to include motion pictures, strip films, slides, cut-aways, blowups, mock-ups, posters, charts, pictures, and blackboard illustrations.

IE 492 Problems in Cooperative Training. (IE 492 Problems) 45 clock hours. Review of the duties of the teacher-coordinator; discussion of probable solutions of actual problems; procedures and techniques involved in community surveys; interpretation of survey data; guidance and counseling; related study materials; placement of trainees; advisory committees; organization and coordination of on-campus and off-campus training classes; child labor laws; wages and hour laws.

AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

113. Air Conditioning I. (Air 113 Condition I) (2-3) Credit 3. Fundamentals of air conditioning; fluid flow analysis; thermodynamics properties of air, steam, refrigerants; heat transfer calculations; operation characteristics of heating and cooling equipment.

123. Air Conditioning II. (Air 123 Condition II) (2-3) Credit 3. Psychrometric processes, heat and cooling loads; refrigeration, heating, air handling systems; fans and ducts; pumps and piping, operation of commercial and industrial equipment.

213. Refrigeration II. (Air 213 Refrigrtn II) (2-3) Credit 3. Thermodynamic principles; single, two stage and cascade cycles; low temperature units; liquid chilling apparatus; operation of commercial and industrial equipment.


263. Air Conditioning Controls. (Air 263 Controls) (2-3) Credit 3. Electric and pneumatic control systems for heating and air conditioning. Types, purposes, applications of controls for heating, cooling, ventilation and humidity correction apparatus.

APPLIED SCIENCE


133-143. Technical Mathematics. (ApSc 133-143 Tech Math) (3-0) Credit 3. I, II. Mathematics needed by persons entering technical fields in industry; treatment of arithmetic computations, plane and solid geometry, applied algebra and functional trigonometry. Stress is given to the application of mathematics in technical fields.

134, 137, 147, 207. Industrial Production Techniques. (ApSc 134, 137, 147, 207 Ind Productn) (3-12) Credit 3 to 7. I, II. Analysis of production jobs; time and motion studies as applied to production techniques; actual practice through work under actual production conditions in various industries.


213. Business Relations. (ApSc 213 Business) (3-0) Credit 3. I. Basic principles of business involved in building contracting or operating a small trade and industrial shop.

223. Industrial Management. (ApSc 223 Management) (3-0) Credit 3. I. Problems of managing a building contracting company or a small trade and industrial shop, industrial shop planning, selection of equipment and personnel, cost and wage analysis, design of production flow systems, and material purchasing.
303. Industrial Safety. (ApSc 303 Ind Safety) (3-0) Credit 3. I or II. Organization and administration of accident prevention and safety education programs in industry; case studies of industrial accidents; techniques of controlling environmental hazards; how to conduct safety inspections and investigations; application of safety engineering principles in the design, construction, utilization and maintenance of equipment; local, state, regional and national safety association.

AUDIO-VISUAL EDUCATION

303. Utilization of Audio-Visual Materials. (Audio 303 Utilization) (3-0) Credit 3. I and II. Practical experience in the use of audio-visual aids, construction and development of various audio-visual aids and devices; sources of audio-visual aids; selection, evaluation and techniques of using audio-visual aids in education, study of motion picture projectors, slides, film strips, opaque projectors, etc. Lab fee: $2.00.

AUTOMOTIVE TECHNOLOGY

123-243. The Power. (Auto 123-243 Power) (2-3) Credit 3. II. A thorough and comprehensive study of the automobile engine; the principles of the internal combustion engine, the gasoline engine, and all their fundamental parts; the most common causes of engine failures; diagnosis and repair. Lab. fee: $2.00.

133-263. The Chasis. (Auto 133-263 Chasis) (2-3) Credit 3. II. This unit includes a study of the purposes, structure, operation, and service of the frames, springs, shock absorbers, front end suspension, steering assembly, front end alignment, clutches, transmissions, universals, propeller shafts, final drive, brake, and chasis lubrication. Lab. fee: $2.00.


213. The Fuel System. (Auto 213 Fuel System) (2-3) Credit 3. I. This unit includes a study of the parts of the fuel system, principles of carburetion, and maintenance and service of the fuel lines, fuel pumps, filters, etc.; servicing of the most popular makes of carburetors. Lab. fee: $2.00.

233. The Electrical System. (Auto 233 Elec System) (2-3) Credit 3. I. The fundamental information needed by an automobile mechanic; principles, parts, operation, maintenance, and servicing of all the units of the automobile's electrical system, including batteries, motors, generators, ignition and accessories. Lab. fee: $2.00.

314-324. Advanced Auto Testing and Laboratory. (Auto 314-324 Adv Testing) (2-6) Credit 4. I or II. Advanced testing, diagnosis, trouble shooting, and service under industrial conditions; special attention also given to service of test equipment; and use of technical manuals and guides.

CARPENTERY

117. Elementary Carpentry I. (Carp 117 Elem I) (3-12) Credit 7. I. Name, use and care of tools, materials and equipment; woods, wood joints, techniques and methods of house construction; surveying and study building sites, laying out from blueprints, practicing elementary frame construction. Lab. fee: $3.00.

127. Elementary Carpentry II. (Carp 127 Elem II) (3-12) Credit 7. II. Continuation of Carpentry 117. Study and practice in the various methods, techniques and styles of framing; simple rafter cutting and stair building.
204. General Carpentry. (Carp 204 General) (2-6) Credit 4. I and II. Designed for Industrial Education students. Information and skills in the layout, framing, and finishing small frame buildings. Lab. fee: $2.00.

217. Advanced Carpentry I. (Carp 217 Advanced I) (3-12) Credit 7. I. Continuation of Carpentry 127. Advanced framing complex roof and stair construction; close-in and finished carpentry work studied and practiced; hardware and other utilities installed and studied. Lab. fee: $3.00.

227. Advanced Carpentry. (Carp 227 Advanced II) (3-12) Credit 7. Continuation of Carpentry 217. The use of power machines in carpentry work; techniques of mass production in the manufacture of prefabricated homes; millwork techniques in the construction of cabinets, stairs, doors, windows, interior and exterior trim. Lab. fee: $3.00.

CRAFTS


122-3. Advanced Photography. (Crft 122-123 Adv Photo) (2-3) (1-6) Credit 2 or 3. I and II. Advanced techniques in picture making process; introduction to commercial, news, portrait photography; stress on good composition and effective presentations.

152-153. General Crafts. (Crft 152-153 Gen Crfts) (2-3) Credit 2 or 3. I and II. Creative handicraft activities in leather, plastic, metal, wood, weaving, rubber, glass, ceramics and other media. Special attention to the needs of teachers, recreational leaders, occupational therapists.


232-233. Ceramics. (Crft 232-233 Ceramics) (2-3) Credit 2 or 3. I. Basic forming techniques; throwing and casting, properties of clays and glazes; kiln firing.

242-243 Jewelry. (Crft 242-243 Jewelry) (2-3) Credit 2 or 3. Creative design and construction of jewelry; introduction to lapidary, proper selection and use of tools, materials, supplies and equipment.

312-313. Advanced Ceramics. (Crft 312-313 Adv. Ceramics) (2-3) Credit 2 or 3. I. Advanced forming techniques; design of ceramic products; advanced processes in casting and wheel work; advanced glazing techniques; kiln control and construction.

COMMERCIAL FOOD

113. Elementary Food Products. (CF 113 Products) (3-0) Credit 3. I. Food products; their quality, source availability, distribution and storage, to serve as a basis for purchase of such commodities for commercial food service.

123. Food Service. (CF 123 Food Service) (3-0) Credit 3. II. Proper methods, organization, handling and serving of foods for banquets, buffets, cafeterias, catering and special occasions.

113. Nutrition. (CF 133 Nutrition) (3-0) Credit 3. I. Nutritional standards as applied to commercial foods, including the various nutrients in food and their relation to health.
115. Basic Food Preparation. (CF 115 Preparation) (2-9) Credit 5. I. Application of basic fundamental principles and skills proven necessary in quality food production for commercial food service.

125. Quantity Cookery. (CF 125 Quan Cookery) (2-9) Credit 5. II. Quantity food production and service; including principles and methods of selecting, purchasing, budgeting and preparing foods for commercial food service.


222. Advanced Food Products. (CF 222 Products). (2-0) Credit 2. Advanced study of food products and their use in commercial institutions.

253 Advanced Food Preparation. (CF 253 Preparation) (2-3) Credit 3. I. Emphasis on the finer techniques of skills required for more efficient food production.

263. Gourmet and International Cuisine. (CF 263 Gourmet) (2-3) Credit 3. I. Art and science of cookery in relation to national, race, social, economic, regional and religious customs including the aesthetic values of food.

212. Sanitation. (CF 212 Sanitation) (2-0) Credit 2. I. Principles of sanitation as applied to food handling, management, storage and personnel in hotels, restaurants and institutions.

233. Organization and Management. (CF 233 Organization) (3-0) Credit 3. I. Principles of organization, supervision and personnel management; examination of the food service manager and dietitian duties in regard to food, supplies and equipment purchasing, cost and wage systems, insurance and legal aspects.

242. Menu Planning. (CF 242 Menu Plng) (2-0) Credit 3. II. Principles and practices of menu planning for hotels, restaurants and institutional food service; menu terms; merchandising practices.

283. Equipment Selection and Layout. (CF 283 Equip Selec) (3-0) Credit 3. II. Layout and design of food service facilities with emphasis on selection, specifications, maintenance and spatial relations.

DRAFTING AND DESIGN

113-123. General Drafting. (Drft 113-123 General) (2-3) Credit 3. I, II. A basic course in drafting including use and care of instruments, equipment, supplies and other media, lettering techniques, fundamental principles of descriptive geometry and geometric construction; basic orthographic projection, auxiliary and sectional view, theory and practice of dimensioning, pictorial drawing, intersections and developments and a complete study of working drawings to include manufacturing processes; study of charts and graphs.

133-143. Applied Drawing I and II. (Drft 133-143 Appl Draft) (2-3) Credit 3. I and II. Drawing which will be in line with student's needs in applying it to a trade where such a specific course is not otherwise designated. Lab. fee: $2.00.

203. Technical Sketching. (Drft 203 Sketching) (2-3) Credit 3. I, II. Free-hand drawing and design as applied to industrial products.

233-243. Applied Drawing III and IV. (Drft 233-243 Appl Draft) (2-3) Credit 3. I and II. An advanced drawing course in line with the student's needs in applying it to a trade where such a specific course is not otherwise designated. Lab. fee: $2.00.
263. Architectural Drafting. (Drft 263 Arch) (2-3) Credit 3. II. Application of basic drafting of Architectural working drawings, in terms of plans, sections and elevation, building details are studied utilizing standard components obtained from such references as Sweet's Catalog and Architectural Graphic Standards.

303. Materials and Methods of Construction. (Drft 303 Mat & Meth) (3-0) Credit 3. I, II. Construction practices for wood and masonry construction; foundations, framing systems, manufacture and performance characteristics of building materials.

313. Design. (Drft 313 Design) (2-3) Credit 3. I and II. A study of line, color, form and their organic relationship; study of design principles; opportunity for creative expression in three dimensional form using woods, metals, plastic, glass, stone, etc. Lab. fee: $2.00.

352. Construction Cost and Estimating. (Drft 352 Const Cost) (1-3) Credit 2. I. Preparation of materials list and take off quantities of materials and labor hours from working drawings and specifications.


383. Commercial Building Design. (Drft 383 Bldg Design) (2-3) Credit 3. II. Application of design principles to the design of small commercial buildings.

393. Building Equipment. (Drft 393 Bldg Equip) (2-3) Credit 3. I or II. Electrical wiring and equipment, heating and ventilating, plumbing and sanitation. Discussions include the various systems, the equipment involved and design procedure.

403. Machine Drafting. (Drft 403 Mach Draftg) (2-3) Credit 3. I or II. A study of working drawings as applied to the machine shop with emphasis on relationship of views and dimensioning, correct interpretation of scale measurement and tolerance, application and the interpretation of symbols and notes.

423. Drafting Room Procedures. (Drft 423 Procedures) (2-3) Credit 3. I, II. Standard Drafting Room procedures found in industry; responsibilities of the draftsman as technician or technical aide, drafting room techniques, materials, supplies, equipment, technical library.

DRIVER EDUCATION

102-202. Driver Education. (DE 102-202 Driver Educ) (0-6) Credit 2. I, II. A basic course in driver education devoted to traffic rules, regulations, and laws; knowledge of automobile operations; sound driving practices, and designated to give limited drivers and non drivers the fundamental driving skills necessary for sound driving practices and to secure an operator's license. Lab. fee $2.00.
Preparation for teaching driver education in workshops or secondary schools;
state laws and regulations, safety practice, teaching methods, course construc-
tion, testing, devices, psycho-physical traits and measurements; principles and 
methods of road skill testing; practice training drivers using a dual control 
car. Lab. fee: $3.00. (approved certification course)

403. Driver Education II. (DE 403 Driv Ed II) (2-3) Credit 3. I, II.
This course is primarily devoted to methods of teaching, and the administra-
tion of high school driver and traffic safety education. Lab. fee: $3.00. 
(approved certification course). Prerequisite DE 303.

ELECTRICITY
102. Electrical Appliances. (Elec 102 Appliances) (0-6) Credit 2. I.
Construction, repair, maintenance and servicing. Lab. fee: $2.00.

113-123. Electrical Wiring and Repair. (Elec 113-123 Wiring) (0-3) Credit
3. I and II. Practice in house wiring; general repairs to wiring and electrical 
equipment; installation and servicing of motors, telephones, transformers 
and generators. Lab. fee: $2.00.

114-124. Elementary Electricity. (Elec 114-124 Elementary) (2-6) Credit 
4. I and II. Fundamental principles of electricity and electrical machinery; 
construction; simple wiring; theory of magnetic and direct current circuits. 
Lab. fee: $2.00.

115. Direct Current Apparatus and Circuits. (Elec 115 DC Curcits) (2-9) 
Credit 5. I. Direct current circuit and magnetic circuit theory and calculations; 
principles of design and construction of direct-current motors and genera-
tors, theory concerning torque, flux, speed, voltage and speed regulations, 
commutation, and armature reaction of shunt and compound machines, parrallel 
operations, and mechanical couplings of electrical machinery; theory and 
practice of direct current control equipment for generators and motors. Lab. 
fee: $3.00.

125. Alternating-Current Apparatus and Circuits. (Elec 125 A C Circuits) 
(2-9) Credit 5. II. Relations of simple harmonic electromotive forces and 
current phase difference; active, reactive, and apparent power, power factor 
and reactive factor, resistance, inductance, and capacities; series, parallel, 
and resonant circuits; polyphase circuits, balanced and unbalanced; construc-
tion, characteristics and operation of alternators, induction motors, transform-
ers, synchronous motors, synchronous converters, mercury-arc rectifiers and 
their regulating control devices; fundamentals of telephone transmission. 
Prerequisite: Electricity 155. Lab. fee: $3.00.

217-227. Electrical Wiring and Illumination. (Elec 217-227 Illumination) 
(3-12) Credit 7. I, II. Fundamentals of commercial and industrial wiring 
and illumination practice. Lab. fee: $3.00.

232. Direct-Current Motor-Generator Repair. (Elec 232 D C Motor) (0-6) 
Credit 2. I. Repair of direct-current motors and generators. Lab. fee: $2.00.

(0-6) Credit 2. II. Repair of alternating-current motors and generators. 
Lab. fee: $2.00.

ELECTRONICS
113. Electric Circuits. (Elec 113 Circuits) (2-3) Credit 3. I. Basic 
principles of electricity, magnetism, conductors, insulators, electron theory, 
Ohm's Law, Kirchoff's Law, characteristics of series and parallel circuits in 
D.C. and A.C.

121. Communication I. (Elec 121 Comm I) (0-2) Credit 1. II. Radiotelegraphy code, FCC rules and regulations, preparation for one of the Radio Amateur licenses.

123. Basic Electronics II. (Elec 123 Basic II) (2-3) Credit 3. II. Basic principles of vacuum tube and semiconductor, A-F and R-F amplifiers, oscillators, detectors; use of voltmeters, current meters, oscilloscopes, signal generators, impedance bridges in analysis of circuits. Prerequisite: Electronics 134.

144. Radio Receivers. (Elec 144 Radio) (2-6) Credit 4. II. Schematic development, construction, circuit analysis, alignment, testing and troubleshooting AM & FM receivers. Emphasis on the superhetrodyne receiver, FM demodulators, automatic frequency controls, antenna systems. Prerequisite: Electronics 123.

211. Communications II. (Elec 211 Comm II) (0-2) Credit 1. I. Continuation of Communications I; Preparation for earning one of the commercial phone licenses. Prerequisite: Electronics 121.

214. Advanced Circuits and Systems. (Elec 214 Adv Circuits) (2-6) Credit 4. I. Theory and laboratory work in wideband, video, pulse and tuned amplifiers; AM & FM transmitters, modulation, antennas; feedback systems; multivibrators, blocking and shock oscillators; wave shaping circuits; sweep circuits... detection, instrumentation and control circuits. Prerequisite: Electronics 144 and concurrent enrollment in Electronics 253.

253. Test Instruments. (Elec 253 Instruments) (2-3) Credit 3. I. Basic characteristics of laboratory and field type instruments used in electronics; selection, use maintenance, calibration, servicing, and testing. Prerequisite: Electronics 123.

234. Television. (Elec 234 Television) (2-6) Credit 4. II. Theory and laboratory with television receivers and antenna systems; picture transmission, contrast, definition, distortion, transmission lines, antenna; the tuner, video IF stages, F.M. sound, sync. circuits, AGC, horizontal and vertical sweep circuits, the picture tube.

224. Testing and Servicing. (Elec 224 Servicing) (2-6) Credit 4. II. Use of test instruments under field conditions; trouble-shooting, servicing and repair of commercial radios, televisions and other electronic units; stress upon the economical and efficient use of time, materials and techniques in servicing. Prerequisites: Electronics 144, 214, and 234.

244. Color Television. (Elec 244 Color TV) (2-6) Credit 4. II. Theory and laboratory with color television receivers, NTSC color standards fundamentals of colorimetry; trouble-shooting, alignment, servicing. Prerequisite: Electronics 234.


303. Electronics Projects. (Elec 303 Projects) (2-3) Credit 3. II. The development of electronic projects suitable for instruction in junior and senior high school industrial arts courses. Lab. fee: $2.00. Prerequisite: Electronics 134.

MASONRY

117-127. Elementary Masonry. (Masn 117-127 Elementary) (3-12) Credit 7. I, II. Use, care and value of tools; recent materials and methods used in
brick masonry to include concrete masonry construction; mixing mortar by hand and machine; laying bricks to a line, building running bond corners, angles, and walls; brick veneering; theory estimating bricks and blocks. Lab. fee: $3.00.

113. Elementary Masonry. (Masn 113 Elementary) (2-3) Credit 3. I. Use, care and value of tools; current methods used in masonry; mixing mortar; description and manufacturing clay products; physical properties of clay products; mortar characteristics and properties; basic skills in laying clay products; design and construction of masonry walls and partitions; current bonds used in masonry construction; brick veneering; masonry maintenance. Lab. fee: $2.00.

123. Elementary Masonry. (Masn 123 Elementary) (2-3) Credit 3. II. Concrete block construction; concrete masonry products and manufacturing; characteristics of concrete masonry units; design and construction of concrete masonry walls and partitions; modular planning of concrete block units; basic skills in laying block units; physical properties of concrete masonry units and walls; concrete masonry wall finishes and wall patterns; concrete masonry as employed in large commercial construction. Lab. fee: $2.00.

213. Advanced Masonry. (Masn 213 Advanced) (2-3) Credit 3. I. Actual practice in the use of masonry tools and materials to include brick veneering, laying bricks to a line, building running bond structures, laying irregular units; rocks, stone and solar tile, laying structural and glazed tile and concrete blocks. Lab. fee: $2.00.

217-227. Advanced Masonry. (Masn 217-227 Advanced) (3-12) Credit 7. I, II. Fireplace and chimney construction; mixing and pouring concrete walks, drives, floors, and slabs; laying tile units; sills, steps and units of various sizes; laying ceramic tile floors and walls; laying irregular units; rocks, stone, and solar tile; theory to include concrete testing and estimating. Lab fee: $3.00.

223. Advanced Masonry. (Masn 223 Advanced) (2-3) Credit 3. II. Theory and practice in special construction in brick and concrete construction; laying various size masonry and concrete units; building with rocks, stone and solar tile; ceramic tile construction; estimating large masonry construction. Lab. fee: $2.00.

323. Ornamental Concrete. (Masn 323 Ornamental) (2-3) Credit 3. II. Theory and practice of ornamental and decorative work in concrete, moulding, pedestals, columns, pottery, vases, benches and other decorator work. Lab. fee: $2.00.

METAL TECHNOLOGY

FOUNDRY


223. Foundry II. (M A 223 Foundry II) (2-3) Credit 3. II. Processes used in casting ferrous alloys: mostly cast iron, cupola practices, sand testing, core-making; practice in moulding and casting ferrous metals, metallurgy of gray iron. Lab. fee: $2.00.

MACHINE SHOP

123. Machine Shop. (Mach 123 Machine Shop) (2-3) Credit 3. II. Fundamental operations; chucking, facing, centering, straight and taper turning, plain milling, plain shaping, thread cutting with lathe, counter-sinking, boring and chuck and mandrel work—mostly lathe study. Lab. Fee: $2.00.


223. Toolmaking. (Mach 223 Tolmaking) (2-3) Credit 3. II. Making jig and fixtures and special tooling for quantity production of some mechanical units to be produced in the shop; emphasis on modern precision toolmaking methods. Lab. fee: $2.00.

313. Heat Treatment. (Mach 313 Heat) (2-3) Credit 3. I. The heat treatment of ferrous alloys, heat treating operations, microstructure and physical properties, hardenability, grain size testing, machinability and some heat treating operations as applied in industry. Lab. fee: $2.00.

343. Material and Processes. (Mach 343 Materials) (3-0) Credit 3. II. The limitation and usefulness of materials, techniques of processing; their relative importance industrially and their relation to one another. Lab. fee: $2.00.

SHEET METAL

112-122. Sheet Metal. (Shmt 112-122 Sheet Metal) (0-6) Credit 2. I, II Sheet metal as an industry course for School of Arts and Sciences students only. Lab. fee: $2.00.


123. Elementary Sheet Metal (Shmt 123 Metal II) (2-3) Credit 3. II. Continuation of Sheet Metal 113 to include direct layouts and short methods. Lab. fee: $2.00.

213. Elementary Sheet Metal. (Shmt 213 Metal III) (2-3) Credit 3. I. Use of templates, soldering, brazing, seaming, drafting or irregular patterns by means of triangulation. Lab. fee: $2.00.

223. Intermediate Sheet Metal. (Shmt 223 Inter Metal) (2-3) Credit 3. II. Continuation of Sheet Metal 213, including advanced problems. Lab. fee: $2.00.

313. Industrial Arts Sheet Metal. (Shmt 313 Indus Metal) (2-3) Credit 3. I. Advanced operations such as raising, forming, stretching, shrinking, bending, spinning, chasing, seaming, piercing, etching, coloring; applied in projects in the working of copper, brass, aluminum, and other materials used in the industrial arts shop. Lab. fee: $2.00.

323. Advanced Sheet Metal. (Shmt 323 Adv Metal) (2-3) Credit 3.

PAINTING

112-122. Elementary Painting. (Pnt 112-122 Elementary) (0-6) Credit 2. I, II. Elementary painting as an industry course for students in the School of Arts and Sciences. Lab. fee: $2.00.

113. Elementary Painting. (Pnt 113 Elementary) (2-3) Credit 3. I. Various kinds of paints, varnishes, stains, lacquers, and their ingredients; the relation and recognition of colors; tools, equipment and their uses; practical experience. Lab. fee: $2.00.

117. Elementary Painting. (Pnt 117 Elementary) (3-12) Credit 7. I. Various kinds of paints, varnishes, stains, lacquers, and their ingredients; the relation and recognition of colors; tools, equipment and their uses; practical experience. Lab. fee: $3.00.
123. Elementary Painting. (Pnt 123 Elementary) (2-3) Credit 3. II. Preparation for exterior surfaces; mixing and applying paints; the effect of weather conditions upon a paint job; color analysis and color matching; practical experience. Lab. fee: $2.00.

127. Elementary Painting. (Pnt 127 Elementary) (3-12) Credit 7. II. Preparation of exterior surfaces; mixing and applying paints; the effect of weather conditions upon a paint job; color analysis and color matching; practical experience. Lab. fee: $3.00.

213. Furniture Finishing. (Pnt 213 Furniture) (2-3) Credit 3. I. Knowledge of woods used in furniture building; use of stains, fillers, shellac and varnish and oils; producing natural stain, varnish and oil finishings. Lab. fee: $2.00.

217. Advanced Painting. (Pnt 217 Advanced) (3-12) Credit 7. I. Preparing interior surfaces; blending colors with furniture; effects of position and light upon interiors; modernistic wall finishing; practical experiences. Lab. fee: $3.00.


227. Advanced Painting. (Pnt 227 Advanced) (3-12) Credit 7. II. Simple steps in paper hanging; shop management and furniture finishing; estimating and practical experience. Lab. fee: $3.00.


423. Advanced Upholstery. (Pnt 423 Upholstering) (2-3) Credit 3. II. Best methods of estimating materials; reupholstering overstuffed chairs and sofas; reupholstering curved backs; slip covering. Lab. fee: $2.00.

PLUMBING

113. Elementary Plumbing. (Plmb 113 Elementary) (2-3) Credit 3. I. Theory and practice in measuring, cutting and threading steel pipe; cutting and caulking cast iron pipe; repairing faucets and cocks; soldering, grading, and laying sewer lines. Lab. fee: $2.00.

117. Industrial and Elementary Plumbing. (Plmb 117 Industrial) (3-12) Credit 7. I. Care and use of tools; plumbing and heating layouts; measuring, cutting and threading steel pipe; cutting and caulking cast iron pipe; repairing faucets and cocks; soldering, grading, and laying sewer lines. Lab. fee: $3.00.


127. Industrial and Elementary Plumbing. (Plmb 127 Industrial) (3-12) Credit 7. II. Leadwork; roughing in for, and setting fixtures on small plumbing and heating jobs; material bills, tapping and venting. Lab. fee: $3.00.

217-227. Advanced Plumbing. (Plmb 217-227 Advanced) (3-12) Credit 7. I and II. Small heating systems; installation of boilers of one and two-pipe heating systems; transmission lines, layouts, laying and codes, etc. Making estimates for labor and material for small plumbing and heating jobs; distribution of hot and cold water; estimating yearly supplies for broading schools. Lab. fee: $3.00.

PRINTING


113. Graphics Arts I. (Prnt 113 Graphic Art) (3-0) Credit 3. I. The history of printing; general survey of allied processes, methods and practices followed.

127. Elementary Printing II. (Print. 127 Elem.) (3-12) Credit 7. Machine composition, cylinder presswork, platen presswork and binding operation. Elementary phases of linotype operation; operation and care of small cylinder presses; the make-ready and feeding of commercial job forms; elementary problems of bindery operation; folding, gathering, stitching, gluing on backs; trimming; proper methods of wrapping.

213. Industrial Arts Graphic Arts II. (Print. 213 Graphic Arts II) (2-3) Credit 3. I. The fundamental printing processes; relief, planographic, intaglio, stencil, bookbinding.

217. Advanced Printing I. (Print. 217 Advanced) (3-12) Credit 7. Hand composition, estimating, plant management and machine composition. Problems in composition and selection of types; proportion, balance, shape, harmony, contrast color; application of the elements of cost finding to jobs of printing in process; solution of problems of finance; profit; plant layout; equipment; operation and employee relations; accuracy, development of speed, correct handling of straight matter; simple tabular work.

227. Advanced Printing II. (Print. 227 Advanced) (3-12) Credit 7. Advanced hand composition, craftsmanship and efficiency in handling typical jobs; creative and experimental typography; advanced cylinder presswork, make-ready and feeding, operation of large cylinder presses, make-ready of halftones. Advanced machine composition, the development of trade accuracy and speed; understanding and practice of accepted typographic usage, setting for color separation, headings, etc; planning and estimating; scheduling and complete manufacture of printing jobs.


413. Industrial Arts Graphic Arts IV. (Print. 413 Graphic Arts IV) (2-3) Credit 3. I. A study of advanced typography, cylinder press techniques, machine composition, offset lithography, layout design and elementary photography.

WELDING


213. Advanced Welding I—Electric. (Weld 213 Adv Electric) (2-3) Credit 3. I and II. Further practice in arc welding; a study of some of the modern techniques in welding; types of tests used in the testing of welded joints; calculating costs, job rating and design; and industrial application of resistance welding. Lab. fee: $2.00.


WOODWORK

112-122. General Woodwork. (Wdwk 112-122 General) (0-6) Credit 2. I, II. An exploration of the woodwork field and a study of its related socio-economic problems; development of an appreciation for wood and its aesthetic qualities; the construction of general small projects using correct tools, materials and operational procedures. (For students of School of Arts and Sciences only.) Lab. fee: $2.00.
113-123. Fundamental Woodwork. (Wdwk 113-123 Fundamentad) (2-3) Credit 3. I, II. Care, use and selection of fundamental woodworking tools, materials and equipment; skill in hand construction of approved projects which must embody good construction and good design values; training in ability to analyze a problem into its learning units and to plan procedure in execution of a job. Lab. fee: $2.00.

121. Maintenance of Shop Equipment. (Wdwk 121 Maintenance) (2-0) Credit 1. I, II. The care and upkeep of shop tools and equipment; gumming, milling, jointing, sharpening of circular saws, setting and filing handsaws, brazing, band saws, sharpening jointer knives. Lab. fee: $2.00.

214. Cabinetmaking. (Wdwk 214 Cabinetmaking) (2-6) Credit 4. I. Introduction to woodworking machines through their uses and care; construction of small pieces of period furniture embodying good design and specific units of instruction. Prerequisite: Fundamental woodworking, freehand drawing. Lab. fee: $3.00.

223. Wood Technology. (Wdwk 223 Technology) (3-0) Credit 3. II. Structures and properties of woods; characteristics and distribution of common species; lumbering, saw-milling, kilning, grading, measurements, markets.


322. Patternmaking. (Wdwk 322 Patternmaking) (0-6) Credit 2. I. Care and use of bench and machine tools used in pattern making, materials used in making patterns; meaning, use and construction of pattern to illustrate principles of draft, shrinkage, finish, warp, and core prints. Lab. fee: $2.00.

323. Wood Turning. (Wdwk 323 Wood Turning) (2-3) Credit 3. II. Proper care and use of the lathe and lathe tools; the principles of cutting and scraping; the making of projects with emphasis on good design. Prerequisite: Woodworking 214. Lab. fee: $2.00.

414. Furniture and Cabinetmaking. (Wdwk 414 Furniture) (2-6) Credit 4. I. Advanced course with emphasis on art and design in furniture construction; construction of period and modern style furniture. Lab. fee: $3.00.
The School of Nursing offers a degree of Bachelor of Science in Nursing. Upon satisfactory completion of all the requirements of the School of Nursing, the student is eligible to apply to write the State Board Examination given by the Board of Nurse Examiners for the State of Texas.

OBJECTIVES

The School of Nursing as an integral part of Prairie View Agricultural and Mechanical College accepts the responsibility for implementing the broad philosophy and objectives of the college. The curriculum is designed to provide learning experiences which will prepare the graduate of the program to:

Objective I Identify and define a nursing intervention that requires the assessment of a wide range of variables (psycho-social, bio-social, cultural, etc.) and their interrelationships.

Characteristic behaviors
1.1. Aware of the influence of physical, social, cultural forces in society.
1.2. Develops the ability to communicate effectively.
1.3. Understands the scientific method.
1.4. Evaluates personal beliefs, and values.
Objective II  To acquire the cognitive resources necessary to identify nursing needs.
  2.1. Acquires new knowledge
  2.2. Organizes and uses information relevant
  2.3. Ability to make decisions in light of needed action

Objective III  To develop professional skills needed to administer appropriate nursing action.
  3.1. Sensitive to the patient's needs and appraises the situation.
  3.2. Understands the skills needed to fulfill the patient's needs.
  3.3. Competence in selected nursing skills.
  3.4. Develops and implements a plan of patient care.
  3.5. Evaluates nursing action and modifies a plan of care accordingly.
  3.6. Aware of management skills applicable to the role of a team leader in the health field.

Objective IV  To develop skills in Interpersonal Relations
  4.1. Ability to work effectively with others
  4.2. Develops a sense of self-direction and assumes responsibility for her decisions
  4.3. Expresses a philosophy of nursing
  4.4. Interested in continued professional and personal growth
  4.5. Aware of the major issues facing nursing today
  4.6. Appreciation of the value of research to the profession of nursing.

SCHOOL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN NURSING  106-109 Semester Hours

- Biology 154, 164, 334
- Chemistry 114, 124
- Child Development 313
- Foods 143
- Psychology 113
- Sociology 263, 333
- Nursing 205
- Nursing 310
- Nursing 320
- Nursing 410
- Nursing 420
- Electives 12-15

COLLEGE REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN NURSING  23-35 Semester Hours

- English 113, 123, 223
- History 173, 183
- Political Science 113, 123
- Nursing 111, 121
- Physical Education 111, 121, 211, 221
- Military Science (Men) or Naval Science (Men)

A total of 132 semester hours, excluding military science 112, 122, 212, 222 and physical education 111, 121, 211, 221 or Naval Science is required for graduation with the Bachelor of Science Degree in Nursing.
CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN NURSING

FIRST YEAR

<table>
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<tr>
<th>Course</th>
<th>1st</th>
<th>2nd</th>
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DESCRIPTION OF COURSES

111. Concepts of Health I. (Nurs 111 Concepts of Hlth I) (1-0) Credit 1. Emphasis upon the physical, mental, and social variables underlying personal health; designed to foster understandings and attitudes needed for intelligent decision-making related to present and future health needs.

121. Concepts of Health II. (Nurs 121 Concepts of Hlth II) (1-0) Credit 1. Continuation of Concepts of Health I.
113. Introduction to Professional Nursing. (Nurs 113 Prof Devp) (3-0) Credit 3. An overview of nursing to acquaint the student with educational programs, personal and social responsibilities. Open to non-majors.

123. Philosophy and Ethics (Nurs 123 Philosophy) (3-0) Credit 3. Focuses on assisting the student in understanding the nature of nursing. Emphasis is placed on understanding the fundamental needs of man. Open to non-majors.

Nursing 205. Nursing Intervention I, (Nurs. 205 Fundamentals of Nurs.) (3-6) Credit 5. Assist students in developing professional attitudes and beginning skills necessary for meeting basic nursing needs of individuals; introduction to mental and community health concepts such as communication, interpersonal relationships, epidemiology, and community roles in health and illness; and the fundamentals of pharmacy. Prerequisite: Basic Pre-Nursing Courses.

Nursing 310. Nursing Intervention II (Nurs. 310 Care of Mother and Infant) (7-15) Credit 12. Concepts basic to effective family-centered care of mothers and infants. Learning experiences are provided within hospital and home setting for care of women before, during and after childbirth, and in the care of the newborn. Care of infants with common illnesses and disabilities focuses on interpersonal relationships and familial interactions. Prerequisite: Junior standing.

Nursing 320. Nursing Intervention III (Nurs. 320 Nursing Care of Children and Adults.) (9-18) Credit 15. (Including Nursing laboratory and field experience.) A study of selected nursing problems to acquire nursing knowledge and to use its application in meeting and health needs of well and sick persons at each maturational level.

Nursing 410. Nursing Intervention IV (Nurs. 410 Psychiatric, Public Health, and Intensive Nursing Care of Adults and Children (9-18) Credit 15. Emphasizes the care of individuals with a variety of complex nursing problems. Selected learning experiences with focus primarily on interpersonal relationships, communication, epidemiology, community health, intensive care, rehabilitation, and the prevention of physical and mental disorders. Prerequisite: Nursing Intervention III.

Nursing 420. Nursing Intervention V (Nursing 420 Symposium) (7-15) Credit 12. Provides the student with the opportunity for synthesizing prior knowledge and learning experiences to develop beginning skills in leadership. Opportunity for the enhancement of the research process. Prerequisite: Nursing Intervention IV.
In an effort to serve the citizens of Texas at the point of their greatest needs, Prairie View A. and M. College extends its in-service teacher education program to various centers in the state where a sufficient number of teachers show interest in professional growth. It is necessary that a request for an Extension Center be approved by the county and city superintendents before its organization and operation. The classes are designed primarily to meet the needs of in-service teachers on the graduate level, but this does not preclude enrollment of other qualified professional or non-professional persons. It is possible for a full-time teacher to earn 9 semester hours per school year in off-campus Extension Centers. The entrance requirements are the same as those for resident students.

ON-CAMPUS SATURDAY CLASSES

Prairie View has extended its services to in-service teachers who wish to earn resident credit toward a higher degree by offering Saturday classes on the graduate level. These classes are designed to offer interested persons an opportunity for professional development as well as earn resident credit leading to the Master's Degree. Classes are offered in the following fields of study: Elementary Education, Administration, Supervision and additional fields when requested. Persons interested in enrolling are asked to contact the Director of Extramural Services for further information.

PRAIRIE VIEW INTERSCHOLASTIC LEAGUE OF TEXAS

The College sponsors and administers the Interscholastic League Program as a public school service. The purpose of the league is to promote inter-school contests between member schools as an aid in the training of public school pupils for worthy citizenship. Organized in 1921, Prairie View has sponsored this program for a period of more than thirty-five years. The League is organized annually and operated under the auspices of a State Executive Committee comprising a Director and ten members of the college faculty. Practically all of the high schools and more than fifty per cent of the elementary schools participate annually in a part or all of the contests which include athletics, literary and music events.

OFFICE OF CAREER PLANNING AND PLACEMENT

The Office of Career Planning and Placement assists the student, beginning with his freshman year, to plan his career, and assists him in finding employment, both while a student, and after he leaves the College. It sponsors four conferences a year, bringing persons from many walks of life as consultants in career opportunities. It assists with follow-up and counseling services and arranges interviews between prospective employees and employers. The Office maintains permanent personnel records, including ratings and recommendations of the graduates. These records serve as a source of information such as is frequently requested by employers. Transcripts of courses completed, background information, work experience, faculty recommendations, photographs and other pertinent information is compiled and sent to prospective employers at the request of the graduate, faculty member or employer. The Office is maintained and operated for the purpose of assisting ex-students and graduates in securing employment. It is also a free public service functioning as an aid to employers in securing qualified workers. Graduating seniors and alumni should register with the bureau. The service is FREE.
Harry Hendricks, Director

The Office of Teacher Education administers the Teacher Education Programs at the College, all of which are approved by the Texas Education Agency, and qualify persons for certification as teachers, administrators, or special service personnel in public and private elementary and secondary schools in the State of Texas. The Director is also the Certification Officer for the College and has the responsibility, when applicable, of certifying to the Texas Education Agency that one has completed an approved certification program. Mere completion of a program, however, does not make the student automatically eligible to receive a certificate. In addition, the student must have demonstrated himself to be of good moral character, personally and socially fit for teaching, physically and mentally able, and professionally competent to assume the duties expected of a teacher.

The Teacher Education Programs are accredited by the National Council for Accreditation of Teacher Education; thus, one completing an approved program at Prairie View A&M College meets the minimum standards for employment in other states throughout the United States.

The Teacher's Certificate in the State of Texas requires the completion of an approved four-year degree program. The requirements for such certificates are those which became effective in September 1, 1962, and apply to all students entering college after that date.

Upon the completion of an approved program of specialization for the degree and certificate, the student receives a Provisional Certificate which is valid for life unless canceled by lawful authority. Upon the completion of thirty (30) hours of graduate work in an approved program the student earns the Professional Certificate in a designated area of specialization. Further information and application forms for teacher certification may be obtained from the Certification and Records Office. A minimum of twelve (12) semester hours in residence must be completed before a recommendation from Prairie View A. & M. College can be made for any certificate.

Teaching Fields

The following specializations which lead to Provisional Certification are available at Prairie View A. & M. College:

1. Elementary Education—Plan I and Plan II
   A. Special Education—(Mentally retarded)**
   B. Kindergarten**

2. Secondary, first teaching fields (Plan I)*
   Biology
   Business
   Chemistry
   Economics
   English
   French
   Geography
   (Plan II)
   Business
   Social Studies

3. PLAN III
   Industrial Arts

   All-Level
   Health-Physical Education
   Music

*Students who select Plan I must complete a second teaching field. Second teaching fields may be in social studies, and music.

**Endorsement
TEACHER EDUCATION

4. Special Services
   Driver Education**
   Librarian**

5. Vocational Education
   Agriculture
   Home Economics

The following specializations which lead to Professional Certification are available at Prairie View A. & M. College:

1. Elementary Education
   a. Special Education—Mentally Retarded**
   b. Kindergarten

2. Secondary
   Business
   History
   Social Studies, Industrial Arts

3. Special Services
   Driver Education**

4. Vocational Education
   Agriculture
   Home Economics

5. School Service Personnel
   Administrator
   Supervisor

CERTIFICATION

The present requirements for teacher certification in Texas apply to all students who entered college after September 1, 1962. These requirements are stated in Texas Education Agency Bulletin 651, Standards for Teacher Education, published in 1964.

Certification requirements for teachers are separate from graduation requirements. Thus, students not enrolled in a teacher education program may be permitted to graduate without completing requirements for teacher certification.

The National Teacher's Examination (NTE) is a requirement for recommendation of candidates for certification to the Texas Education Agency (TEA). This agreement was made between the TEA and the state-supported teacher education institutions, effective after September 1, 1965. for all persons recommended for certification. Thus, the National Teacher's Examination is considered a requirement for graduation for each person enrolled in a teacher-education program. The NTE is administered at the College four times per year. Information relative to testing dates may be received from the Counseling Center.

ADMISSION TO AND RETENTION OF STUDENTS IN TEACHER EDUCATION PROGRAMS

I. Admission to Provisional Status (TE-1 Forms)
   During the first registration period the freshman or transfer student shall declare his or her intent to enroll in a teacher education program.

   Criteria for Admission:
   1. Satisfactory high school record (50% of class)
   2. Must have completed, or enrolled in, all academic foundations requirements
   3. No record of criminal conviction
TEACHER EDUCATION

4. Good health
5. Possess no serious impediment that would cause him or her to be unable to teach effectively
6. Genuine and expressed interest and desire in teaching

II. Admission to Professional Status (TE-2 Form)
Criteria for Admission:
1. Student must have completed at least 45 semester hours
2. Must have overall “C” average
3. Must meet minimum requirements in his teaching fields
4. Good character and good conduct record
5. Good Health
6. Possess no serious impediment that would cause him or her to be unable to teach effectively
7. Genuine and expressed interest and desire in teaching

III. Admission to Candidacy (TE-3B Form)
Criteria for Admission:
1. Must have completed at least 75 semester hours of course work
2. Must have completed, or enrolled in, all academic foundations requirements
3. Must have an overall “C” average, or better
4. Good character and conduct
5. Good health
6. Possess no serious impediment that would cause him or her to be unable to teach effectively
7. Evidence of genuine interest and desire in teaching

IV. Prerequisites for Student Teaching. The following criteria will be used in determining the eligibility of a student to enroll in student teaching:
1. Complete course required by the Division; Department or School before student teaching.
2. Maintain a minimum average of “C” or above, as set up for a selected major field.
3. Maintain not less than a “C” average in the second teaching field, if scheduled to do student teaching in that field.
4. Satisfactorily complete the approved general education courses, including the twelve semester hours of required English courses.
5. Present evidence of physical fitness from the college medical officer at the time of registration for student teaching.
6. Show evidence of emotional maturity.
7. Give evidence of good moral character, desirable personality traits, professional attitudes, and good conduct record.
8. Show evidence of necessary competencies for specific student
9. Present evidence of professional laboratory experiences prior to student teaching.

Application for a Teaching Certificate (TE-4 Form)
To be executed by the student on or before date of completion of student teaching. This form is not to replace the formal application for a certificate to the Texas Education Agency, which the student must also prepare. This latter application requires a fee of $2.00 for the Provisional Certificate.
TEACHER EDUCATION

ACADEMIC ADVISERS

The Head of the Division or Department will appoint members of the faculty to serve as academic advisers to individual students who are pursuing a Teacher Education Program. The academic adviser should:

1. Assist an advisee from the point of his admission to Teacher Education to the time of his graduation. The advisee should be informed on program and policy changes affecting him.

2. Be familiar with the academic record of the advisee and to assist him in making satisfactory progress in terms of his interests and abilities.

3. Assist the advisee in making wise selection and pursuit of proper course sequence.

4. Plan in advance, with the advises (in writing), the program of studies and to approve the schedule of each advisee for every semester and/or summer session enrolled. The appropriate Division or Department Head should be consulted in the absence of the academic adviser.

5. Be mindful of steps leading from admission to advanced standing—proper course sequence, minimum grade, required semester hours, and hours required for graduation.

6. Provide the Office of the Director of Teacher Education with the necessary information and records for the duration of the student's enrollment in teacher education.

7. Be responsible to the Division or Department Head and Dean for a given number of students who are enrolled in Teacher Education Curricula.

ELEMENTARY EDUCATION

Plan I

ACADEMIC FOUNDATIONS (54-62)

English (12)  
113 Grammar and Composition  
123 Reading and Composition  
213 Public Speaking  
223 Introduction to Literature

History (6)  
173 American History  
and three semester hours from  
183 American History  
323 The New South, 1865  
433 American Foreign Relations  
453 Contemporary United States, 1898  
463 History of the Negro in America

Political Science (6)  
113 American Government I  
123 American Government II

Foreign Language (6)  
French  
—or—  
Spanish  
113 Elementary French  
123 Elementary French  
113 Elementary Spanish  
123 Elementary Spanish

Mathematics (6)  
113 College Algebra  
123 Trigonometry  
—or—  
Mathematics  
173 General College Mathematics  
183 General College Mathematics  
—or—  
Mathematics  
263 Structure of the Number System  
273 Fundamentals of Algebra
Science (6-8)

Science

— or —
Chemistry

— or —
Biology

Physical Education (4)

Military Science (8)

or

Naval Science (9)

Nursing (2)

ACADEMIC SPECIALIZATION (18 semester hours minimum - with 9 semester hours #300 or above)

Art Education

English*

Geography

Health-Phys. Ed.*

Physics

113 College Science

114 General Inorganic Chemistry

114 General Zoology

111 Freshman Practice

112 Elementary

153 Elementary

112 Elementary Practice

123 College Science

124 General Inorganic Chemistry

124 General Zoology

121 Freshman Practice

122 Elementary

233 Elementary

121 Concepts of Health

121 Freshman Practice

211 Sophomore Practice

212 Elementary

243 Elementary

221 Sophomore Practice

222 Elementary

225 Elementary

111 Concepts of Health

or

112 Elementary

111 Concepts of Health

233 English Literature

121 Freshman Practice

233 American Literature

211 Sophomore Practice

353 The English Language

221 Sophomore Practice

363 Advanced Grammar

222 Elementary

353 Drawing and Composition

— or —

373 History of Art

202 Elementary Modern Dance

383 Special Projects

312 Gymnastics

153 Organization of Instruction in Elementary School Art

263 Advanced Elementary School Art

533 Gymnastics

373 History of Art

233 English Literature

453 Organization of Instruction in Elementary School Art

353 The English Language

403 Playground & Community Recreation

363 Advanced Grammar

313 World Regional Geography

333 Methods and Materials in Health Education, Elementary School

322 Gymnastics

483 Political Geography

and

483 Org. & Adm. of Physical Education

172 History & Principles of Physical Education

403 Playground & Community Recreation

433 Electricity and Magnetism

333 Methods and Materials in Health Education, Elementary School

214 General Physics

313 Mechanics

225 General Physics

314 Modern Physics

312 Gymnastics

214 General Physics

312 Gymnastics

225 General Physics
TEACHER EDUCATION

Sociology
263 General Sociology
303 The Family
333 Social Psychology
343 Modern Social Problems
353 Contemporary Urban Communities
483 Juvenile Delinquency

Economics
213 Principles of Economics
223 Economic Problems
313 Public Finance and Taxation
333 Economic History
363 Economics of Consumption
403 Money and Banking

COMBINATION OF SUBJECTS (18 semester hours minimum. These may not include courses in Academic Foundation.)

Education 432 Children's Literature
Geography 163 Introduction to Physical Geography
Health Education 203 Personal Hygiene
Art Education 253 Elementary School Art
Art Education 363 Advanced Elementary School Art
Music Education 253 Elementary School Methods
Music Education 263 Elementary School Music

PROFESSIONAL DEVELOPMENT AND ELEMENTARY CONTENT COURSES

The student shall be required to complete 18 semester hours of professional education - of which at least six semester hours shall be in student teaching. In addition, the student shall be required to complete 12 semester hours of courses covering phases of the subject matter content of the elementary school curriculum.

PROFESSIONAL DEVELOPMENT (Junior standing or above)
Education 313 American Public School
333 Methods of Teaching
343 Human Development and Learning
483 Basic Concepts in Education
306 Student Teaching

ELEMENTARY CONTENT (Junior standing or above)
Education 433 Language Arts
Science 473 Elementary School Science
Mathematics Math for Elementary Teachers
Social Science 483 Social Studies in Elementary School

ELECTIVES (6 semester hours minimum)

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN EDUCATION WITH A MAJOR IN ELEMENTARY EDUCATION

Plan I

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**TEACHER EDUCATION**

**ELEMENTARY EDUCATION**

**Plan II**

(24 semester hours in one subject including 12 semester hours in advanced work. These may include courses in academic foundation.) All courses cited under ACADEMIC FOUNDATION, PROFESSIONAL DEVELOPMENT, and ELECTIVES in Plan I will prevail in Plan II. The following academic specializations are for PLAN II ELEMENTARY EDUCATION:

### ACADEMIC SPECIALIZATION

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<th>Subject</th>
<th>Courses</th>
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| Biology*    | 134 General Botany  
             | 202 Laboratory Technique  
             | 314 Human Physiology  
             | 414 Vertebrate Embryology  
             | 424 Comparative Vertebrate Anatomy (prerequisite: Chem. 114-124 and Biology 102) |
| Chemistry*  | 204 Quantitative Analysis  
             | 214 Quantitative Analysis  
             | 315 General Organic Chemistry  
             | 414 Physical Chemistry  
             | 424 Physical Chemistry |
| Economics   | 213 Principles of Economics  
             | 223 Economic Problems  
             | 313 Public Finance and Taxation  
             | 333 Economic History  
             | 363 Economics of Consumption  
             | 453 Labor Problems  
             | 408 Money and Banking  
             | 428 Intermediate Economic Theory and Policies |
| English*    | 233 English Literature  
             | 333 American Literature  
             | 353 The English Language  
             | 363 Advanced Grammar  
             | 378 Journalism |
| French*     | 213 Intermediate French  
             | 223 Intermediate French  
             | 303 Composition and Conversation  
             | 313 Histoire de la Civilisation Francaise  
             | 323 Survey of French Literature  
             | 423 Phonetics and Diction |
| Geography   | 173 Introduction  
             | 183 Economic Geography  
             | 273 Principles of Human Geography  
             | 303 Geography of Texas  
             | 433 Geography of the Americas  
             | 443 Climatology  
             | 473 Geography in Education  
             | 483 Political Geography |
| Government* | 213 Political Parties  
             | 273 Introduction to Public Administration  
             | 383 International Relations  
             | 313 Modern Political Theory  
             | 303 Ancient Political Theory  
             | 413 American Constitutional Law  
             | 423 The Constitution and Private Right  
             | 453 The Legislative Process |
TEACHER EDUCATION

Health-Phys. Ed.*  
102 Elementary Modern Dance
202 Elementary Modern Dance
—or—
312 Gymnastics
322 Gymnastics
and
172 History & Principles of Physical Education
488 Organization & Admn. of Physical Education
402 First Aid
403 Playground & Community Recreation
423 Safety Education
333 Methods & Materials in Health Education, Elementary School

History*  
143 Survey of Civilization to 1500
153 Survey of Civilization to Present
213 The United States, 1492-1837
223 The United States, 1837-1898
and 12 semester hours from:
313 American Historiography
323 The New South, 1865
333 Economic History of the United States
453 Contemporary U.S.—1898 to present
463 History of the Negro in America
433 American Foreign Relations, 1775-present
473 History of the Far East

Mathematics*  
(12 s.h. from academic foundation & 12 from:
313 Introduction to Modern Abstract Algebra
333 College Geometry
373 Linear Algebra
433 Elementary Statistics
453 Foundations of Mathematics

Physics  
215 General Physics
225 General Physics
313 Mechanics
314 Modern Physics
333 Electricity and Magnetism
402 Advanced Laboratory Technique
424 Modern Physics

Spanish*  
213 Intermediate Spanish
223 Intermediate Spanish
303 Composition and Conversation
313 Survey of Spanish Literature
323 Spanish Prose and Free Literature
333 Survey of Spanish Literature

COMBINATION OF SUBJECTS  
(12 semester hours minimum. These may not include courses in Academic Foundation)

Education  432 Children's Literature
Geography  163 Introduction to Physical Geography
Health Education  203 Personal Hygiene
and 6 semester hours from:
Art Education  253 Elementary School Art
Art Education  263 Advanced Elementary School Art
Music Education  253 Elementary School Music
Music Education  263 Elementary School Music

*Denotes that courses in Academic Foundation may be counted.
TEACHER EDUCATION

KINDERGARTEN SPECIALIZATION

Psychology 403 Foundations of Learning: The 5 year Old Child
Education 413 Kindergarten Methods and Materials
Geography 423 Kindergarten Curriculum
Special Education 473 Special Problems in Kindergarten Education
Teaching 493 Student Teaching in Kindergarten

SPECIAL EDUCATION (MENTALLY RETARDED) SPECIALIZATION

Special Education 313 Introduction to the Education of Exceptional Children
Curriculum Building for Mentally Retarded Children
Problems & Methods of Teaching Retarded Children
Psychological Problems of Mentally Retarded Children

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN EDUCATION WITH A MAJOR IN ELEMENTARY EDUCATION
(Teacher Education Plan II)

FIRST YEAR

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SECOND YEAR

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THIRD YEAR

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FOURTH YEAR

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ACADEMIC FOUNDATION

English (12) 113 Grammar and Composition
123 Reading and Composition
213 Public Speaking
225 Introduction to Literature

History (6) 173 American History
183 American History

Political Science (6) 113 American Government I
123 American Government II

Social Science (3) 113 Survey of Social Science

Mathematics (6) 113 College Algebra
123 Trigonometry

Foreign Language (12)

French 113 Elementary French
123 Elementary French
213 Intermediate French
223 Intermediate French

—or—

German 113 Elementary German
123 Elementary German
213 Intermediate German
223 Intermediate German
## TEACHER EDUCATION

### Science (10)
- Chemistry

### Physical Education (4)
- Freshman Practice
- Sophomore Practice

### Military Science (8)
- Elementary

### or
- Naval Science

### Nursing (2)
- Concepts of Health

### Social Science (3)
- Survey of Social Science

### ACADEMIC SPECIALIZATION
- (34) 24 semester hours minimum with 12 semester hours advanced. Courses in academic foundation may be counted.

#### Biology
- General Zoology
- Laboratory Technique
- Human Physiology
- Vertebrate Embryology
- Comparative Anatomy
- Seminar
- Research
- and one (1) course from:
  - Genetics
  - Microbiology
  - Histology
  - Parasitology
  - Entomology

#### SECOND TEACHING AREA
- (24) 24 semester hours minimum - including 12 semester hours advanced

#### PROFESSIONAL DEVELOPMENT
- (18) Junior level or above
  - American Public School
  - Methods of Teaching Biology
  - Human Development and Learning
  - Basic Concepts
  - Student Teaching

#### ELECTIVES
- (6)

### CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN BIOLOGY (Teacher Education Option)

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### TEACHER EDUCATION

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### BUSINESS, SECONDARY — Plan I

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#### ACADEMIC SPECIALIZATION (31-33)

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#### SECOND TEACHING AREA (24)

(24) 24 semester hours minimum - including 12 semester hours advanced
### TEACHER EDUCATION

**PROFESSIONAL DEVELOPMENT (18)**

- Education
  - 313 American Public School
  - 383 Methods of Teaching Business
  - 343 Human Development and Learning
  - 483 Basic Concepts
  - 406 Student Teaching

**ELECTIVES (6)**

- 313 American Public School
- 383 Methods of Teaching Business
- 343 Human Development and Learning
- 483 Basic Concepts
- 406 Student Teaching

### CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN BUSINESS EDUCATION

**(Teacher Education Option, Plan I)**

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<td>Nursing</td>
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#### SECOND YEAR

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<td>History</td>
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#### THIRD YEAR

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### CHEMISTRY, SECONDARY — Plan I

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<td>223 Introduction to Literature</td>
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<td>History (6)</td>
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<td>123 American Government II</td>
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<td>Social Science (3)</td>
<td>113 Survey of Social Science</td>
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<td>Mathematics (6)</td>
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<td>125 Analytic Geometry with Calculus</td>
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*Not required if a proficiency in typewriting is shown—test given to all freshman level students, interested in Business Education and/or Secretarial Science.*
**TEACHER EDUCATION**

### Physical Education (4)
- 111 Freshman Practice
- 121 Freshman Practice
- 211 Sophomore Practice
- 221 Sophomore Practice

### Military Science (8)
- 112 Elementary
- 122 Elementary
- 212 Elementary
- 222 Elementary

—or—

### Naval Science
- 153 Elementary
- 233 Elementary
- 243 Elementary

### Nursing (2)
- 111 Concepts of Health
- 121 Concepts of Health

### ACADEMIC SPECIALIZATION (26)

**Chemistry* 214**
- 315 General Organic Chemistry
- 325 General Organic Chemistry
- 414 Physical Chemistry
- 424 Physical Chemistry
- 434 Biochemistry

### SECOND TEACHING AREA 24 semester hours minimum - including 12 semester hours advanced

### PROFESSIONAL DEVELOPMENT (18)

**Education**
- 313 American Public School
- 333 Methods of Teaching Chemistry
- 343 Human Development and Learning
- 483 Basic Concepts
- 406 Student Teaching

### ELECTIVES

**American Public School**
- 313 Methods of Teaching Chemistry
- 343 Human Development and Learning
- 483 Basic Concepts
- 406 Student Teaching

### CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN CHEMISTRY (Teacher Education Option)

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| or Naval Science | 153-
| Physical Education | 111-121 |
| Nursing    | 111-121 |

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### ECONOMICS, SECONDARY Plan I

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<td>121 Concepts of Health</td>
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<tr>
<td>Military Science (8)</td>
<td>112 Elementary</td>
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<td>122 Elementary</td>
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<td>212 Elementary</td>
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<tr>
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<td>233 Elementary</td>
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<td>ACADEMIC SPECIALIZATION (24)</td>
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<tr>
<td>Economics</td>
<td>213 Principles of Economics</td>
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<td>223 Principles of Economics</td>
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<tr>
<td></td>
<td>313 Public Finance and Taxation</td>
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<tr>
<td></td>
<td>333 Economic Development of the United States</td>
</tr>
<tr>
<td></td>
<td>353 Economic Statistics</td>
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<td>463 Modern Economic Thought</td>
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<td></td>
<td>443 Contemporary Economic Systems</td>
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<td>473 International Trade</td>
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### SECOND TEACHING AREA (24)
24 semester hours minimum - including 12 semester hours advanced

---

248
### TEACHER EDUCATION

#### PROFESSIONAL DEVELOPMENT (18)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Education 313</td>
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<tr>
<td>Human Development and Learning 343</td>
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<tr>
<td>Methods of Teaching Social Studies in High School 383</td>
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<td>Student Teaching 406</td>
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#### ELECTIVES (6)

### CURRICULUM FOR THE BACHELOR OF ARTS

#### DEGREE WITH A MAJOR IN ECONOMICS

(Founder Education Option)

#### FIRST YEAR

<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
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<td>Social Science</td>
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<tr>
<td>Geography</td>
<td>163-173</td>
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<td>Political Science</td>
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<tr>
<td>Physical Education</td>
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<td>Nursing</td>
<td>112-122</td>
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#### SECOND YEAR

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<tr>
<td>Foreign Language</td>
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<tr>
<td>Political Science</td>
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<tr>
<td>Business Administration</td>
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<tr>
<td>Military Science (Men)</td>
<td>212-222</td>
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</tr>
<tr>
<td>or Naval Science (Men)</td>
<td>233-243</td>
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#### THIRD YEAR

<table>
<thead>
<tr>
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<td>History</td>
<td>173-183</td>
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#### FOURTH YEAR

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<td>Economics</td>
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<td>Economics</td>
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<td>Elective</td>
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<td>Education</td>
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### ENGLISH, SECONDARY — Plan I

#### ACADEMIC FOUNDATIONS

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<tr>
<td>History (6)</td>
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<td>Political Science (6)</td>
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<tr>
<td>Mathematics (6)</td>
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**—or—**

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>Foreign Language (12)</td>
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**—or—**

#### French

<table>
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<td>Intermediate French</td>
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**—or—**

#### Spanish

<table>
<thead>
<tr>
<th>Subject</th>
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<td>Intermediate Spanish</td>
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#### Science (6)

<table>
<thead>
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**TEACHER EDUCATION**

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<th>Freshman Practice</th>
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<td></td>
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<td>Sophomore Practice</td>
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<tr>
<td></td>
<td>221</td>
<td>Sophomore Practice</td>
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<tr>
<td>Military Science (8)</td>
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<td>Elementary</td>
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<tr>
<td></td>
<td>212</td>
<td>Elementary</td>
</tr>
<tr>
<td></td>
<td>222</td>
<td>Elementary</td>
</tr>
<tr>
<td>or Naval Science (9)</td>
<td>153</td>
<td>Elementary</td>
</tr>
<tr>
<td></td>
<td>233</td>
<td>Elementary</td>
</tr>
<tr>
<td></td>
<td>243</td>
<td>Elementary</td>
</tr>
<tr>
<td>Nursing (2)</td>
<td>111</td>
<td>Concepts of Health</td>
</tr>
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<td></td>
<td>121</td>
<td>Concepts of Health</td>
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</tbody>
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**ACADEMIC SPECIALIZATION (27)**

| English | 233 | English Literature |
|         | 333 | American Literature |
|         | 343 | American Literature |
|         | 353 | English Language    |
|         | 373 | Journalism          |
|         | 383 | Advanced Grammar    |
|         | 393 | Victorian Literature|
|         | 413 | Eighteenth Century Literature |
|         | 423 | Shakespeare         |

**SECOND TEACHING FIELD (24) including 12 semester hours advanced**

| English | 233 | English Literature |
|         | 333 | American Literature |
|         | 343 | American Literature |
|         | 353 | English Language    |
|         | 363 | Advanced Grammar    |
|         | 373 | Journalism          |
|         | 423 | Shakespeare         |

**PROFESSIONAL DEVELOPMENT (18)**

| Education | 313 | American Public School |
|           | 383 | Methods of Teaching English |
|           | 343 | Human Development and Learning |
|           | 483 | Basic Concepts |
|           | 406 | Student Teaching |

**ELECTIVES (6)**

**CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN ENGLISH (Teacher Education Option)**

**FIRST YEAR**

| English | 113-123 |
| Science | 113-123 |
| Foreign Language | 113-123 |
| Social Science | 113-112 |
| Military Science (Men) | 113-122 |
| or Naval Science (Men) | 153- |
| Physical Education | 111-121 |
| History | 173- |

**SECOND YEAR**

| English | 333-343 |
| English | 373-383 |
| English | 353-383 |
| Education | 313-343 |
| Electives (Minor) | 6- 6 |

**THIRD YEAR**

| English | 333-343 |
| English | 373-383 |
| English | 353-383 |
| Education | 313-343 |
| Electives (Minor) | 6- 6 |

**FOURTH YEAR**

| English | 333-343 |
| English | 373-383 |
| English | 353-383 |
| Education | 313-343 |
| Electives (Minor) | 6- 6 |
ACADEMIC FOUNDATIONS

English (12)  113 Grammar and Composition  
               123 Reading and Composition  
               213 Public Speaking  
               223 Introduction to Literature

FRENCH, SECONDARY — Plan I

History (6)  173 American History  
             183 American History

Political Science (6)  113 American Government I  
                       123 American Government II

Social Science (3)  113 Survey of Social Science

Mathematics (6)  173 General Math  
                 183 General Math

Foreign Language (12)  

French  113 Elementary French  
         123 Elementary French  
         213 Intermediate French  
         223 Intermediate French

—or—

Spanish  113 Elementary Spanish  
         123 Elementary Spanish  
         213 Intermediate Spanish  
         223 Intermediate Spanish

—or—

German  113 Elementary German  
        123 Elementary German  
        213 Intermediate German  
        223 Intermediate German

Science (6)  113 Survey  
             123 Survey

Physical Education (4)  111 Freshman Practice  
                        121 Freshman Practice  
                        211 Sophomore Practice  
                        221 Sophomore Practice

Military Science (8)  112 Elementary  
                      122 Elementary  
                      212 Elementary  
                      222 Elementary

or

Naval Science (9)  153 Elementary  
                   233 Elementary  
                   243 Elementary

Nursing (2)  111 Concepts of Health  
             121 Concepts of Health

ACADEMIC SPECIALIZATION (24)

French*  303 Composition and Conversation  
         313 Survey of French Literature  
         323 Introduction to Classic Literature  
         423 Phonetics and Diction

SECOND TEACHING FIELD  24 - including 12 semester hours advanced

PROFESSIONAL DEVELOPMENT (18)

Education  313 American Public School  
            383 Methods of Teaching French  
            343 Human Development and Learning  
            483 Basic Concepts  
            406 Student Teaching

ELECTIVES

FREE (Student may select electives)
TEACHER EDUCATION

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN FRENCH
(Teacher Education Option)

<table>
<thead>
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<th>SECOND YEAR</th>
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<td>213-223</td>
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<td>Mathematics</td>
<td>173-183</td>
<td>English</td>
<td>213-223</td>
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<td>113-</td>
<td>History</td>
<td>173-183</td>
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<td>Natural Science</td>
<td>113-123</td>
<td>Political Science</td>
<td>113-123</td>
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<td>Military Science (Men)</td>
<td>112-122</td>
<td>Physical Education</td>
<td>211-221</td>
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<td>or Naval Science (Men)</td>
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<td>Military Science (Men)</td>
<td>211-222</td>
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<td>or Naval Science (Men)</td>
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<td>3-</td>
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<td>313-343</td>
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<td>Minor</td>
<td>3-</td>
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GEOGRAPHY, SECONDARY — Plan I

ACADEMIC FOUNDATIONS

| English (12) | 113 Grammar and Composition |
|             | 123 Reading and Composition |
|             | 213 Public Speaking         |
|             | 223 Introduction to Literature |
| History (6) | 173 American History       |
|             | 183 American History        |
| Political Science (6) | 113 American Government I |
|             | 123 American Government II |
| Mathematics (6) | 113 College Algebra         |
|             | 123 Trigonometry            |
| Foreign Language (12) | 113, 123, 213, 223 Elementary & Intermediate French |
|             | or —                       |
| Spanish    | 113, 123, 213, 223 Elementary & Intermediate Spanish |
|             | or —                       |
| German     | 113, 123, 213, 223 Elementary and Intermediate German |
| Science (8) | 114 Inorganic Chemistry     |
| Chemistry  | 124 Inorganic Chemistry     |
| Physical Education (4) | 111, 121, 211, 221 Freshman & Sophomore Practice |
| Military Science (8) | 112, 122, 212, 222 Elementary |
| or Naval Science (9) | 153 Elementary |
| Nursing (2) | 233 Elementary |
| Social Science (3) | 243 Elementary |
|             | 111 Concepts of Health      |
|             | 121 Concepts of Health      |
|             | 113 Survey of Social Science |
TEACHER EDUCATION

ACADEMIC SPECIALIZATION (24) including 12 semester hours advanced
Geography 163
183
273
313
303
443
403
and one (1) course from:
473
483
423
Introduction to Physical Geography
Economic Geography
Human Geography
World Regional Geography
Geography of Texas
Climatology
Cartography
Industrial and Commercial Geography

SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced

PROFESSIONAL DEVELOPMENT (18)
Education 313
343
383
483
The American Public School
Human Development and Learning
Methods of Teaching Geography
Basic Concepts in Education

FREE ELECTIVES (6) minimum

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN GEOGRAPHY (Teacher Education Option)

FIRST YEAR

1st 2nd
English 113-123
Social Science 113-
Mathematics 174-123
Geography 163-173
Chemistry 114-
Physical Education 111-121
Military Science (Men) 112-122
or Naval Science (Men) 153-
Nursing 111-121
Political Science 113-
American Government 123-
Biology -134

THIRD YEAR

1st 2nd
Education 313-343
Foreign Language 213-223
Mathematics 162-
Geography 483-213
Military Science (Men) 314-324
Electives 6- 3
Geography -308

FOURTH YEAR

1st 2nd
Education 483-406
Foreign Language 443-
Mathematics 473-403
Geography 443-
Electives 433-

GOVERNMENT, SECONDARY — Plan I

ACADEMIC FOUNDATIONS

English (12) 113
123
History (6) 173
183
Political Science (6) 113
123
Mathematics (6) 113
123
Foreign Language (12) 113, 123, 213, 223
—or—
Spanish 113, 123, 213, 223
—or—
German 113, 123, 213, 223

Grammar and Composition
Reading and Composition
Public Speaking
Introduction to Literature
American History
American History
American Government I
American Government II
College Algebra
Trigonometry
Elementary & Intermediate French
Elementary & Intermediate Spanish
Elementary and Intermediate German
### TEACHER EDUCATION

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<thead>
<tr>
<th>Science ( ) Chemistry</th>
<th>114 Inorganic Chemistry</th>
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<tbody>
<tr>
<td>Physical Education (4) 111, 121, 211, 221</td>
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<td>or Naval Science (9) 153, 233, 243</td>
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<td>Nursing (2) 111, 121</td>
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### ACADEMIC SPECIALIZATION

<table>
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<tr>
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<tr>
<td>273 Introduction to Public Administration</td>
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<tr>
<td>and 12 semester hours from</td>
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<tr>
<td>333 Comparative Politics of Developing Nations</td>
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<td>373 U. S. Foreign Policy</td>
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<td>383 International Relations</td>
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<td>303 Ancient Political Theory</td>
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<td>313 Modern Political Theory</td>
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<td>403 Urban Politics and Government</td>
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<td>413 American Constitutional Law</td>
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<tr>
<td>423 The Constitution and Private Rights</td>
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<td>433 The Presidency</td>
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<td>453 The Legislative Process</td>
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### SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced

### PROFESSIONAL DEVELOPMENT (18)

<table>
<thead>
<tr>
<th>Education</th>
<th>313 The American Public School</th>
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<td>483 Basic Concepts in Education</td>
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### FREE ELECTIVES (6) minimum

### CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN POLITICAL SCIENCE (Teacher Education Option—Plan I)

<table>
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<th>(Teacher Education Option—Plan I)</th>
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### TEACHER EDUCATION

#### HEALTH - P. E., SECONDARY — Plan I

##### ACADEMIC FOUNDATIONS

| Subject                  | Hours
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**Foreign Language (12)**

- French: 113, 123, 223, 223
- Spanish: 113, 123, 213, 223
- German: 113, 123, 213, 223

**Science (11)**

- Biology: 113
- 314

**Physical Education (4)**

- 111, 121, 211, 221

**Military Science (8)**

- 112, 122, 212, 222

**Naval Science (9)**

- 153
- 233
- 243

**Nursing (2)**

- 111
- 121

**Social Science (3)**

- 113

### ACADEMIC SPECIALIZATION

(31) including 12 semester hours advanced

**Health-Physical Education**

- 111
- 121
- 211
- 221
- 151
- 161
- 241
- 301
- 301
- 323
- 433
- 462

**College Algebra**

**Introduction to Literature**

**American History**

**American Government I**

**American Government II**

**General College Math**

**College Algebra**

**Trigonometry**

**Elementary & Intermediate French**

**Elementary & Intermediate Spanish**

**Elementary and Intermediate German**

**General Biology**

**Physiology**

**Elementary**

**Concepts of Health**

**Survey of Social Science**

**Corrective Physical Education**
TEACHER EDUCATION

Health Education

102 Personal Hygiene
333 Methods & Materials in Health Education

SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced

PROFESSIONAL DEVELOPMENT (18)

Education

313 The American Public School
343 Human Development and Learning
383 Methods of Teaching Health—P.E.
483 Basic Concepts in Education
406 Student Teaching

FREE ELECTIVES (6) minimum

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN HEALTH-PHYSICAL EDUCATION
(Teacher Education Option, Plan I)

FIRST YEAR

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THIRD YEAR

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FOURTH YEAR

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HISTORY, SECONDARY — Plan I

ACADEMIC FOUNDATIONS

English (12)

113 Grammar and Composition
123 Reading and Composition
213 Public Speaking
223 Introduction to Literature

History (6)

173 American History
183 American History

Political Science (6)

113 American Government I
123 American Government II

Mathematics (6)

113 College Algebra
123 Trigonometry

Foreign Language (12)

French 113, 123, 213, 223 —or—
Spanish 113, 123, 213, 223 —or—
German 113, 123, 213, 223
Science (8)
Chemistry 114

Inorganic Chemistry

Inorganic Chemistry
TEACHER EDUCATION

Physical Education (4)
111, 121, 211, 221 Freshman & Sophomore Practice

Military Science (8)
112, 122, 212, 222 Elementary

or

Naval Science (12)
153 Elementary
163 Elementary
233 Elementary
243 Elementary

Nursing (2)
111 Concepts of Health
121 Concepts of Health

Science (3)
113 Survey of College Science

ACADEMIC SPECIALIZATION (27) including 12 semester hours advanced

History
143 Survey of Civilization to 1500
153 Survey of Civilization to Present
213 The United States, 1492-1837
223 The United States, 1837-1898
473 History of the Far East
323 The New South, 1865
373 Problems in Latin American History
and six (6) semester hours from:
333 Economic History of the U. S.
433 American Foreign Relations 1775 to Present
463 History of the Negro in America

SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced

PROFESSIONAL DEVELOPMENT (18)

Education
313 The American Public School
343 Human Development and Learning
383 Methods of Teaching History
483 Basic Concepts in Education
406 Student Teaching

ELECTIVES (Minimum 6)

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH MAJOR IN HISTORY

(Teacher Education Option: Plan I)

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TEACHER EDUCATION

MATHEMATICS, SECONDARY — Plan I

ACADEMIC FOUNDATIONS

English (12) 113 Grammar and Composition
123 Reading and Composition
213 Public Speaking
223 Introduction to Literature

History (6) 173 American History
183 American History

Political Science (6) 113 American Government I
123 American Government II

Mathematics (6) 115 College Algebra & Trigonometry
125 Analytic Geometry with Calculus

Foreign Language (12)
French 113, 123, 213, 223 Elementary & Intermediate French
—or—
Spanish 113, 123, 213, 223 Elementary & Intermediate Spanish
—or—
German 113, 123, 213, 223 Elementary and Intermediate German

Science ( )
Chemistry 114 Inorganic Chemistry
124 Inorganic Chemistry

Physical Education (4)
111, 121, 211, 221 Freshman & Sophomore Practice

Military Science (8)
112, 122, 212, 222 Elementary

or

Naval Science (9)
153 Elementary
233 Elementary
243 Elementary

Nursing (2)
111 Concepts of Health
121 Concepts of Health

Social Science (3)
113 Survey of Social Science

ACADEMIC SPECIALIZATION

Mathematics (24) including 12 semester hours advanced
162 Introduction of Computational Processes
214 Differential Calculus
224 Integral Calculus
413 Differential Equations
423 Differential Equations
333 College Geometry
483 Advanced Calculus
163 Introduction Computer Programming

SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced

PROFESSIONAL DEVELOPMENT (18)

Education
313 The American Public School
343 Human Development and Learning
383 Methods of Teaching Mathematics
483 Basic Concepts in Education
406 Student Teaching

FREE ELECTIVES (6) minimum
CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE
WITH A MAJOR IN MATHEMATICS
(Teacher Education Option)

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ACADEMIC FOUNDATIONS

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<tr>
<td>Political Science</td>
<td>113 American Government I</td>
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<td>Mathematics</td>
<td>115 College Algebra</td>
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<td>Elementary and Intermediate German</td>
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<td>111, 121, 211, 221 Freshman &amp; Sophomore Practice</td>
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<td>Military Science</td>
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<td>Naval Science</td>
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<tr>
<td>Social Science</td>
<td>113 Survey of Social Science</td>
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</table>
TEACHER EDUCATION

ACADEMIC SPECIALIZATION (24) including 12 semester hours advanced
Physics 215 General Physics
225 General Physics
303 Modern Physics
393 Modern Physics
402 Advanced Laboratory Techniques
and six (6) semester hours from:
373 Mathematical Physics
383 Mathematical Physics
—or—
353 Electrical Measurements
363 Electrical Measurements
—or—
313 Mechanics
323 Mechanics
—or—
333 Electricity and Magnetism
343 Electricity and Magnetism
—or—
Six semester hours (6) in any other Physics courses numbered 300 or above

SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced

PROFESSIONAL DEVELOPMENT (18)
Education 313 The American Public School
343 Human Development and Learning
333 Methods of Teaching Physics
483 Basic Concepts in Education
406 Student Teaching

FREE ELECTIVES (6) minimum

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN PHYSICS
(Teacher Education Option)

FIRST YEAR 1st 2nd
Chemistry 115-125
English 113-123
Mathematics 115-125
Political Science 111-121
Physical Education 111-121
Nursing 112-122
Military Science (Men) 153-
or Naval Science (Men)

SECOND YEAR 1st 2nd
Physics 215-225
Mathematics 214-224
English 213-223
German 113-123
History 173-183
Physical Education 211-222
Military Science (Men) 212-222
or Naval Science (Men) 233-243

THIRD YEAR 1st 2nd
Physics 303-393
Education 313-343
German 213-223
Social Science 113-
Education 333-

FOURTH YEAR 1st 2nd
Physics (Elective) 6-
Education -406
Elective (Minor) 9-
Social Science 402-
Education -483
# SPANISH, SECONDARY — Plan I

## ACADEMIC FOUNDATIONS

<table>
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<tr>
<th>Subject</th>
<th>Courses</th>
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</table>
| **English** (12)      | 113 Grammar and Composition  
                        | 123 Reading and Composition  
                        | 213 Public Speaking  
                        | 223 Introduction to Literature |
| **History** (6)       | 173 American History  
                        | 183 American History |
| **Political Science** (6) | 113 American Government I  
                        | 123 American Government II |
| **Mathematics** (6)   | 173 General Math  
                        | 183 General Math |
| **Foreign Language** (12) | 113, 123, 213, 223 Elementary & Intermediate French  
                        | —or—  
                        | 113, 123, 213, 223 Elementary & Intermediate Spanish  
                        | —or—  
                        | 113, 123, 213, 223 Elementary and Intermediate German |
| **Science** (6)       | 113 Survey of College Science  
                        | 123 Survey of College Science |
| **Physical Education** (4) | 111, 121, 211, 221 Freshman & Sophomore Practice |
| **Military Science** (8) | 112, 122, 212, 222 Elementary |
| or                    | 153 Elementary  
                        | 223 Elementary  
                        | 243 Elementary |
| **Nursing** (2)       | 111 Concepts of Health  
                        | 121 Concepts of Health |
| **Social Science** (3) | 113 Survey of Social Science |

## ACADEMIC SPECIALIZATION

(24) including 12 semester hours advanced

<table>
<thead>
<tr>
<th>Subject</th>
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| **Spanish** 113 and 123 | Elementary Spanish  
                        | 213 and 223 Reading and Grammar  
                        | 303 and 313 Composition and Conversation  
                        | 323 Survey of Spanish Literature  
                        | 403 Historical Survey of the Culture and Civilization of Spain |

## SECOND TEACHING AREA

(24) minimum, including 12 semester hours advanced

## PROFESSIONAL DEVELOPMENT (18)

<table>
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<th>Subject</th>
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</table>
| **Education** 313     | The American Public School  
                        | 343 Human Development and Learning  
                        | 383 Methods of Teaching Spanish  
                        | 483 Basic Concepts in Education  
                        | 406 Student Teaching |

## FREE ELECTIVES (6) minimum

Student may select any courses
# TEACHER EDUCATION

## CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN SPANISH (Teacher Education Option)

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### SECOND YEAR

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### FOURTH YEAR

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# SECONDARY EDUCATION, PLAN II

## BUSINESS, SECONDARY — Plan II

### ACADEMIC FOUNDATIONS

**English (12)**
- 113 Grammar and Composition
- 123 Reading and Composition
- 213 Public Speaking
- 223 Introduction to Literature

**History (6)**
- 173 American History
- 183 American History

**Political Science (6)**
- 113 American Government I
- 123 American Government II

**Social Science (3)**
- 113 Survey of Social Science

**Mathematics (6)**
- 173 General Math
- 183 General Math

**Foreign Language (12)**
- **French** 113, 123, 213, 223 Elementary & Intermediate French
- **Spanish** 113, 123, 213, 223 Elementary & Intermediate Spanish

**Science (6)**
- 113 College Science
- 123 College Science

**Physical Education (4)**
- 111, 121, 211, 221 Freshman and Sophomore Practice

**Military Science (8)**
- 112, 122, 212, 222 Elementary
- **or**
- **Naval Science (9)**
  - 153 Elementary
  - 233 Elementary
  - 243 Elementary

**Nursing (2)**
- 111 Concepts of Health
- 121 Concepts of Health
TEACHER EDUCATION

ACADEMIC SPECIALIZATION (48-50) including 18 semester hours advanced

Business Education

132 Elementary Typewriting
142 Elementary Typewriting

BA 143 Introduction to Business

Econ 213 Principles of Economics
243 Beginning Shorthand (formerly 153)

BA 253 Elementary Accounting
273 Beginning Shorthand (formerly 163)

BA 263 Elementary Accounting
272 Advanced Typewriting
282 Advanced Typewriting

303 Business Correspondence
304 Office Practice
312 Office Machines

343 Advanced Shorthand (formerly 253)
373 Advanced Shorthand (formerly 263)

372 Secretarial Practice

and three (3) courses from:

BA 313 Marketing
BA 373 Business Law
BA 343 Salesmanship
BA 323 Business Statistics
BA 403 Management

BE 413 Research in Business Education
BE 433 Problems in Business Education
BE 382 Secretarial Practice

PROFESSIONAL DEVELOPMENT (18)

Education
313 The American Public School
343 Human Development and Learning
383 Methods of Teaching Business
483 Basic Concepts of Education
406 Student Teaching

FREE ELECTIVES (6) minimum

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN BUSINESS EDUCATION

(Alteer Education Option, Plan II)

FIRST YEAR

English 1st 2nd
113-123
113-123

History 1st 2nd
113-123
113-123

Mathematics 1st 2nd
113-123
113-123

Foreign Language 1st 2nd
113-123
113-123

College Science 1st 2nd
112-122
112-122

Military Science 1st 2nd
193-293
153-

or Naval Science 1st 2nd
193-293
153-

Physical Education 1st 2nd
111-121
111-121

Nursing 1st 2nd

SECOND YEAR

English 1st 2nd
113-123
113-123

Political Science 1st 2nd
113-123
113-123

Social Science 1st 2nd
113-123
113-123

Foreign Language 1st 2nd
213-223
213-223

Military Science 1st 2nd
233-243
233-243

or Naval Science 1st 2nd
111-121
111-121

Physical Education 1st 2nd
111-121
111-121

Elective 1st 2nd
3- 3

THIRD YEAR

Education 1st 2nd
313-343
313-343

Business Education 1st 2nd
393-323
393-323

Business Administration 1st 2nd
303-353
303-353

Business Education 1st 2nd
272-282
272-282

Business Education 1st 2nd
294-322
294-322

Business Education 1st 2nd
253-263
253-263

FOURTH YEAR 1st 2nd
Education
483-406
383-

Education
383-
383-

Economics
213-
213-

Elective (Business)
6-
6-

Business Education
372-
372-

Business Education
363-
363-

SOCIAL STUDIES - ECONOMICS

Plan II

ACADEMIC FOUNDATIONS

English (12)
113 Grammar and Composition
123 Reading and Composition
213 Public Speaking
223 Introduction to Literature
TEACHER EDUCATION

History (6)  
173 American History  
183 American History

Political Science (6)  
113 American Government I  
123 American Government II

Mathematics (6)  
113 College Algebra  
123 Trigonometry
—or—
173 General Mathematics  
183 General Mathematics

Foreign Language (12)  
French 113, 123, 213, 223  
—or—
Spanish 113, 123, 213, 223  
—or—
German 113, 123, 213, 223  
—or—

Science (6)  
113 Survey of College Science  
123 Survey of College Science

Physical Education (4)  
111, 121, 211, 221  
—or—

Military Science (8)  
112, 122, 212, 222  
—or—

Naval Science (9)  
153 Elementary

Nursing (2)  
111 Concepts of Health  
121 Concepts of Health

Social Science (3)  
113 Introduction to Social Science

ACADEMIC SPECIALIZATION (48) including 18 semester hours advanced
Economics (24)  
213 Principles of Economics  
223 Economic Problems  
363 Economics of Consumption  
453 Labor Problems  
313 Public Finance and Taxation  
333 Economic History  
423 History of Economic Theory  
481 Seminar in Economics  
403 Money and Banking

Government (6)  
213 Political Parties  
383 International Relations

Sociology (6)  
262 Principles of Sociology  
343 Modern Social Problems

History (6)  
213 The U. S. — 1492-1837  
223 The U. S. — 1837-1898

Geography (6)  
163 Introduction to Geography  
313 Regional Geography

PROFESSIONAL DEVELOPMENT (18)
Education  
313 The American Public School  
343 Human Development and Learning  
383 Methods of Teaching Social Science  
483 Basic Concepts in Education  
406 Student Teaching

FREE ELECTIVES (6) minimum

264
## CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
## WITH A MAJOR IN ECONOMICS

**(Teacher Education Option)**

### FIRST YEAR

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<td>History</td>
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### SECOND YEAR

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<td>273-</td>
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TEACHER EDUCATION

Nursing (2)
- 111 Concepts of Health
- 121 Concepts of Health

Social Science (3)
- 113 Social Science

ACADEMIC SPECIALIZATION

History (24)
- 213 The U. S. — 1492-1837
- 223 The U. S. — 1837-1898
- 313 American Historiography
- 333 Economic History of the U. S.
- 363 Historical Methods

and 9 semester hours from:
- 453 Contemporary United States, 1898 to present
- 463 History of the Negro in America
- 473 History of the Far East

Government (6)
- 213 Political Parties
- 383 International Relations

Economics (6)
- 213 Principles of Economics
- 223 Economic Problems

Sociology (6)
- 262 Principles of Sociology
- 343 Modern Social Problems

Geography (6)
- 163 Introduction to Geography
- 313 Regional Geography

PROFESSIONAL DEVELOPMENT (18)

Education
- 313 The American Public School
- 343 Human Development and Learning
- 333 Methods of Teaching Social Studies
- 483 Basic Concepts in Education
- 406 Student Teaching

FREE ELECTIVES (6) minimum

CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN HISTORY

(Teacher Education Option: Plan II)

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<td>or Naval Science (Men)</td>
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<td>Electives</td>
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SOCIAL STUDIES - GOVERNMENT

Plan II

ACADEMIC FOUNDATIONS

English (12)
- 113 Grammar and Composition
- 123 Reading and Composition
- 213 Public Speaking
- 223 Introduction to Literature
TEACHER EDUCATION

History (6)
- Survey of Western Civilization
  - American Government I
  - American Government II

Political Science (6)
  - American Government I
  - American Government II

Mathematics (6)
- General Mathematics
  - General Mathematics

Foreign Language (12)
- French 113, 123, 213, 223
  - or -
- Spanish 113, 123, 213, 223
  - or -
- German 113, 123, 213, 223

Science (6)
- College Science
  - Chemistry
  - Physical Education (4)
    - Freshman & Sophomore Practice

Military Science (8)
- or -
- Naval Science (9)

Nursing (2)
- Concepts of Health

Social Science (3)
- Social Science

ACADEMIC SPECIALIZATION (48) including 18 semester hours advanced

Government (24)
- Political Parties
  - Introduction to Public Administration
  - International Relations
  - Ancient Political Theory
  - American Constitutional Law
  - Comparative Government
  - Modern Political Theory
  - The Constitution and Private Rights

History (6)
- The U. S. 1492-1837
  - The U. S. 1837-1898

Economics (6)
- Principles of Economics
  - Economic Problems

Sociology (6)
- Principles of Sociology
  - Modern Social Problems

Geography (6)
- Introduction to Geography
  - Regional Geography

PROFESSIONAL DEVELOPMENT (18)

Education
- The American Public School
  - Human Development and Learning
  - Methods of Teaching Social Science
  - Basic Concepts in Education
  - Student Teaching

FREE ELECTIVES (6) minimum

267
TEACHER EDUCATION
CURRICULUM FOR THE BACHELOR OF ARTS DEGREE
WITH A MAJOR IN POLITICAL SCIENCE
(Teacher Education Option)

FIRST YEAR

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<td>213-223</td>
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<td>Physical Education</td>
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THIRD YEAR

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FOURTH YEAR

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SOCIAL STUDIES - SOCIOLOGY
Plan II

ACADEMIC FOUNDATIONS

English (12)  
113 Grammar and Composition  
123 Reading and Composition  
213 Public Speaking  
223 Introduction to Literature  

History (6)  
213 The U. S. — 1492-1837  
223 The U. S. — 1837-1898  

Political Science (6)  
113 American Government I  
123 American Government II  

Mathematics (6)  
173 General Mathematics  
183 General Mathematics  

Foreign Language (12)  
French 113, 123, 213, 223  
Elementary & Intermediate French  
—or—  
Spanish 113, 123, 213, 223  
Elementary & Intermediate Spanish  
—or—  
German 113, 123, 213, 223  
Elementary and Intermediate German  

Science (6)  
113 Survey of College Science  
123 Survey of College Science  

Physical Education (4)  
111, 121, 211, 221  
Freshman & Sophomore Practice  

Military Science (8)  
112, 122, 212, 222  
Elementary  
or  
Navy Science (9)  
153 Elementary  
233 Elementary  
243 Elementary  

Nursing (2)  
111 Concepts of Health  
121 Concepts of Health  

Social Science (3)  
113 Survey of Social Science
### Academic Specialization

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**262 Principles of Sociology**

**263 General Sociology**

**303 The Family**

**373 Introduction to Social Work**

**343 Modern Social Problems**

**333 Social Psychology**

**353 Contemporary Urban Communities**

**463 Social Research**

**402 Seminar in Sociology**

### Professional Development (18)

- **Education**
  - 313 The American Public School
  - 343 Human Development and Learning
  - 383 Methods of Teaching Social Science
  - 483 Basic Concepts in Education
  - 406 Student Teaching

### Free Electives (6) minimum

### Curriculum for the Bachelor of Arts Degree with a Major in Sociology

**(Teacher Education Option)**

#### First Year

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<tbody>
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#### Second Year

<table>
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<td>Military Science (Men)</td>
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<td>or Naval Science (Men)</td>
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#### Third Year

<table>
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#### Fourth Year

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### Industrial Arts, Secondary — Plan III

#### Academic Foundations

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<td>Grammar and Composition</td>
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<tr>
<td>Public Speaking</td>
<td>213</td>
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<tr>
<td>Introduction to Literature</td>
<td>223</td>
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</table>

| History (6)         |         |
| American History    | 183     |
| American History    | 173     |

| Political Science (6) |         |
| American Government I | 113     |
| American Government II | 123    |
TEACHER EDUCATION

Mathematics (6)
- 113 College Algebra
- 123 Trigonometry

Science (16)
- Chemistry
  - 114 Inorganic Chemistry
  - 124 Inorganic Chemistry
- Physics
  - 214 General Physics
  - 224 General Physics

Physical Education (4)
- 111, 121, 211, 221 Freshman & Sophomore Practice

Military Science (8)
- 111, 121, 211, 222 Elementary
  or
- Naval Science (9)
  - 153 Elementary
  - 233 Elementary
  - 243 Elementary

Nursing (2)
- 111 Concepts of Health
- 121 Concepts of Health

*Elective (3)

ACADEMIC SPECIALIZATION (59) including 18 semester hours advanced

Industrial Education
- 111 Philosophy of Industrial Education
- 121 Philosophy of Industrial Education
- 273 Classroom Organization & Management
- 323 Coursemaking

Drafting—12
- 113 General Drafting I
- 123 General Drafting II
- 313 Design
- 403 Machine Drafting

Metalwork—12
- 113 Benchwork
- 123 Machine Shop
- 313 Industrial Arts Sheetmetal
- 343 Materials and Processes

Woodwork—15
- 121 Maintenance of Shop Equipment
- 113 Fundamentals of Woodwork
- 214 Cabinetmaking
- 223 Wood Technology
- 314 Machine Woodworking

AND ONE OF THE FOLLOWING TECHNICAL AREAS:

Crafts—12
- 153 General Crafts
- 233 Ceramics
- 243 Jewelry
- 313 Advanced Ceramics

Electricity—13
- 114 Elementary Electricity
- 102 Electrical Appliances
- 134 Basic Electronics
- 303 Electronic Projects

*Students must elect 3 semester hours from the following courses: Sociology 123; Economics 203; or Home Economics 123.
### CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL EDUCATION

#### FIRST YEAR

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<tr>
<td>Woodwork</td>
<td>214-</td>
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<tr>
<td>Sheetmetal</td>
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#### THIRD YEAR

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#### FOURTH YEAR

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<td>3-</td>
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<td>Experience Work in Library Methods</td>
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### ALL-LEVEL

#### LIBRARY SERVICE (ENDORSEMENT)

**LIBRARY SCIENCE**
- 213 The Library of the School
- 223 Children's Literature
- 333 School Library Reference Materials and Tools
- 313 Administration of School Libraries
- 323 Cataloging and Classification
- 343 Experience Work in Library Methods

### HEALTH-PHYSICAL ED. ALL-LEVEL

#### ACADEMIC FOUNDATIONS

**English (12)**
- 113 Grammar and Composition
- 123 Reading and Composition
- 213 Public Speaking
- 223 Introduction to Literature
TEACHER EDUCATION

History (6)
173 American History
183 American History

Political Science (6)
113 American Government I
123 American Government II

Mathematics (6)
173 General College Math
183 General College Math
—or—
113 College Algebra
173 Trigonometry

Foreign Language (12)
French 113, 123, 213, 223 Elementary & Intermediate French
—or—
Spanish 113, 123, 213, 223 Elementary & Intermediate Spanish
—or—
German 113, 123, 213, 223 Elementary & Intermediate German

Science (11)
Biology 113 General Biology
304 Physiology

Physical Education (4)
111 Freshman Practice
121 Freshman Practice
211 Sophomore Practice
221 Sophomore Practice

Military Science (8)
112 Elementary
122 Elementary
212 Elementary
222 Elementary

or
Naval Science (9)
153 Elementary
233 Elementary
243 Elementary

Nursing (2)
111 Concepts of Health
121 Concepts of Health

Social Science (3)
113 Survey of Social Science

ACADEMIC SPECIALIZATION (31) including 18 semester hours advanced

Health-Physical Education
151 Elementary Gymnastics
161 Elementary Gymnastics
171 Elementary Modern Dance
172 History and Principles
181 Intermediate Modern Dance
241 Intermediate Swimming
391 Advanced Swimming
323 Anatomy and Kinesiology
333 Methods & Materials for Health & Physical Education in Elementary Schools
433 Test & Measurement
483 Organization and Administration of Physical Education
462 Corrective Physical Education

Health Education
102 Personal Hygiene
333 Methods & Materials in Health Education

SECOND TEACHING AREA (24) minimum, including 12 semester hours advanced
TEACHER EDUCATION

PROFESSIONAL DEVELOPMENT (18)

Education 
313 The American Public School 
343 Human Development and Learning 
383 Methods of Teaching Health-Physical Education 
483 Basic Concepts in Education 
406 Student Teaching 
Elementary and Secondary Levels

FREE ELECTIVES (6) minimum

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN HEALTH AND PHYSICAL EDUCATION

(ALL-LEVEL)

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MUSIC

ALL-LEVEL

ACADEMIC FOUNDATIONS

| English (12)          | 113    | Grammar and Composition |
|                      | 123    | Reading and Composition |
|                      | 213    | Public Speaking          |
|                      | 223    | Introduction to Literature|

| History (6)           | 173    | American History         |
|                      | 183    | American History          |

| Political Science (6) | 113    | American Government I    |
|                      | 123    | American Government II   |

| Mathematics (6)       | 113    | College Algebra          |
|                      | 123    | Trigonometry             |

| Foreign Language (12) |         |                       |
|                      | 113, 123, 213, 223 | Elementary & Intermediate French |
|                      | or—       |                           |
|                      | 113, 123, 213, 223 | Elementary & Intermediate Spanish |
|                      | or—       |                           |
|                      | 113, 123, 213, 223 | Elementary and Intermediate German |
TEACHER EDUCATION

<table>
<thead>
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<th>113 Survey of Science</th>
<th>123 Survey of Science</th>
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<tbody>
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<td>Elementary</td>
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<tr>
<td>Naval Science (9)</td>
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<td>111 Concepts of Health</td>
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<td>113 Survey of Social Science</td>
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ACADEMIC SPECIALIZATION

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<thead>
<tr>
<th>Music</th>
<th>151-161 Elementary Keyboard Harmony</th>
<th>152-162 Elementary Harmony</th>
<th>182 Elementary Sight Singing</th>
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<td>251-261 Advanced Keyboard Harmony</td>
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<td>272-282 Advanced Sight Singing</td>
<td>142 Voice Class</td>
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<td>132 Brasses and Percussions</td>
<td>132 Strings Class</td>
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<td>132 Woodwinds</td>
<td>223 Music Literature</td>
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<td>393 Instrumental Music Methods</td>
<td>332 Conducting</td>
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<td>353 Counterpoint</td>
<td>413 Music History</td>
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Choir (16)

| 112-122-212-222-312-322-412-422 | Choral Practice |

Applied Music

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<th>Piano</th>
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<tr>
<td>Voice</td>
<td>112-122-212-222-312-322-412-422 Voice (16)</td>
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<tr>
<td>Band/Orchestra</td>
<td>112-122-212-222-312-322-412-422 (14)</td>
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PROFESSIONAL DEVELOPMENT (18)

| Education | 313 The American Public School | 343 Human Development and Learning | 383 Methods of Teaching Music | 483 Basic Concepts in Education | 406 Student Teaching |

FREE ELECTIVES (6) minimum

274
# TEACHER EDUCATION

## CURRICULUM FOR THE BACHELOR OF ARTS DEGREE WITH A MAJOR IN MUSIC

(Teacher Education)

### FIRST YEAR

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<thead>
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### SECOND YEAR

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### THIRD YEAR

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<td>or Organ</td>
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### FOURTH YEAR

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<tbody>
<tr>
<td>Elective</td>
<td>303-313</td>
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<tr>
<td>Music (Instrumental or vocal music methods—music elective)</td>
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<tr>
<td>Social Science</td>
<td>113-123</td>
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<tr>
<td>Music</td>
<td>332-342</td>
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<tr>
<td>Music</td>
<td>132-142</td>
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<td>Music</td>
<td>431-441</td>
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<tr>
<td>Piano 412-422, Voice 412-422, or Organ</td>
<td>412-421</td>
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<tr>
<td>Choir 412-422 or Band</td>
<td>411-421</td>
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<tr>
<td>Education</td>
<td>431-441</td>
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### NOTE:

Voice majors must add Music 151-161 and Music 251-261 to the lower division requirements.

## SPECIAL SERVICES

### DRIVER EDUCATION

(Endorsement)

<table>
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<td>Driver Education II</td>
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## AGRICULTURAL EDUCATION - VOCATIONAL

### ACADEMIC FOUNDATIONS

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<td>English (12)</td>
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<td>Reading and Composition</td>
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<td>Public Speaking</td>
<td>213</td>
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<td>Introduction to Literature</td>
<td>223</td>
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<tr>
<td>History (6)</td>
<td>173</td>
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<td>American History</td>
<td>183</td>
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<tr>
<td>Political Science (6)</td>
<td>113</td>
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<td>American Government I</td>
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<td>Mathematics (6)</td>
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<td>Trigonometry</td>
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<td>General College Mathematics</td>
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<td>General College Mathematics</td>
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<tr>
<td>Science (20)</td>
<td>114</td>
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<tr>
<td>Inorganic Chemistry</td>
<td>124</td>
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</table>

275
TEACHER EDUCATION

Biology 114 General Zoology
134 General Botany
254 Genetics

Physical Education (4)
111, 121, 211, 221 Freshman & Sophomore Practice

Military Science (8)
112, 122, 212, 222 Elementary

or

Naval Science (9)
153 Elementary
233 Elementary
243 Elementary

Nursing (2)
111 Concepts of Health
121 Concepts of Health

Sociology
273 Rural Sociology
—or—
263 General Sociology

ACADEMIC SPECIALIZATION (54) including 18 hours advanced
Animal Science 113 General Animal Science
313 Animal Nutrition

Plant Science
123 Crop Production
463 Plant Propagation

Agricultural Economics
223 Fundamentals of Economics
323 Marketing Farm Products

Agricultural Engineering
123 Farm Shop
213 Farm Machinery
and
423 Farm Engines and Tractors

Veterinary Science
323 Livestock Diseases and Sanitation

Agronomy
323 Soils
403 Soil Management

Entomology
323 General Entomology

Agricultural Science (15) from
Agricultural Engineering
Plant Science
Animal Science
Dairy Science
Poultry Science
Veterinary Science

PROFESSIONAL DEVELOPMENT (18)

Education
313 American Public School
—or—
483 Basic Concepts in Education
and
343 Human Development and Learning
and

Agricultural Education
313 Agricultural Leadership
323 Course Building and Teaching Methods
426 Student Teaching

FREE ELECTIVES (6)
276
### TEACHER EDUCATION

**CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE IN AGRICULTURE WITH A MAJOR IN AGRICULTURAL EDUCATION**

(Vocational Agricultural Certification)

<table>
<thead>
<tr>
<th><strong>FIRST YEAR</strong></th>
<th>1st</th>
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<tbody>
<tr>
<td>English</td>
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<tr>
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<tr>
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<td></td>
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<tr>
<td>Dairy Science</td>
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<tr>
<td>Chemistry</td>
<td>114-</td>
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<td>Poultry Science</td>
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<tr>
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<td>113-</td>
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<tr>
<td>Nursing</td>
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<td>121</td>
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<tr>
<td>Military Science</td>
<td>112-</td>
<td>122</td>
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<tr>
<td>or Naval Science</td>
<td>152-</td>
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<tr>
<td>Physical Education</td>
<td>112-</td>
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<tr>
<td>History</td>
<td>173-</td>
<td>183</td>
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<tr>
<td>Biology</td>
<td>134-</td>
<td>114-</td>
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<tr>
<td>Chemistry</td>
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<td>Agricultural Engineering</td>
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<td>Plant Science</td>
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<td>Physical Education</td>
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<td>221</td>
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<td>Military Science</td>
<td>212-</td>
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<tr>
<td>or Naval Science</td>
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<td>-233</td>
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<td>Animal Science</td>
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<td>-423</td>
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### HOME ECONOMICS - VOCATIONAL

#### ACADEMIC FOUNDATIONS

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<tr>
<td>English (12)</td>
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<td>Reading and Composition</td>
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<td>213</td>
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<tr>
<td>Introduction to Literature</td>
<td>223</td>
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<tr>
<td>History (6)</td>
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<tr>
<td>American History</td>
<td>183</td>
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<tr>
<td>Political Science (6)</td>
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<td>American Government I</td>
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<td>American Government II</td>
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<td>Mathematics (6)</td>
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<tr>
<td>General Mathematics</td>
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<td>Science (12)</td>
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<td>Biology</td>
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<td>Physiology</td>
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<td>Physical Education (4)</td>
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<td>Freshman Practice</td>
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<td>Concepts of Health</td>
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<td>The Family</td>
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<td>Economics (3)</td>
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<td>Survey of Economics</td>
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#### ACADEMIC SPECIALIZATION

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<td>Elementary Textiles</td>
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<td>Design</td>
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<td>Family Life Education</td>
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<td>Family Clothing</td>
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<tr>
<td>Food and Nutrition</td>
<td>143</td>
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<td>Household Equipment</td>
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<td>Food Principles and Preparation</td>
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</table>

(48) including 18 semester hours advanced
TEACHER EDUCATION

Home Economics 243 Meal Management
283 Personal and Family Finance
303 Nursery School Observation and Participation
313 Home Management
343 Advanced Clothing Problems
353 Housing and Man
373 Child Development and Guidance
403 Home Management Residence
423 Advanced Nutrition

PROFESSIONAL DEVELOPMENT (18)

Education 313 The American Public School
343 Human Development and Learning

Home Economics 313 Developing a Functional Program in Home Economics
363 Special Methods
406 Student Teaching

FREE ELECTIVES (12)

CURRICULUM FOR THE BACHELOR OF SCIENCE DEGREE
IN HOME ECONOMICS
WITH A MAJOR IN HOME ECONOMICS EDUCATION
(Vocational Certification)

FIRST YEAR

<table>
<thead>
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<tbody>
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<td>Chemistry</td>
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<td>Art</td>
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<td>English</td>
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<td>History</td>
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SECOND YEAR

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THIRD YEAR

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<td>Biology</td>
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<td>Child Development</td>
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FOURTH YEAR

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GRADUATE TEACHER EDUCATION CURRICULA

ELEMENTARY EDUCATION
(Professional)

SPECIALIZATION AREA (12)

Twelve (12) semester hours of graduate courses in a subject included in the public school curriculum in which the student has at least 24 semester hours undergraduate credit in a program for secondary teachers, or 18 semester hours in a program for elementary teachers.

PROFESSIONAL DEVELOPMENT (6)

Psychology 593 Pupil Growth and Development and 3 semester hours from:

Education 723 Philosophy of Education
---or--- 523 Principles and Practices of Educational Measurements
| RESOURCE AREA (12) | 683 | Elementary School Curriculum |
| | 743 | Problems of Elementary Teachers |
| | 793 | Diagnosis and Remedial Treatment of Elementary School Subjects |
| | 643 | Psychology of Reading |
| | 633 | Teaching Reading in the Elementary Grades |
| | 753 | Teaching the Language Arts |
| | 763 | Teaching of Social Studies in the Elementary School |
| | 733 | Teaching of Science in the Elementary Grades |

| RESEARCH (6) | 843 | Techniques of Research |
| | 853 | Project and Thesis |

| SPECIAL EDUCATION (MENTALLY RETARDED) | SPECIALIZATION Graduate Courses Available for Provisional Endorsement |
| | Education | 603 | Education of Exceptional Children |
| | | 613 | Problems and Methods of Teaching Mentally Retarded Children |
| | | 633 | Psychological Problems of Mentally Retarded Children |
| | | 903 | Laboratory* |
| | | 913 | Curriculum Building for Mentally Retarded Children |
| | | 923 | Workshop* |

| *ELECTIVE | 623 | Development of the Pre-School Child |
| | 813 | Kindergarten Methods and Materials |
| | 823 | Seminar in Kindergarten Curriculum |
| | 833 | Current Trends in Early Childhood Education |
| | 863 | Practicum I in Kindergarten Education |
| | 873 | Practicum II in Early Childhood Education |

| EARLY CHILDHOOD EDUCATION (KINDERGARTEN) (ENDORSEMENT) | SPECIALIZATION |
| Psychology | 623 | Development of the Pre-School Child |
| Education | 813 | Kindergarten Methods and Materials |
| | 823 | Seminar in Kindergarten Curriculum |
| | 833 | Current Trends in Early Childhood Education |
| | 863 | Practicum I in Kindergarten Education |
| | 873 | Practicum II in Early Childhood Education |

| BUSINESS EDUCATION (Professional) | SPECIALIZATION (15) |
| Business Education | 523 | Problems in Business Education |
| | 533 | Advanced Methods of Teaching Business Subjects |
| | 623 | Curriculum Construction in Business Education |
| | 723 | Seminar in Business Education |
| Business Administration | 563 | Business Law |

| PROFESSIONAL DEVELOPMENT (9) | Education | 583 | Secondary School Curriculum |
| | 673 | Methods of Teaching School Subjects |
| | 503 | Principles of Secondary Education |

| RESOURCE AREA (6) | Economics | 583 | Economic Problems of the Consumer |
| | 663 | Modern Economic Thought |

| RESEARCH (6) | Education | 843 | Techniques of Research |
| | 853 | Project and Thesis |
TEACHER EDUCATION

HISTORY
(Professional)

SPECIALIZATION (14)

History
503 Methods of Teaching History
563 Survey of the Critical Attitudes, tools of Scientific History
572 Historical Investigative Paper and a minimum of 6 semester hours from graduate offerings in History

PROFESSIONAL DEVELOPMENT (6)

Education
583 Secondary School Curriculum
673 Methods of Teaching Secondary School Subjects

RESOURCE AREA (12)

Twelve hours are required of which six must be from:
Sociology 583 Social Anthropology
Economics 663 Modern Economic Thought
Political Science 613 Modern Political Theory
Geography 603 Geography of Texas

INDUSTRIAL ARTS
(Professional)

SPECIALIZATION (18) from:

Industrial Education
512-3 Development and Effective Use of Instructional Materials
523 Test and Measurements in Industrial Education
542-3 Occupational Analysis and Course Making
563 The General Shop
583 Industrial Arts for Elementary Schools
712-3 Administration and Supervision of Industrial Education
710 Philosophy and Objectives of Industrial Education
743 The History of Industrial Education
753 Practicum in Industrial Education
783 Problems in Industrial Education

PROFESSIONAL DEVELOPMENT (8)

Education
523 Principles and Practices of Educational Measurements
723 Philosophy of Education

RESOURCE AREA (6) Six Semester hours which provide background for the specialization area, or in courses chosen to extend the student's preparation in a subject matter field other than his specialization. (May be Junior or Senior Level)

RESEARCH (6)

Industrial Education
763 Research and Thesis Writing
720 Thesis in Industrial Education

SOCIAL STUDIES
(Professional)

SPECIALIZATION (18)

History
(6 hours from:)
583 History of Civilization to 1500
593 History of Civilization from 1500 to Present
633 American Foreign Relations
643 American Foreign Relations
653 Contemporary United States History
623 Problems in Latin American History
673 The Negro in American History
TEACHER EDUCATION

Economics (3 hours from:)
743 Capitalism and Socialism
773 Economic Theory and Social Policy

Geography (3 hours from:)
603 Geography of Texas
613 Geography for Teachers
713 Geography in Education
723 Geography in Education

Government (3 hours from:)
513 American Local Rural Government
523 Municipal Government

Sociology (3 hours from:)
803 Comparative Cultures and International Relations
643 Modern Social Problems

PROFESSIONAL DEVELOPMENT (6)
Education
503 Principles of Secondary Education
583 Secondary School Curriculum
673 Methods of Teaching Secondary School Subjects

RESOURCE AREA (6)
History
703 Great American Historians
522 Library Techniques and Resources for Social Studies

RESEARCH (6)
Sociology
563 Social Research
History
702 Seminar in Social Studies Education

THE GUIDANCE PROGRAM (3)
Guidance
683 Organization and Administration of a Guidance Program

PUPIL SERVED (6)
Psychology
593 Human Growth & Development
553 Psychology of Adjustment

RESOURCE AREA (21)
Psychology
513 Psychological Testing
533 Fundamentals of Statistics
603 Theory of Counseling

Guidance
543 Principles and Psychology of Guidance
583 Educational and Occupational Information
603 Supervised Practice in Counseling and Guidance
733 Principles of Counseling

RESEARCH (6)
Education
843 Techniques of Research
853 Project and Thesis

DRIVER EDUCATION (Endorsement)
Driver Education
703 Driver Education and Traffic Safety II
703 Driver Education and Traffic Safety 55
SUPERVISOR

LEADERSHIP FOR INSTRUCTIONAL IMPROVEMENT
Supervision
- 643 Elementary School Supervision
- or -
- 663 High School Supervision
and
- 753 Principles and Practices of Supervision
- 733 Practicum in Supervision

RESOURCE AREAS (21)
Psychology
- 593 Pupil Growth and Development
Education
- 723 Philosophy of Education
and
- 583 Secondary School Curriculum
- 683 Elementary School Curriculum
and
- 673 Methods of Teaching Secondary School Subjects
- or -
- 683 Basic Principles for Curriculum Improvement in Elementary Schools
and
Administration
- 523 Administration of School Personnel
- 713 Fundamentals of Public School Administration

RESEARCH (6)
Education
- 843 Techniques of Research
- 853 Project & Thesis

SCHOOL ADMINISTRATORS*

GENERAL ACADEMIC AREA (6) (Academic courses as described in Specialization and Resource Areas)

SPECIALIZATION AREA (12) (Graduate courses in a subject or area commonly taught in the public schools of Texas)
- Business
- History
- Mathematics

PROFESSIONAL DEVELOPMENT AREA (6) (Graduate courses in professional development as required for the Professional Teacher's Certificate for the improvement of teaching ability)
Education
- 583 Secondary School Curriculum
- 683 Elementary School Curriculum

GENERAL AND SPECIALIZED PROFESSIONAL ADMINISTRATION AREAS (24) (Graduate courses designed to give competence in school administration at all levels and each of the assignments of the elementary principal, semester hours of a supervised practicum.)
Administration
- 523 Administration of School Personnel
- 533 Senior High School Administration
- 613 The School Plant
- 633 Elementary School Administration
- 643 Junior High School Administration
- 703 Public School Finance
- 713 Fundamentals of School Administration
- 733 Practicum in Educational Administration
- 743 Public School Law

Supervision
- 753 Principles and Practices of Supervision

RESOURCE AREAS (12) (Courses distributed among the social sciences, humanities, and sciences, the purpose of which is to give breadth to the preparation of the school administrator.)

*Effective September 1, 1966

282
AGRICULTURAL EDUCATION
(Professional)

SPECIALIZATION
12 or more hours from:
Agricultural Education 503 Agricultural Education Seminar
513 Methods of Conducting Part-Time and Evening Schools in Vocational Agriculture
533 Extension Organization and Program Determination
543 Extension Methods
713 Problems in Agricultural Education
723 Principles of Teaching Methods in Agricultural Education

PROFESSIONAL DEVELOPMENT AND RESOURCE AREAS
3-12 hours may be taken Vocational Supervision, and Counseling from the following courses:
Industrial Ed. 813, 833, 653, 643, 633, 573
3-12 hours may be taken in Educational Guidance, Administration and/or Supervision.
3-12 hours may be taken in the Agricultural Sciences including:
Animal Science
Soil and Plant Science
Agricultural Economics
Agricultural Engineering

This plan will enable the student to receive the Master's of Education Degree as well as certify for Vocational Supervision and counseling. Those students not desiring Vocational Supervision and Counseling certification may concentrate in the Agricultural Sciences and selected courses in general education. Students desiring the Master of Arts or Science will take 30 semester hours course work, exclusive of thesis.

RESEARCH (7)

HOME ECONOMICS
Professional Certificate
Academic Specialization
(18 semester hours)

Students may select from among the following courses:
Home Economics 513 Studies in Home Management
553 Family Life Problems
563 Consumer
733 Seminar in Foods
753 Clothing Seminar
763 Problems in Home Economics
813 Child Development Curriculum
883 Personal and Family Finance
913 Problems of Youth
Total 18 Semester Hours

Resource Area
(6 or more semester hours)

Students may select from among the following:
Sociology 543 Sociology of Urban Areas
583 Social Anthropology
603 Programs in Child Welfare
643 Social Disorganization
683 Sociology of Youth
614 Socio-Psychological Aspects of Poverty
Total 6 Semester Hours
TEACHER EDUCATION

Professional Development
(6 or more semester hours)

Students may select from among the following courses:
Home Economics  
  543 Advanced Methods
Education  
  643 Adult Education
  593 Home Economics Curriculum
  723 Measurement
  Total 6 Semester Hours

Research
(6 or more semester hours)

Home Economics  
  523 Research Problems
Education  
  843 Techniques in Educational Research
  Total 6 Semester Hours
  Grand Total 36 Semester Hours
The Graduate School has general supervision of all graduate studies carried out in the specialized departments, divisions and schools of the college and in this respect serves as an administrative unit concerned with all aspects of graduate study. Procedures, regulations and policies which provide direction for graduate programs are developed by the Graduate Council and administered by the Dean of the Graduate School. This Council, consisting of ex-officio, elected, and appointed members, is responsible for determining the basic policies of the Graduate School.

Prairie View Agricultural and Mechanical College has a distinct character identified with its graduate program and subsequently reflects a kind of philosophy and objectives to be achieved. This character peculiarly related to the College has been of a distinguishing nature and will continue to serve as the underlying source of stimulation for continuous improvement.

ACCRREDITATION

Prairie View A & M College is accredited by the Texas Education Agency, the Southern Association of College and Schools, and the National Council for Accreditation of Teacher Education.

EXPERIMENTAL GRADUATE PROGRAM

Prairie View A & M College, through its Graduate Teacher Education Program, received approval for a first cycle Teacher Corps Program in May, 1966. Presently, the College is involved in it fifth cycle program.
The Teacher Corps Program is an experimental program for the College as well as for the Nation. Its major emphasis relates to teaching the disadvantaged. Excellent opportunities are provided through this program for experimental work in relation to on-site instruction for graduate teacher education, team teaching, laboratory training for teacher education students, utilization of video-tapes, inter-action analysis scales and other objective criteria in teacher education and a curriculum specifically geared to the preparation of teachers of disadvantaged pupils.

ADMISSION TO THE GRADUATE SCHOOL

Applicants for admission to the Graduate School should submit a regular application blank properly executed at least thirty days prior to the opening of the session in which they wish to register. This is to be accompanied by an official transcript of undergraduate work completed.

FINAL DATES FOR ADMISSION

The following dates have been established as final dates for applying for admission:

For September Admission..............August 1st
For January Admission................December 1st
For Summer Session Admission........May 1st

These closing dates are necessary to provide the Graduate School Office with sufficient opportunity to review all applications for admission. Processing of application cannot begin until all credentials are on file with the office of the Graduate Dean.

2. Arrange for two (2) official transcripts of all previous college work inclusive of Bachelor's degree to be sent to the office of the Graduate Dean within appropriate time to be considered along with submitted application form.

3. A previously earned Bachelor's degree from an accredited College or University.

4. An accumulative grade point average of 2.75 on a 4 point scale or 1.75 on a 3 point scale or better at the completion of undergraduate work in support of an ability to successfully pursue graduate study.

Criteria in Evaluating Graduate Applications:

1. The undergraduate record, particularly in fields related to the applicant's projected graduate study in support of a grade point average of 2.75 or better. There must be evidence of satisfactory preparation for graduate study in the fields chosen. The general undergraduate record, educational experiences and one's record in relation to major field of specialization will be considered in determining admission status.

2. Written recommendations from known faculty members or persons knowledgeable on the applicant's potential for graduate study.

3. Levels of performance on the GRE or other standardized test in support of aptitude and scholarly achievement.

4. Evidences of ability to carry on independent study and to engage in speculation.

5. Evidences of acceptable character and personality.

TYPES OF ADMISSION

Degree Applicant. A student who wishes to pursue a program leading to the Master's degree is a "Degree Applicant."

Certificate Applicant. A student who wishes to pursue a program of study leading to the professional certificate. This applicant must meet the same criteria as the Degree Applicant for admission to the Graduate School.
Special Student. "Special Students" may be of three categories. They are: 1) students who do not wish to become applicants or candidates for a Master's degree; 2) those students who do not qualify for admission as "Degree Applicants," and 3) students who are removed from "Degree Applicant" status because of low quality of performance.

Special students, in the first category, may become Degree Applicants when they can comply with all admission requirements.

GRADUATE WORK BY SENIORS

A senior in this College, who lacks six semester hours or less of having completed the requirements for the undergraduate degree may, with the approval of his undergraduate dean, the Dean of the College, and the Dean of the Graduate School, register for graduate courses, not to exceed six semester hours, while completing his undergraduate requirements. If graduate credit is desired for any part of the work carried, the combined load of the graduate and undergraduate courses must not exceed 15 semester hours.

STUDENT RESPONSIBILITY

It is the responsibility of the student to inform himself concerning and to carry out all regulations and procedures required by the course he is pursuing. In no case will a rule be waived or an exception granted because a student pleads ignorance of the rule or asserts that he was not informed of it by his adviser or other authority.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS, MASTER OF SCIENCE, AND MASTER OF EDUCATION

Graduate of Prairie View Agricultural and Mechanical College or an accredited College or University may, on the satisfactory completion of an approved program of study, receive the appropriate degree of Master of Arts, Master of Science or Master of Education.

Fields of Study

Major and Minor specializations may be selected in the following fields:

- Agricultural Economics
- Agricultural Education
- Art Education
- Biology
- Business Education
- Chemistry
- *Counseling
- Economics
- **Educational Administration
- ***Elementary Education
- English
- ***Guidance
- **Home Economics Education
- ***Industrial Education
- Mathematics
- Music
- Physical Education
- Political Science
- Secondary Education
- Sociology
- Special Education
- Supervision

For further information regarding program or course offerings on the graduate level place request with the office of the Dean of the Graduate School.

Degree Requirements

It is the responsibility of the student to be familiar with and, complete the requirements for the degree being sought and to be governed by all regulations.

*Denotes fields for which only minors are offered.
**Educational administration is available as a specialist or administrators certificate program.
***Denotes fields of study for which the Master of Education degree is offered.
****Denotes fields of study for which a Master of Science or Master of Education options are provided.
and procedures required by the program he is pursuing. The student may expect guidance from his advisor, but it is the student’s responsibility to meet all program requirements.

MASTER OF ARTS, MASTER OF SCIENCE

These degrees are available through a thesis option only and for areas as previously indicated under Fields of Study.

Master of Education

The Master of Education degree is a specialized professional degree appropriate for those who plan for teacher education or related careers. Prerequisites for this degree are eighteen semester hours of undergraduate education credits and two or more years of teaching experience. A written research report and/or special project of special quality is required of each student for this degree.

The following general requirements apply to each degree program:

1. Residence—
The minimum residence requirements is two semester of at least 12 semester hours of graduate credit in each, five six-week summer terms, or an equivalent approved by the Graduate Council.

2. Course Requirements—
   a. A minimum of thirty semester hours, exclusive of thesis, with an average grade of “B,” or better, in courses approved for graduate credit, is required for the degrees of Master of Arts and Master of Science.
   b. Thirty-six semester hours of course work are required for the degree of Master of Education.
   c. Ordinarily, at least twenty semester hours of graduate work in the major field and ten semester hours in the minor field will be required.

3. Transfer of Credit—
Credit obtained in a different but recognized institution, not exceeding six semester hours, may be transferred and credited to the Master’s degree, provided that the work was of graduate character and provided that acceptance of the transferred credit does not reduce the minimum residence period of one academic year. Graduate credit for which the student received less than a “B” grade cannot be transferred to this College. Transfer of advanced credit is not made unless requested by the student in a letter to the Dean of Graduate Study. Such a transfer of credits from another institution to apply in partial fulfillment of the requirements for the Master’s degree must be approved by the Graduate Council. An “A” grade from another institution or earned in extension courses, may not be used to validate a grade of “C” earned in this College.

4. Extension and Correspondence Courses—
A student who satisfied requirement for admission to the Graduate School may receive credit toward the Master’s degree for extension courses, subject to the following conditions: (1) graduate credit will be given only for courses approved by the Graduate Council; (2) the courses fit in with the student’s program of study; (3) graduate credit for extension courses shall not exceed six semester hours and shall not reduce the residence requirement for the degree; and (4) an “A” grade from another institution or earned in extension courses, may not be used to validate a grade of “C” earned in this College.
Correspondence work is not accepted for graduate credit. With the consent of the department concerned, a student may take work by correspondence to remove edificiencies in his undergraduate training.

5. Not more than a total of nine semester hours of extension and transferred credits combined may be counted toward the Master's degree.

6. Quality of Work—
A candidate must maintain at least a "B" average in all work taken in graduate study.

7. English Usage Requirement—
A student who is deficient in English usage but who is otherwise doing satisfactory work will be required to satisfy the Committee on English Usage with regard to his use of the English language, before he is allowed to graduate. Such deficiency might be determined by an English Usage examination or by reports of instructors of courses in which a student is registered.

8. Admission to Candidacy—
A graduate student having been previously admitted to full standing graduate status does not automatically become a candidate for the Master's degree. To become a candidate, the student must complete the following requirements:
   a. Achieve a satisfactory score on the Graduate Record Examination inclusive of both aptitude and verbal sections.
   b. Prepare and submit official application for Candidacy Form reflecting the applicant's having satisfactorily completed twelve (12) semester hours of required graduate courses with an average of "B" or better. This candidacy form should provide a listing of courses completed as well as those to be completed. This instrument becomes the basic guide for the student and advisor to be followed through to completion of the degree program.
   c. This application for admission to candidacy is prepared on a candidacy form procedurable in the office of the Graduate Dean. The application when approved by both major and minor areas of specialization must be submitted to the Graduate Dean for approval.

9. Foreign Language Option—
At the option of the head of the department in which the major work is done, a reading and working knowledge of French, German or Spanish may be required to complete the requirements for the Master of Arts degree.

10. Thesis—
a. In addition to the thirty semester hours in graduate courses all candidates for the degrees of Masters of Arts and Master of Science must present an acceptable thesis on a subject germane to the major course of Study. The thesis must be written under the direction of a member of the faculty of the Graduate School in the department in which the individual is working. The thesis must have the approval of each member of the Student's Reading Committee. This work must be acceptable with respect to both scholarship and literary quality. A candidate for an advanced degree must have his thesis subject approved by his Chairman at least six months before the date of his intended graduation in order that it may be examined by each member of the Advisory Committee of the student. The following directions should be rigidly followed in the writing of the thesis.

The thesis should be typewritten double-spaced on a durable rag bond, 8½ x 11 inches, leaving the left hand margin at least an
GRADUATE SCHOOL

inch and a quarter wide, the right-hand margin at least three-quarters of an inch. Set up the title page according to the following form:

TITLE OF THESIS
A Thesis of Prairie View Agricultural and Mechanical College Presented to the Graduate School In Partial Fulfillment of the Degree of Master of ......................................................... By (Author's Name in Full) (Date on which degree is to be conferred)

Two copies of the thesis must be filed in the Graduate Office. All candidates for the degree of Master of Education are required to enroll in a Seminar in connection with which a seminar paper will be written in specially prepared form approved in writing by the instructor in charge of the seminar. This paper shall deal with a topic in the student's major field of concentration.

11. Application for the Degree—
Any candidate expecting to graduate at the end of a regular long session is required to file application for the degree expected by October 15th on a blank available in the Registrar's Office. If graduation is expected at the end of the summer session the application for the degree should be made by March 15th. The application should be directed to the Registrar with prior approval of major advisor and Dean of Graduate School.

12. Final Examination—
After the thesis has been completed and filed with the Graduate Office, the candidate is required to pass a general comprehensive examination which shall be a test of the candidate's knowledge of the study which he has mainly pursued. This general examination is conducted by the Student's Advisory Committee of which he representative of the major field shall act as Chairman, and at least two other examiners to be appointed by the Dean of the Graduate School, after consultation with the Advisory Committee. Any member of the Graduate Faculty may attend the examination as a visitor.

A candidate who fails in his general examination must register in the Graduate School and carry work for an additional semester before an opportunity will be given for a second examination, unless special permission is granted by the Graduate Council for an earlier examination and the request of the department concerned.

13. Recommendation for the Degree—
Upon completion of all requirements for the Master's degree, candidates are certified for graduation by the Chairman of the Graduate Council. Degrees are publicly conferred at the close of the regular and the summer sessions.

Time Limit On Work for Master's Degree
A student must complete his Master's work within six consecutive years after his first enrollment in the Graduate School. Credit for individual courses completed in residence between six and seven years before all requirements for the Master's degree are completed may be re-validated by special examination given by the department concerned. Courses completed in extension, or at another institution, cannot be re-validated. A course in which a grade "C" was earned cannot be re-validated. A re-validated course is valid as credit toward the Master's degree during the term it is re-validated only.
Grading System for Graduate Students

Course work for graduate students is reported as “A” (95-100); “B” (85-94); “C” (75-84); “D” (65-74); “F” (below 65); “I” (incomplete); “W” (Withdrew officially or withdrew passing).

No graduation credit is given for courses in which a grade lower than “C” is received. In order to show satisfactory progress toward an advanced degree a student must receive an average grade of “B”. A graduate student is expected to maintain a “B” average in all his work. An “A” grade from another institution, or earned in this College.

The work of a graduate student performed in connection with this thesis problem is reported as “satisfactory” or “unsatisfactory.”

A graduate student may receive a grade of “I”—incomplete, in a course with the privilege of finishing the work at a later date. “Incomplete” work must be made within twelve months after the close of the term in which the grade was earned, or no credit will be allowed for the course.

Graduate students registered in courses that are open to advanced undergraduates must do a certain amount of work in addition to that required of undergraduates. The nature of this additional work may be the reading of additional books on the subject and presenting a review of same, the making of reports, or such other work as the teacher in charge of the course may deem wise.

Special Note.—Any person reporting for matriculation as a graduate student without having filed an application and other necessary credentials for graduate status (two weeks prior) will be given only tentative graduate status, pending the proper evaluation of undergraduate work. The student should understand that after his credentials have been examined under this tentative arrangement, the institution reserves the right to deny him graduate status even though he has completed all other parts of his registration.

Master of Education Comprehensive Examination

The student in pursuit of a Master of Education degree must perform satisfactorily on a written comprehensive examination. This examination is provided for each candidate for the degree during his final semester in which all course requirements are met. This examination is related to the over-all objectives of the major and minor programs. Its purpose is to identify and evaluate each candidate's knowledge and understanding.

Graduate Assistantships Available

Graduate teaching and research assistantship positions are available to students with exceptional academic records and promise for successful graduate study. Interested applicants should submit their application and credentials to the office of the Dean, Graduate School. Application forms and dates to be submitted are available upon request through the Graduate School.

Graduate Work By Seniors

A senior in this College who lacks six semester hours or less of having completed the requirements for the undergraduate degree may, with the approval of his undergraduate dean, and the Chairman of the Graduate Council, register for graduate courses, not to exceed six semester hours, while completing his undergraduate requirements. If graduate credit is desired for any part of the work carried, the combined load of the graduate and undergraduate courses must not exceed 15 semester hours.

Seniors who wish to register for graduate courses may apply to the Chairman of the Graduate Council for information as to procedure.

Student Responsibility

It is the responsibility of the student to inform himself concerning, and to carry out all regulations and procedures required by the program he is pursuing. In no case will a rule be waived or an exception granted because a student pleads ignorance of the rule or asserts that he was not informed of it by his advisor or other authority.
AGRICULTURAL ECONOMICS

To fulfill the requirements for a major in this field, one must complete at least eighteen semester hours of work in Agricultural Economics.

DESCRIPTION OF COURSES

513. Agricultural Finance. (AgEc 513 Finance) (3-0) Credit 3. Financial requirements of individual farmers; emphasis placed on credit institutions serving the farmers.

523. Marketing of Farm Products. (AgEc 523 Mktg Prod) (3-0) Credit 3. Study of the principles underlying successful marketing of farm products; study made of various middlemen through which farm products pass from the producer to the consumer; trips arranged for the class to visit and study markets.

723. Cooperative Marketing of Farm Products. (AgEc 723 Coop Mktg) (3-0) Credit 3. Principles underlying the successful operation of cooperative marketing organizations; examples of successful fruit, vegetables, livestock and cotton marketing associations.

733. Advanced Farm Management, Business Organization of Texas Farms. (AgEc 733 Farm Mgmt) (3-0) Credit 3. Use of farm management principles in the organization and operation of Texas farms; selecting farms, farm enterprises; planning cropping systems, equipment needs, and capital; trips to representative farms by the class.

743. Land Tenure and Problems. (AgEc 743 Land Tenure) (3-0) Credit 3. Land as a factor of production, land utilization, tenure and income.

763. Agricultural Land Use Planning. (AgEc 763 Land Use) (3-0) Credit 3. County, state, regional and national land use program, submarginal, and supermarginal land; work of the Farm Security Administration. Department of the Interior, and National Resources Board.

AGRICULTURAL EDUCATION

To fulfill the requirements for a major in this field, one must complete from fifteen to eighteen hours in Agriculture Education as agreed upon in consultation with the head of the department. Subject to the approval of the major professor, the candidate for the Master's of Agricultural Education Degree may choose either the Master's of Science or Master's of Education Degree as follows:

MASTER OF SCIENCE: This plan requires 30 semester hours of graduate credit plus master's thesis.

MASTER'S OF EDUCATION: This plan requires 36 semester hours or graduate credit without the master's thesis.

DESCRIPTION OF COURSES

503. Seminar. (Agricultural Education 503 Seminar) (1-0) or (2-0) Credit 3. Group study of current legislature and research development in agricultural education and related areas of education.

513. Methods and Principles of Adult Education. (Agricultural Education Adult Education) (3-0) Credit 3. An analysis of the problems related to adult education in vocational education and to the development of objectives and procedures in the organization and conduct of such instruction. Identification of the basic principles that motivate adults to learn.
523. Supervised Practice Program Building. (AgEd 523 Prog Bldg) (3-0) Credit 3. Teaching in Vocational Agriculture. Permission of instructor is required. Based upon researches in project accounting and analysis.

533. Occupational Experience Programs in Agriculture. (AgEd 533 Occupational Experience) (3-0) Credit 3. Study of the nature and scope of occupational experience programs. Cooperative part-time training and pre-employment laboratory experience programs will be emphasized.

543. Advanced Methods in Agricultural Education. (AgEd 543 Advanced Methods) (3-0) Credit 3. Advanced course in teaching. Professional public school or extension experience or approval of Department Head.

553. Youth Leadership Activities and Programs. (AgEd 553 Youth Activities) (3-0) Credit 3. Methods of development and conducting youth programs, and organizations; objectives, program content, and evaluation.

563. Workshop in Agricultural Education. (AgEd 563 Workshop) (3-0) Credit 3. Study of selected problems in teacher and/or extension education. Consultants utilized in specialized areas.

613. Philosophy of Agricultural Education. (AgEd 613 Philosophy) (3-0) Credit 3. Study of Philosophy and evaluation of education in agriculture; socioeconomic influence for the establishment of agricultural education.

623. Public Relations and Agricultural Education. (AgEd 623 Public Relations) (3-0) Credit 3. Methods and practices of acquainting the public with the scope and purposes of vocational education through print, radio, visual aids, and full use of written and spoken words.


643. History and Principles of Vocational Education. (AgEd 643 Principles) (3-0) Credit 3. The historical development of vocational education. The objectives of vocational education. Types of vocational programs, services and activities.

714. Problems in Agricultural Education. (AgEd 714 Problems) Credit 1 to 4. Studies related to classroom, laboratory, supervised farming, work experience, extension education, and adult and young farmer educational activities in agriculture. Directed individual study of selected problems.

723. Technological Change. (AgEd 723 Change) (3-0) Credit 3. Study of cultural change a theoretical base for planned technological change. Emphasis will be given in methods of planning and implementing change, its effects and how it can be predicted.

ANIMAL SCIENCE


AGRONOMY

514. Soil Microbiology. (Agron. 514 Soil Micro) (3-2) Credit 4. I. Soil Microorganisms and their effect on soil physical and chemical characteristics, nitrogen fixation, organic matter decomposition and denitrification. Prerequisite: 9 hours of soils and 6 hours of biology or consent of instructor.
523. Plant Nutrition and Soil Fertility. (Agron. 523 Pl. Nutr. and Soil Fert) (3-0) Credit 3. I. A study of the most important elements for plant growth derived from the soil; their source and availability in the soil and their functions in plant metabolism. Emphasis will be placed on nitrogen, phosphorus, potassium, calcium sulphur, iron, zinc, aluminum and magnesium, including the cause and correction of copper, aluminum, and manganese toxicity in plants. Prerequisite: 9 hours of soil and 3 hours of plant physiology.

593. Advanced Soil Management. (Agrn 593 Soil Mgmt) (2-2) Credit 3. The application of the principles of soil management to the solution of practical farm problems.

801. Seminar. (Agron. 801 Seminar) (1-0) Credit 1. I, II. Presentation and discussion on topics of individual research.

PLANT SCIENCE


COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

Cooperative Extension Work in Agriculture and Home Economics

A graduate major leading to a Master of Science degree in Extension Education is offered. The major field of study, which is approximately two-thirds of the graduate work leading to the degree, may consist of courses selected from an approved list. The list of courses for major in the field of Extension Education has been made from courses offered by the department of Agricultural Education, Agricultural Economics, education, Home Economics, Education, Physical Education and Sociology.

The Extension worker is permitted an even broader selection of courses for his minor subjects. Minor courses, constituting approximately one-third of the graduate program, may be chosen from the various academic departments in the College in which the worker feels the greatest need for subject matter training.

To be permitted to work toward the Master of Science degree in Extension Education, the candidate is required to have the equivalent of a Bachelor of Science degree in Agriculture or Home Economics. Also, the candidate must have had at least two years of satisfactory Extension experience.

A master's thesis or master's written report will be required. It is expected that the work of gathering material for the thesis will provide information useful to the Extension worker.

Two plans are available for obtaining the master's degree. Subject to the approval of the major instructor, the candidate for the master's degree may choose:

PLAN I—with the Master's Thesis. This plan requires 30 semester hours of graduate credit plus a master's thesis.

PLAN II—without the Master's Thesis. This plan requires 36 semester hours of graduate credit, including a written master's report of research or problem on a topic in the major field.

Associated with the credit requirement is the residence requirement. Under either plan, a student must spend in residence a minimum of two semesters or two and one-half twelve-week summer sessions.

Graduate credit may be earned off campus by enrolling in absentia for a limited amount of research or problem work on the recommendation of the head of the major department and with the approval of the Chairman of the Graduate Council.
Some Extension workers have earned graduate credit at other institutions. If this work comes within the time limitations mentioned below, and if it is of such nature as to fit with the student's program of study at Prairie View A. and M. College, the Graduate Council will permit up to six semester hours to be transferred from approved institutions. A student who is allowed to transfer six semester hours from another institution may not, because of the residence requirement, be allowed to use credit obtained from off-campus work.

SUGGESTED COURSES FOR A MAJOR IN THE FIELD OF EXTENSION EDUCATION

Agricultural Economics .......743 Land Tenure and Problems
763 Agricultural Land Use Planning

Agricultural Education ..........533 Extension Organization and Program Determination
543 Extension Methods
553 Organization and Conduct of 4-H Club Work
563 Special Problems in Home Economics Extension
573 Methods of Working with Out-of-School Groups
613 History and Philosophy of Extension Education
623 Public Relations and Extension Education
633 Psychology for Extension Workers
643 Extension Work Evaluation
713 Problems in Agricultural Education
753 Extension Supervision

Economics ..................583 Economics Problems of the Consumer
573 Labor Problems
773 Economics Theory and Social Policy

Education ..........Guid. 543 Principles and Philosophy of Guidance
Psy. 563 Mental Adjustment
Sup. 723 Rural School Supervision

Health Education ..............673 Nutritional Aspects of Health Education
683 Community Planning for Health
699 Teaching of Health

Home Economics Education ....563 Consumer Education
703 Seminar in Nutrition
793 Supervision of Home Economics
553 Family Life Programs
753 Extension Supervision

Sociology ..................503 Introduction to Social Welfare
603 Problems of Child Welfare
643 Modern Social Problems
The graduate Program in business education is designed to provide for the professional development of business teachers. The primary purpose of the program are to offer advanced instruction in professional and subject-matter area teachers, and to develop research in the field.

The program is adapted to the needs of persons who have completed as undergraduates a course study in business education, or persons who have completed an undergraduate minor in business education.

The major in business education leading to the Master's degree consists of 21 hours which the following are required:

- Problems in Business Education: 3 hours
- Advanced Methods of Teaching Business Subjects: 3 hours
- Curriculum Construction in Business Education: 3 hours
- Seminar in Business Education: 3 hours
- Business Statistics: 3 hours

The minor in business education consists of 9 hours of which the following are required:

- Problems in Business Education: 3 hours
- Seminar in Business Education: 3 hours
- 6 hours

DESCRIPTION OF COURSES


533. Advanced Methods of Teaching Business Subjects. (BE 533 Adv Methods) (3-0) Credit 3. Consideration is given to intensive review of subject content, selection of objectives and instructional materials, techniques and procedures in presenting educational activities, and to evaluating teacher effectiveness in Typewriting, Shorthand, Bookkeeping and Accounting, and Filing.

553. Legal Environment. (BA 553 Leg. Environment) (3-0) Credit 3. Designed to introduce the student to the legal environment in which business decisions are made with an introduction to business organization, torts, government regulations, taxation, and the legal profession.

573. Advanced Marketing. (BA 573 Adv. Mktg) (3-0) Credit 3. The application of quantitative and behavioral techniques to the strategic planning and evaluation of marketing systems. Strategic decision making with regard to product research and development, price setting, promotion, channels of distribution and physical distribution.

593. Introduction to Finance. (BA 593 Int Finance) (3-0) Credit 3. Corporate organization and control; security; the management of fixed capital and working capital and work capital reserve, surplus and dividend policies; investment banking and the securities market.

623. Curriculum Construction in Business Education. (BE 623 Curr Constr) (3-0) Credit 3. Criteria for solving curricular problems are studied and applied in devising business education curricula for the secondary school and in appraising present school offerings.
723. Seminar. (BA 723 Seminar) (3-0) Credit 3. Cooperative research in one or more economic problems: each member of the class concentrating on a selected phase of the common subject.


783. Research. (BE 783 Research) (3-0) Credit 3. Research methods and procedures, statistical treatment of findings, planning, writing, analyzing research, and review of selected research. Business Education majors will identify their research paper or thesis topic in this course and begin writing.

793. Thesis Writing. (BE 793 Thesis Writing) (3-0) Credit 3. Independent research on thesis problem assigned by the major professor and approved by the department.

ECONOMICS

Majors and minors are offered in the Department of Economics on the Graduate Level. Students desiring to major or minor in Economics should consult with the Head of the Department and plan a program in conjunction with the major professor.

The graduate courses in Economics permit intensive research and study of the integrated undergraduate courses in the various departments of the Social Sciences.

Among the specific objectives are (1) development of ability to use available literature, facilities and techniques of investigation, (2) advancement of independent thought necessary for further study, and (3) experimentation and contribution to the field.

Students who have not completed an undergraduate major in Economics must take, under the guidance of the Head of the Department, certain undergraduate courses in Economics.

For course sequence, or any other information, consult the Head of the Department and the professor offering the course.

ECONOMICS

501. Seminar in Economics. (Econ 501 Seminar) (1-0) Credit 2. I or II. Informal discussion of Student Reports on Contemporary Socio-economic Problems facing the United States and the rest of the world.


563. International Trade. (Econ 563 Trade) (3-0) Credit 3. II. Case studies of the contributions to international economic theory of Merchants, Hume, Smith, Ricardo, Mill, and others. Problem of balance of payments; Trade policies of major nations; International economic institutions in theory and practice. A study of the history of the forces shaping up the United States foreign economic policy.

573. Labor Problems. (Econ 537 Labor) (3-0) Credit 3. I. Economic and Social Forces determining labor supply and demand, labor finance, unemployment labor mobility, functioning of labor markets and wage theories. Major problems in modern collective bargaining, practical aspects and economic implications. Historical experience with labor movements in western type industrial societies, labor movements and labor problems in newly emerging countries relevance of western labor movement to developing nations.
583. Economics Problems for the Consumer. (Econ 583 Consumer) (3-0) Credit 3. II. Family budgets, marketing, price controls and other problems of the consumer.

603. Money and Banking. (Econ 603 Banking) (3-0) Credit 3. II. Major emphasis on the role of money in determination of prices, interests, sales, income and employment. Study of demand and supply of money. Effectiveness of monetary policy.


703. Public Finance and Taxation. (Econ 703 Taxation) (3-0) Credit 3. Economics of Income Taxation; Economics of Business Taxation, Corporation and Special Business Taxes; Motor Vericular Highway Taxes.

743. Capitalism and Socialism. (Econ 743 Capitalism) (3-0) Credit 3. II. Capitalism, unionism, socialism, facism, and individualistic anticapitalism, each viewed under the headings of conditions, theories and movements. A research course. Prerequisites: Economics 573, Sociology 313 and the consent of the instructor.

773. Economic Theory and Social Policy. (Econ 773 Econ Theory) (3-0) Credit 3. I. Modern economic theories involved in various institutional and governmental policies, especially those centering around farm control, education, housing, relief, protection of workers, and consumers and social security. Prerequisite: consent of the instructor.

GEOGRAPHY

603. Geography of Texas. (Geog 603 Texas) (3-0) Credit 3. Geographical survey of physical resources, population, and commercial production in Texas. The geographical conditions and human adjustments in the major areas or regions of Texas. The natural environment, routes of communication, resources and strategic location in their geographical and historical aspects. Optional field trips.

613-623. Geography for Teachers. (Econ 613-623 Tchr Geog) (3-0) Credit 3. I and II. The relationship of geography to other fields of knowledge concerned with man and his adjustments. The use of geographic premises underlying the analysis of major industries. Tools of geography, space relations, weather, climate, vegetation, soils, landforms, population, distribution, power and mineral resources. Prerequisite: 12 hours in the social sciences (undergraduate and/or graduate).

703. Cartography and Graphics. (Geog 703 Cartography) (3-0) Credit 3. Advanced statistical mapping techniques, with emphasis on the mapping of population and settlement. Measures of distribution. History of cartography.

713-723. Geography in Education. (Geog 713-723 Tchng Geog) (3-0) Credit 3. Analyzes the distinctive contribution of geography to education for citizenship on elementary and secondary levels. Discusses teaching sources and organization of materials, textbooks, and tests. Designed for teachers of geography, social studies, and related fields.

733. World Regional Geography. (Geog 733 Regional) (3-0) Credit 3. World regions as the home of man; a practical, logical and systematic approach to the field of geography; a survey of the world in terms of outlook; regional types.
803. Industrial and Commercial Geography. (Geog 803 Industrial) (3-0) Credit 3. Fundamental geographic factors which enter into the production, distribution and consumption of raw materials of food, clothing, shelter, metals, minerals and fuels; fundamentals of manufacturing and principles of commerce.

SOCIAL SCIENCE


583. Methods of Teaching Social Studies in Elementary Grades. (Soc Sci 583 or Ed 763 Elem Methods) (3-0) Credit 3. Improving the social learning which grows out of the entire life of children both in and out of school, selection and organization of content, learning activities, problem solving and social acting skills; building social values and developing methods of unified and correlated social studies program.

EDUCATION

MINIMUM REQUIREMENTS FOR A MASTER'S DEGREE IN THE DIVISION OF EDUCATION GRADUATE TEACHER EDUCATION

The minimum undergraduate preparation for the Master's Degree is eighteen semester hours of basic course credit in the field of the graduate major.

Attention is called to the requirements of the Texas Education Agency for the teaching certificate in the field of graduate concentration.

ADMISSION TO CANDIDACY

Action on admission to candidacy for a Master's Degree will be taken after the student (1) has been in residence for at least one semester or summer session, earning at least twelve hours of graduate course credit; (2) has maintained a "B" average or better; (3) has satisfactorily demonstrated proficiency in English usage and has satisfied all the classification requirements of the college.

The student failing to meet the above requirements will be continued on probation for a second semester. In the event he does not meet the requirements for candidacy at this time, it will be understood that no more graduate credits earned by him will be applicable to a Master's Degree.

In keeping with proposed changes in state standards for professional certificate programs, those having been admitted to degree and/or certificate programs since September, 1962 will be advised according to a schematic plan consisting of specialization, resources and professional areas of concentration. Courses and professional experiences may be suggested in terms of those areas and more specifically in accord with the specific needs of the graduate student. Specific requirements as to total hours for certificate and/or degrees will remain relatively the same as outlined.

Those seeking admission to graduate programs offered by the Division of Education are urged to avail themselves to advisement by an appointed advisor on the departmental level.
GRADUATE SCHOOL

SUGGESTED CURRICULUM FOR A MAJOR IN ELEMENTARY EDUCATION

Prerequisites: Legal certificate valid for teaching in the Elementary School or valid credits necessary for such an endorsement.

Specialization (9) Hours
Education 683—Elementary School Curriculum ......................... 3 hrs.
Education 743—Problems of the Elementary Teacher ..................... 3 hrs.
Education 753—Teaching of Language Arts in the Elementary School ..... 3 hrs.
Education 793—Diagnosis and Remedial Treatment of Elementary School Subjects .................................................. 3 hrs.

Resource Area (3) Hours
Education 843—Techniques in Education Research ....................... 3 hrs.

Supplement to Resource Area (12) Hours.
Twelve (12) semester hours in content courses having resource value for an elementary teacher and with prior approval by Advisor .......... 12 hrs.

Profession (9) Hours
Education 723—Philosophy of Education .................................. 3 hrs.
Education 853—Project and Thesis Research .............................. 3 hrs.
Psychology 593—Pupil Growth and Development ........................... 3 hrs.

SUGGESTED CURRICULUM FOR A MINOR IN ELEMENTARY EDUCATION

Prerequisites: Psychology 593—Pupil Growth and Development .......... 3 hrs.
Education 633—Teaching Reading in the Elementary School .......... 3 hrs.

Education 683—Elementary School Curriculum ........................... 3 hrs.
Education 753—Teaching of Language Arts .................................. 3 hrs.
Education 763—Teaching of Social Studies .................................. 3 hrs.

9 hrs.

SUGGESTED CURRICULUM FOR A MAJOR IN GUIDANCE

Prerequisites: Legal Certificate valid for appropriate grade level served and three years of successful teaching experience on appropriate level.

Specialization (9) Hours
Guidance 543—Principles and Philosophy of Guidance .................. 3 hrs.
Guidance 683—Organization and Administration of Guidance Program ... 3 hrs.
Guidance 733—Principles of Counseling .................................... 3 hrs.

Resource Area (12) Hours
Guidance 583—Occupational and Educational Information .................. 3 hrs.
Guidance 603—Supervised Practice in Counseling and Guidance ........ 3 hrs.
Psychology 513—Psychological Testing ................................. 3 hrs.
Psychology 533—Fundamentals of Statistics ................................ 3 hrs.
Psychology 553—Psychology of Adjustment ................................ 3 hrs.
Psychology 593—Pupil Growth and Development .......................... 3 hrs.
Psychology 603—Theory of Counseling .................................... 3 hrs.

Supplement to Resource Area (6) Hours
Education 843—Techniques of Educational Research ..................... 3 hrs.
Education 853—Project and Thesis Research .............................. 3 hrs.

SUGGESTED CURRICULUM FOR A MINOR IN COUNSELING

Guidance 603—Supervised Practice in Counseling and Guidance .......... 3 hrs.
Guidance 733—Principles of Counseling .................................... 3 hrs.
Psychology 553—Psychology of Adjustment or Psychology 563—Mental Hygiene ......................................................... 3 hrs.
Psychology 603—Theory of Counseling .................................... 3 hrs.

12 hrs.
GRADUATE SCHOOL

SUGGESTED CURRICULUM FOR A MAJOR IN SPECIAL EDUCATION
(Teacher of Mentally Retarded Emphasis)

Prerequisites: Legal Certificate valid for the elementary school or appropriate level served.

Specialization (12) Hours
Special Education 603—Survey Course in Education of Exceptional Children 3 hrs.
Special Education 613—Problems and Methods of Teaching Mentally Retarded Children 3 hrs.
Special Education 633—Psychological Problems of Mentally Retarded Children 3 hrs.
Special Education 913—Practicum I—Curriculum Building for Mentally Retarded Children 3 hrs.

Resource Area (12) Hours
Education 683—Elementary School Curriculum 3 hrs.
Education 793—Diagnosis and Remedial Treatment of Elementary School Subjects 3 hrs.
Education 763—Social Studies in Elementary 3 hrs.

Supplement (6) Hours
Education 843—Technique in Educational Research 3 hrs.
Education 853—Project and Thesis Research 3 hrs.

Professional (6) Hours
Psychology 593—Pupil Growth and Development 6 hrs.

SUGGESTED CURRICULUM FOR A MINOR IN SPECIAL EDUCATION

Prerequisites: Psychology 593—Pupil Growth and Development 3 hrs.
Psychology 523—Principles and Practices of Educational Measurements 3 hrs.
Special Education 603—Survey Course in Education of Exceptional Children 3 hrs.
Special Education 613—Problems and Methods of Teaching Mentally Retarded Children 3 hrs.
Special Education 633—Psychological Problems of Mentally Retarded Children 3 hrs.
Special Education 913—Practicum I—Curriculum Building for Mentally Retarded Children 3 hrs.

SCHOOL ADMINISTRATORS*

GENERAL ACADEMIC AREA (6) (Academic courses as described in Specialization and Resource Areas)

SPECIALIZATION AREA (12) (Graduate courses in a subject or area commonly taught in the public schools of Texas.)

Biology Health-Physical Education
Business History
Chemistry Mathematics
English

PROFESSIONAL DEVELOPMENT AREA (6) (Graduate courses in professional development as required for the Professional Teacher's Certificate for the improvement of teaching ability.)

Education 583 Secondary School Curriculum
683 Elementary School Curriculum

GENERAL AND SPECIALIZED PROFESSIONAL ADMINISTRATION AREAS (24) (Graduate courses designed to give competence in school administration at all levels and each of the assignments of the elementary principal, semester hours of a supervised practicum.)

Administration 523 Administration of School Personnel
533 Senior High School Administration
613 The School Plant
633 Elementary School Administration
643 Junior High School Administration
703 Public School Finance
713 Fundamentals of School Administration
733 Practicum in Educational Administration
743 Public School Law

Supervision 753 Principles and Practices of Supervision
*Effective September 1, 1966
GRADUATE SCHOOL

RESOURCES AREAS (12) (Courses distributed among the social sciences, humanities, and sciences, the purpose of which is to give breadth to the preparation of the school administrator.)

SUGGESTED CURRICULUM FOR A MAJOR IN SUPERVISION OF INSTRUCTION

Prerequisites: Legal Certificate valid for teaching on level of major emphasis and three years of successful teaching experience on appropriate level.

Specialization (6) Hours
- Supervision 643—Elementary School Supervision or Supervision 663—High School Supervision
- Supervision 753—Principles and Practices of Supervision

Resource Area (18) Hours
- Administration 523—Personnel Administration
- Administration 633—High School Administration or Administration 533—Elementary School Administration
- Education 583—Secondary School Curriculum
- Education 683—Elementary School Curriculum
- Education 723—Philosophy of Education
- Education 843—Techniques of Educational Research
- Psychology 593—Pupil Growth and Development

Supplement to Resource Area (12) Hours
- Education 583—Project and Thesis Research

Nine (9) semester hours in content and methods courses directly related to level of specialization with prior approval of Advisor

SUGGESTED CURRICULUM FOR A MINOR IN SUPERVISION

Prerequisites: Psychology 593—Pupil Growth and Development

Supervision 643—Elementary School Supervision or Supervision 663—High School Supervision

SUGGESTED CURRICULUM FOR A MINOR IN ART EDUCATION

Prerequisites: Art Education 253—Elementary School Art

Supervision 643—Elementary School Supervision or Supervision 753—Principles and Practices of Supervision

DESCRIPTION OF COURSES

ADMINISTRATION

523. Administration of School Personnel. (Adm 523 Sch Persnl) (3-0) Credit 3. Personnel problems of administration and supervisors, such as needs for, and needs of different classes of personnel; principles for maintaining good human relationships; and personnel evaluation and records.

533. High School Administration. (Adm 533 High School) (3-0) Credit 3. A survey of problems in High School Administration with emphasis on the organization, administration and supervision of the high school program.

643. Junior High School Administration. (Adm 643 Junior High School) (3-0) Credit 3. A survey of problems in Junior High School Administration with emphasis on the history, purposes, organization, administration, and supervision of the Junior High School.
633. Elementary School Administration. (Adm 633 Elem School) (3-0) Credit 3. A survey of problems in elementary school administration with emphasis on the organization, administration and supervision of the high school program.

613. The School Plant. (Adm 613) (3-0) Credit 3. A study of school buildings and sights designed to accommodate modern and dynamic educational programs as well as meet as economically as possible the needs of the community and its children.

703. Public School Finance. (Adm 703) (3-0) Credit 3. A critical analysis of educational finance as it relates to educational objectives, revenue, expenditures, financial organization and operation, budgeting, accounting, and reporting in cooperation with local, state, and national resources, etc.

713. Fundamentals of School Administration. (Adm 713 Fundamentals) (3-0) Credit 3. General principles of organization and administration with emphasis on problems of federal, state and local school administrative organization.

733. Practicum in Educational Administration. (Adm 733 Educ Admin) (3-0) Credit 3. The practical application of insights developed in the analysis and solution of administrative problems. Experiences to be supervised cooperatively by practicing administrators and members of the college staff.

743. Public School Law. (Adm 743) (3-0) Credit 3. A classification of the fundamental principles underlying the relation of the state to education and to reduce to systematic organization the principles of the case or common law which is applicable to practical problems of school organization and administration.

ART EDUCATION

653. Arts and Crafts in Public Schools. (ArEd 653 Arts Crafts) (0-6) Credit 3. Working with leathercraft, woodwork, paper mache, flour and salt ceramics, novelty materials, and metals to enhance one's ability to create with a variety of art media. Lab. fee: $2.00.

663. Special Projects in Public School Art. (ArEd 663 Projects) (0-6) Credit 3. Methods, procedures and phases of teaching art; problems of art education and methods of teaching art. Lab. fee: $2.00.

763. Ceramics. (ArEd 763 Ceramics) (0-6) Credit 3. Making of pottery shapes by coil, slab, and mole methods, also the use of the potter's wheel; understanding of teaching ceramics in the public schools. Lab. fee: $2.00.

823. Methods of Teaching Art in the Elementary Grades. (ArEd 823 Methods) (3-0) Credit 3. Emphasis on solving the problems of teaching creative activities to the gifted child and the retarded child; procedures for selecting art experiences and ways of evaluating pupils' work of all types of children. The student is to keep aware of the current development in art education for both the elementary and secondary levels.

ELEMENTARY EDUCATION

633. Teaching Reading in the Elementary Grades. (Educ 633 Tchg Reading) (3-0) Credit 3. Problems in the teaching of reading in elementary, junior and senior high schools. Analyzing student needs, using appropriate remedial and developmental techniques, providing for individual differences and developing basic insights for continued growth of reading efficiency. (Graduate).

683. Elementary School Curriculum. (Educ 683 Elem Curr) (3-0) Credit 3. Study of important developments in elementary education with particular attention to methods and materials which may be used to improve the development of pupils in elementary schools. Problems which are encountered in day-to-day teaching situation receive much attention. 
743. Problems of the Elementary Teacher. (Educ 743 Elem Prob) (3-0) Credit 3. Open to undergraduates who are teachers in-service and to graduate students. Special projects, investigations and reports required; attention given to problems presented by members of the class as the outgrowth of their experiences.

753. Teaching of the Language Arts in the Elementary School. (Educ 753 Tchg Lang Arts) (3-0) Credit 3. For those interested in guiding and directing children of elementary school age in reading and in oral and written composition; special emphasis placed on diagnosis and remedial work in reading.

763. Teaching of Social Studies in the Elementary Grades. (Educ 763 Tchg Soc Stud) (3-0) Credit 3. Emphasis on improving the social learning which grows out of the entire life of children both in and out of school. Selection and organization of content, learning activities, problem-solving and social acting skills, building social values and developing methods of unified and correlated social studies program.

773. Teaching of Science in the Elementary Grades. (Educ 773 Tchg Elem Sci) (3-0) Credit 3. Emphasis is placed upon the principles, materials and methods of teaching science, and its influence upon the development of children, in the elementary grades. Laboratory work is designed to help the teacher develop a background of science understanding with suitable experiments and suggestions for appropriate equipment and suitable materials for various age levels.

793. Diagnosis and Remedial Treatment of Elementary School Subjects. (Educ 793 Diag El Subj) (3-0) Credit 3. Techniques of diagnosis and remedial treatment of difficulties in the various elementary school subjects at all levels.

813. Kindergarten Methods and Materials. (Educ 813 Kindrgn Meth) (3-0) Credit 3. A study of selection and use of materials for program organization, creative self-expression, physical and mental activities, directing work habits and informal experiences in language arts in number work.

GENERAL EDUCATION


643. Psychology of Reading and Reading Difficulties. (Educ 643 Psy Reading) (3-0) Credit 3. The nature of reading will be explored with emphasis upon the sociological and psychological factors related to reading success and failure. The learning and enjoyment of reading will be discussed in relations to the psychological factors of motivation, cognition, perception, attitudes, self-control and family dynamics. The relevant theories of the Gestalt (emphasizes the organization, patterning and wholeness of experience) and Psychoanalytic Schools will be particularly stressed. Prerequisite: An undergraduate preparation in Teacher Education.


733. Comparative Education. (Educ 733 Comparative) (3-0) Credit 3. (Elementary or Secondary Level.) An international view of educational problems; educational differences among countries; schools and other educational agencies in England, France, Germany, the USSR and other countries; their relations to social and political institutions and ideas; and a comparison with American Education.
843. Techniques in Educational Research. (Educ 843 Research) (3-0) Credit 3. Study of research in education, the sources of information and techniques available, and approved form and style in preparation of research reports and thesis.

853. Project and Thesis Research. (Educ 853 Project) (3-0) Credit 3 to 6 hrs. Prerequisites: Education 843 and advisors' approval for project or thesis study. Individual conferences and advisement on selection and preparation of research proposal or thesis study.

GUIDANCE

543. Principles and Philosophy of Guidance. (Guid 543 Principles) (3-0) Credit 3. Introductory course. Survey of the field; emphasis on the role of work.

583. Educational and Occupational Information. (Guid 583 Occupnt Info) (3-0) Credit 3. Where and how to get facts and assemble information about occupations and education. To learn the methods of evaluating and using collected information.

603. Supervised Practice in Counseling and Guidance. (Guid 603 Counseling) (3-0) Credit 3. This course deals with actual counseling experience. The class will be built around the problems encountered in the counseling situation, case discussions, role playing, demonstrations of counseling, observations of counseling interviews, and a limited amount of counseling under supervision.

683. Organization and Administration of a Guidance Program. Guid 683 Guid Program) (3-0) Credit 3. Emphasis is placed upon purposes and functions of guidance service; initiating, organizing, and promoting a guidance program; selecting, organizing and using adequate tools, techniques and physical facilities for guidance; developing and using evaluative procedures for a program of guidance; relationships, status and scope of the guidance program to the total school and community.

733. Principles of Counseling. (Guid 733 Counsl Prin) (3-0) Credit 3. Introductory course, survey of the area; emphasis on acquainting the student with counseling as it relates to the total development of the individual through a study of the basic principles.

PSYCHOLOGY

513. Psychological Testing. (Psy 513 Testing) (3-0) Credit 3. Theory and Practice of Psychometrics, emphasis upon the individual intelligence test. Students will study a variety of tests and analyze the results.


553. Psychology of Adjustment. (Psy 553 Adjustment) (3-0) Credit 3. A systematic treatment of the principles of the dynamic psychology of human adjustment. The whole individual and how he adjusts to the situation—both outer and inner—that confronts him are considered.

593. Pupil Growth and Development. (Psy 593 Pupil Growth) (3-0) Credit 3. A study of the growth and development of the individual. Emphasis on problems of inheritance, growth, learning, intelligence, emotion, and personality. Consideration given to fundamental psychological needs of the organisms and the conditions under which they may be realized. Applications to educational procedures, on home, school and community.
603. Theory of Counseling. (Psy 603 Counsl Thry) (3-0) Credit 3. To provide a perceptual framework specific to the counseling process and to familiarize the student with the many interrelationships that enter into the counselor's contribution to total mental health program. The course will also give the student a laboratory introduction to actual counseling.

SECONDARY EDUCATION


583. Secondary School Curriculum. (Educ 583 Sec Curr) (3-0) Credit 3. Principles or organizing and developing the high school curriculum, analyzed in relationship to the "prescribed" and "teacher made" course-of-study in individual schools. Various types of curriculum organization and the related teacher-pupil activities are studied in terms of community and pupil needs. Methods and materials of the related activities of the curriculum, aside from instruction, are given consideration.


SPECIAL EDUCATION


613. Problems and Methods of Teaching Mentally Retarded Children. (Sp Ed 613 Methods) (3-0) Credit 3. Characteristics and needs of the mentally retarded child; principles of adapting the curriculum materials and methods of teaching to the needs of the retarded child.

903. Laboratory. (Sp Ed 903 Laboratory) Credit 3. Techniques of teaching the educable mentally retarded; analysis of materials, methods and specialized services along with an evaluative approach; intensive practice in the curriculum center for teachers of the mentally retarded; field trips; study of observation centers and limited experimental studies.


923. Workshop. (Sp Ed 923 Workshop) Credit 3. Designed to promote areas of professional growth of in-service teachers.

SUPERVISION

643. Elementary School Supervision. (Supv 643 Elem School) (3-0) Credit 3. Study of important developments in elementary education with particular attention given to methods and materials which may be used to improve the development of pupils in elementary schools. Problems which are encountered in day-to-day teaching situations receive much attention.

663. High School Supervision. (Supv 663 High School) (3-0) Credit 3. The nature and philosophy of supervision, the needs of supervision, the activities of supervisors, the promotion of teachers growth, and the appraisal of teaching efficiency in the high school.
673. Trends in Supervision (Seminar). (Supv 673 Trends) (3-0) Credit 3. Trends in the supervision of elementary and secondary public schools with emphasis upon democratic practices related to objectives, content, materials, methods of planning and presenting lessons, evaluation of teaching as well as supervision and the development of skills in group dynamics.

683. Problems in Supervision. (Supv 683 Problems) (3-0) Credit 3. A study of principles governing the processes of supervision and techniques for accomplishing the supervisory programs. Applications are made to both the elementary and secondary school.

ENGLISH REQUIREMENTS FOR A MASTER OF ARTS DEGREE IN THE DEPARTMENT OF ENGLISH

For admission to graduate study in English a student should present at least an undergraduate minor, 24 semester hours in this field, and English 463, The Teaching of English. A student is expected to pass an English qualifying examination before admission to candidacy is approved.

Prerequisite courses such as the English Language and The Teaching of English which the student did not take while an undergraduate at this college, must be taken before the student begins the courses in the graduate program.

Requirements are stated in terms of minimum essentials. Students are urged to indicate some effort toward enrichment of background by including in their programs more than the minimum essentials. The following courses are required to fulfill the 21 credit hours for a graduate major in English. The 21 credit hours must be in courses on the graduate level—numbered 500 and above.

ADMISSION TO CANDIDACY

Action on admission to candidacy for a Master’s Degree in English will be taken after the student (1) has been in residence for at least one semester or summer session, earning at least twelve hours of graduate course credits; (2) has maintained a “B” average or better; (3) has satisfactorily passed a comprehensive examination in English Language and Literature.

The student failing to meet the above requirements will be continued on probation for a second semester. In the event he does not meet the requirements for candidacy at this time, it will be understood that no more graduate credits earned by him will be applicable to a Master’s Degree.

THE MAJOR

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<td>English 533</td>
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<td>English 883</td>
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MINORS

Prerequisite—The Equivalent of an Undergraduate Minor in English

I. In English

The following courses are required to fulfill the 12 credit hours for a graduate minor in English:

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<tr>
<th>Course Number</th>
<th>Credit Hours</th>
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<tr>
<td>English 533</td>
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<td>English 583</td>
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<tr>
<td>English 813</td>
<td>3</td>
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<td>English 883</td>
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For the Major and the Minor, the candidate’s program of studies is always subject to revision and approval by the department.
GRADUATE SCHOOL

DESCRIPTION OF COURSES

ENGLISH

533. Medieval Literature. (Eng 533 Medievl Litr) Credit 3. Ideas, political and social conditions as revealed in the writings of chief representatives of the period.


613-616. Dramatic Workshop. (Eng 613-616 Drama Wksp) Credit 3 or 6. Opportunity for the graduate student to study all phases of drama, to assist and participate in the presentation of at least one play to be on the campus during the summer. Field trips involving summer theater productions and radio presentations in Houston required.

643. Studies in Contemporary Drama. (Eng 643 Contp Drama) Credit 3. Study of the historical background of the contemporary theater movements in Europe and in America with emphasis placed on various literary styles that make up modern theater.


823. Seminar in Thesis Writing. (Eng 823 Thesis) Credit 3. Open only to candidates engaged in writing the Master's Thesis in English.


DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION

Requirements for Master of Science Degree in Physical Education

Students with undergraduate major or minor in Physical Education will be required to complete additional courses designed to give them competence in the areas of subject matter that are basic to this field. A demonstration of skill in teaching a wide variety of Physical Education activities is required. Courses listed below are prerequisite courses:

I. Basic Science:
   A. Minimum
      1. Zoology (or its equivalent)
      2. Anatomy
      3. Physiology

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II. Health Education Courses:
A. Minimum (choice of two)
   1. Personal Hygiene
   2. Principles of Health Education
   3. Methods of Health Education
   4. Health Education

III. Technical Training in Physical Education
1. Organization and Administration of Physical Education .......... 3 hrs.
4. Care and Prevention of Athletic Injuries or First Aid .......... 2 hrs.
5. Tests and Measurements in Physical Education ................... 3 hrs.
6. Coaching .................................................. 3 hrs.
7. Modern Dance, Folk Dance, or Gymnastics ......................... 3 hrs.

PHYSICAL AND HEALTH EDUCATION

Prerequisites for a graduate major will ordinarily consist of not less than 30 semester hours of undergraduate credits in the chosen field or in some related field. A graduate minor will ordinarily be based upon not less than 12 semester hours of undergraduate work.

If the transcript of the undergraduate record of a student does not meet the above qualifications, additional satisfactory undergraduate work will be required before the student is admitted to graduate status.

It should be clearly understood that admission to the graduate school does not imply admission to candidacy for a degree.

Courses for which graduate credit may be obtained are numbered above 500. A minimum of 21 prescribed hours and a thesis is required.

Graduate courses required for a major in physical education
623. Physiology of Muscular Exercise .......................... 3 hrs.
633. Advanced Test and Measurements in Physical Education .... 3 hrs.
653. Administrative Problems in Physical Education .............. 3 hrs.
703. Seminar I—Techniques of Research in Physical Education .... 3 hrs.
713. Seminar II—Thesis ........................................ 3 hrs.
723. Kinesiology ............................................... 3 hrs.
733. Supervision in Physical Education .......................... 3 hrs.
753. Scientific Foundation of Physical Education ................. 3 hrs.
763. Physical Education Curriculum .............................. 3 hrs.
613. Individual Physical Education ................................ 3 hrs.

GRADUATE MINOR IN PHYSICAL EDUCATION
653. Administrative Problems in Physical Education .............. 3 hrs.
733. Supervision in Physical Education .......................... 3 hrs.
753. Scientific Foundation of Physical Education ................. 3 hrs.
763. Physical Education Curriculum .............................. 3 hrs.

DESCRIPTION OF COURSES
613. Individual Physical Education. (P E 613 Indiv P E) (3-0) Credit 3.
I or II. Making a physical education program meet the needs of handicapped individuals; fundamental principles in the selection and adoption of activities in corrective procedure; abnormal physical conditions that come to the care of reports. Prerequisites: Physical Education 314 and 324.
GRADUATE SCHOOL

903-906. Health Education Training Laboratory or Workshop in Health Education. (Hlth 903-906 Hlth Lab) (2-2) or (3-6) Credit 3 or 6. Training Laboratory in Health Education sponsored jointly by the College and the State Department of Health. Provisions made for students to participate in a variety of procedures for investigating, analyzing and evaluating community action programs in health; local schools and community are used as a laboratory in studying problems.

HISTORY

Teacher Education and Liberal Arts Programs are offered in the Department of History. Students pursuing the M.A. degree should select their program of studies and the professor under whose direction they wish to prepare for examination and write thesis as early as possible in the first semester of residence. The minor program of study will be arranged by the student and the major professor with the view of keeping the two reasonably related. The program of study and the area of thesis interest, to be approved by the Department of History, must be filed before the end of the first semester or the summer after the entrance of the student into the graduate school of the College.

All students are required to take History 563. Arrangements should be made to take this course as early as possible after the beginning of work for the Master's degree.

Twenty hours of satisfactory work is required for a major in the field of History, and twelve hours for the minor. The satisfactory completion of a thesis, the subject of which is to be determined in consultation with the major professor, if required of all persons graduating with a major in this field. Minors in this field are allowable only if the candidate can demonstrate that the techniques of this field are necessary for this research project or that the Minor Field is reasonably associated with Major specialty in content and orientation.

Prerequisites for majoring or minoring in the field of History are: (a) Lower college courses in American and European History corresponding to the lower college offering in the field at Prairie View; (b) At least an advanced course in either modern and/or contemporary European or American History; (c) A cumulative average of "B" in their social science courses on the undergraduate level; (d) Preliminary to the graduate regulation on candidacy for the degree, no person shall be acceptable for pre-candidacy status if by the end of the first semester he has not shown the proper inclination to master the skills and attitudes attendant upon graduate study.

The Teacher Education program at the professional level leads to the M.Ed. degree and consist in the successful completion of a composite program of thirty-six (36) hours. The thirty six hours are a composite of all of the following major fields in the social sciences in the following order: History 6 hours; Economics, 3 hours; Geography 3 hours; Sociology 3 hours. The building of research techniques in social sciences will encompass five hours of class and seminar work. The resource area of history will include six (6) hours and the professional development area of education will also include six (6) hours.

In lieu of the thesis there will be a series of studies, the culminating one to be presented as evidence of research proficiency centered either in the problem areas of the "Nature of the Learner," "School and Community Relations," or "Instructional Problems." There should be an element of consistency in the program of studies as well as the research problems developed by the student in consultation with the departmental advisors for teacher education, and the program with its emphasis should be filed with the students departmental records as early in the development of studies as possible. Because of the nature of this subject area, the department offers no minors in this field of study.
DESCRIPTION OF COURSES

503. Methods of Teaching History. (Hist 503 Tchg Meth) (3-0) Credit 3. The nature of Social Studies; the development and changing emphasis in the current social studies programs; purposes and values; classroom methods and materials. Lectures, projects, reading, tests and laboratory experiences.

513. French Revolution and Napoleon. (Hist 513 Fren Revoltn) (3-0) Seminar approach to the causes and the development of the revolution, the discipling of the Revolution by Napoleon, the greater France in Europe—the imperialistic impulse of the Revolution. Established areas of interest and research studies in both the scholarship and the substantive facts of the course.

523. Imperialism. (Hist 523 Imperialism) (3-0) Credit 3. The Era of modern imperialism, with its causes, results, and techniques are developed under the following areas of investigation; Development and theories of Imperialism in the scholarship of the field, 1870 to 1920; Humanitarianism: Imperialism and Liberalism, 1870 to 1920, with special reference to natural, human, and cultural resources; Neo-merchantilism or "Vampire" Imperialism, 1920 to the Present with special reference to totalitarianism of the left and the right in the approach to natural, human, and cultural resources. Lectures, discussions, research reports, and papers.

533 and 543. England, 1485 to the Present. (Hist 533-543 England) (3-0) Credit 3. I. Development of Britain in modern historical perspective; Tudors and the Reformation; the Stuarts and Parliament; English Expansion under Parliamentary; the Era of Reform and Empire; and World War I, Britain between wars; the fight for survival—global war. Lectures, discussions, special reports. Offered in odd years.

553. Europe, 1914 to the Present. (Hist 553 Europe) (3-0) Credit 3. I. Twentieth Century European development in its world setting; the background and causes of World War I; the war itself; the Versailles settlement and postwar efforts at political, economic and social security, collectively and nationally; the ideological clash between democracy and totalitarianism which led to global war and the Atomic Age—form the subject matter of the course. Lectures, discussions, special reports. Offered in odd years.

563. Survey of the Critical Attitude and Tools of Scientific History. (Hist 563 Tools) (3-0) Credit 3. I or II. History and its relation to the Social Sciences; the Social Sciences; the subject and the collection and classification of sources; the criticism of data; exposition or the presentation of historical evidence. Lectures, laboratory exercises, special reports, tests.

572. Historical Investigative Paper. (Hist 572 Inves Paper) (2-0) Credit 2. I and II. Credit allowed upon satisfactory completion of required thesis.

583. History of Civilization to 1500. (Hist 583 Civilization) (3-0) Credit 3. Theoretical scholarly treatment of the ideals and institutions connected with the political, social and economic life during periods of Greece, Rome, Feudalism, Renaissance, Reformation. Lectures, reading, tests, and special reports.

593. History of Civilization from 1500 to the Present. (Hist 593 Civilization) (3-0) Credit 3. Theoretical scholarly treatment of the ideals and institutions connected with political, social, and economic life in the period of rational liberalism and nationalism, the French Revolution, Nineteenth Century England liberalism, nationalistic unifications, socialism, imperialism, and Twentieth Century fascism and democracy. Lectures, readings, tests and special reports.

603. Western American History. (Hist 603 Western Amer) (3-0) Credit 3. II. Seminar in the exploration, settlement and development of the region west of the Mississippi; designed to discover and preserve materials on the early Spanish, French, African and Anglo-Saxon explorations and the contributions of the immigrants who made their homes in the Western region later.
613. American Revolution and the Constitution. (Hist 613 Amer Revoltn) (3-0) Credit 3. An examination of the development of the scholarship around the following areas of the American Revolutionary experiences as a clinical phenomena in the development of Revolutions: The "Revolution" and American Scholarship, Ideological background, Actionist and Vigilantes, the Fall of Tory rule, the internal revolution, the fever subsidies, Neuer, Ordnung. Special reports and research projects. Graduate status.

623. Problems in Latin-American History. (Hist 623 Latin Amer) (3-0) Credit 3. I. Geography and resources of the Latin-American countries; cultural traits of the population; description of the social, political and economic institutions. History of the relations between the United States and Latin American countries. Seminar organization, problem emphasis, special reports, discussions, and research paper.

633 and 643. American Foreign Relations, 1775 to the Present. (Hist 633-613. Foreign Rltn) (3-0) Credit 3. I and II. The United States in its relations with Latin-America and the rest of the world; public opinion and the economic.

653. Contemporary United States History, 1898 to the Present. (Hist 653 Contemporary) (3-0) or (2-0) Credit 3 or 2. II. Twentieth Century American development thus: America comes of age; the quest for social justice; the Great Crusade (World War I); postwar normalcy and reaction; Democracy in transition—the New Deal; and American leadership in the United Nations. Lectures, discussions, special reports.

663. Economic History of the United States. (Hist 663 U. S. Econ) (3-0) Credit 3. I. Historical review of the development of agriculture, commerce, industry, and business from colonial times to the present; social and economic forces in American society with attention to various mass movements; industrialization for the country and the necessity for governmental regulations; historical interpretation of trade unions, employer's association, cooperative. Lectures, discussions, readings, special reports.

673. History of the Negro in America. (History 463 Negro) (3-0) Credit 3. This course emphasizes the importance of the Negro's own History and the
positive role he has played in shaping his destiny. Also there will be an in­
vestigation of the stereotyped views that have been handed down from one
generation to the next, slanted accounts of black experience, apathy of many
blacks and prejudices of many whites.

site History 503. In lieu of a thesis, student is required to develop a course
of study in one of the major areas of the Social Studies and teach a unit in
the laboratory classroom.

MATHMATICS

A person holding the Bachelor of Science Degree from an approved col­
lege with a major in Mathematics is eligible for admission to graduate study
leading to the Master of Science in Mathematics with emphasis in Geometry,
Algebra and Analysis. Otherwise, the necessary deficiencies will have to be
made up before work can begin toward the Masters degree.

At least a grade of “B” must be earned in each course.

Programs leading to Masters of Science Degree in mathematics;

A student may select one of two programs.

Program A—30 semester hours of graduate mathematics.

Program B—21 semester hours of graduate mathematics and a minor
in some other area.

In addition, each program must include a carefully prepared thesis.

A minor in Mathematics at the graduate level must include 12 semester
hours of graduate mathematics.

DESCRIPTION OF COURSES

503. Reading and Research. (Math 503 Rdng and Res) (3-0) Credit 3.
Reading and discussion of advance Mathematics Articles appearing in various
Mathematical Journals; Pattern and Techniques of Mathematical Research;
Modern Techniques and Trends in the field of Advanced Mathematics.

513. Seminar. (Math 513 Seminar) (3-0) Credit 3. Seminar in Mathe­
matics for in-service teachers. Lectures, demonstrations, reports on current
trends in the field of Mathematics. Consent of Instructor.

523. The Real Number System. (Math 523 Real Num Sys) (3-0) Credit 3.
The development of the real number system, deductive systems, field proper­
ties, order properties, completeness properties, powers and roots, and decimal
representations. Prerequisite: Math 224.

533. Selected Topics in Modern Mathematics. (Math 533 Selct Topics) (3-0)
Credit 3. Introduction to symbolic logic and set theory; applications to ele­
mentary algebra, linear and plane analytical geometry; probability and sta­
tistics. Consent of Instructor.

543. Fourier Series and Boundary Value Problems. (Math 543 Fouriers)
(3-0) Credit 3. Application of partial differential equations to problems in­
volving heat flow, fluid flow, electric fields, mechanical vibrations, and other
similar problems arising in chemistry, physics, radio theory, and engineering.
Prerequisite: One course in ordinary differential equations.

553. Calculus for High School Science and Mathematics Teachers. (Math
553 Calculus) (3-0) Credit 3. Concise treatment of certain fundamental
ideas in the mathematics of the calculus with a point of view of extending,
illuminating, and clarifying the teacher's past knowledge with understanding.
Consent of Instructor.

583. Structure and Concepts of Arithmetic. (Math 583 Structure) (3-0) Credit 3. Introduction to sets, the number concept, the evolution of numeration systems, modular systems, the number system, measurement, ratio, proportion, and percentage.

593. Logic and Geometry. (Math 593 Logic) (3-0) Credit 3. Elementary logic, plausible reasoning, informal geometry, coordinate geometry, and geometry as a mathematical system.

623. Introduction to Partial Differential Equations. (Math 623 Diff Equatns) (3-0) Credit 3. Basic concepts; techniques for solving first and second order partial differential equations; wave equations; the potential equation; the heat equation; approximate (numerical) solutions; existence and uniqueness theorems.

633. Elementary Functions. (Math 633 Functions) (3-0) Credit 3. Real numbers system, algebraic functions, and their properties, circular functions and their properties, exponential functions and their properties, logarithmic functions and their properties, hyperbolic functions and their properties. Prerequisite: Graduate standing in Mathematics.

643. Integrated Introduction to Geometry for Teachers. (Math 643 Integ Geom) (3-0) Credit 3. The origin of geometry; the three classical problems of antiquity; the five platonic solids; Euclid's elements and fallacies; a modern set of axioms for geometry; geometrics in the Euclidean plane; transformation groups; hyperbolic geometry; elliptic geometry. Consent of Instructor.

653. Intermediate Analysis. (Math 653 Analysis) (3-0) Credit 3. Continuous functions, sequences, limits of functions, integrable functions, properties of integrable functions, the integral of continuous and bounded functions, series; step-functions. Prerequisite: Three (3) courses in Calculus or consent of instructor.

673. Advanced Analysis. (Math 673 Adv Analysis) (3-0) Credit 3. Continuous functions of several numbers, properties of functions of several numbers, the double integral, the iterated integral, the Riemann-Stieltjes integral. Prerequisite: Mathematics 623.

703. Modern Algebra. (Math 703 Algebra) (3-0) Credit 3. Fundamental concepts of Algebra, integral domains, fields. Introduction to such concepts as groups, vector spaces, and lattices. Prerequisite: Math 453.

723. Analytic Mechanics. (Math 723 Anal Mech) (3-0) Credit 3. Application of mathematics to problems of physics and engineering. Special emphasis will be placed upon the role of differential equations in describing physical laws and principles, such as Newton's Law of Motion, Einstein's equation of motion and Kirchoff's Law of Electricity. Prerequisite: Consent of Instructor.

743. Statistics for High School Teachers. (Math 743 Stat HS Tchr) (3-0) Credit 3. Processes of statistical methods, with reference to applications in various fields and with special application to analysis of school data.


813. Theory of Matrices. (Math 813 Matrices) (3-0) Credit 3. Definitions, matrix algebra; inverse of a matrix, transpose of a matrix, rank of a matrix; matrices and linear transformations; differentiations and integration.
of matrices; application of matrices to systems of linear equations, quadratic forms, bilinear forms and systems of differential equations. Prerequisite: Math 224.

863. Real Variables. (Math 683 Variables) (3-0) Credit 3. Introduction to point sets, rigorous approach to the concept of function and limit, the Riemann integral, the Lebesque integral, and some of their generalizations. Prerequisite: Math 653 or consent of Instructor.


MUSIC

The College offers courses leading to the degree of Master of Arts with a major in Music. This degree is open to persons holding a Bachelor of Music or Bachelor of Science or Arts with concentration in music from an institution of recognized standing. These degrees presented as entrance requirements in the graduate department must represent an amount of work equivalent to that prescribed in the School of Arts and Sciences at Prairie View A. and M. College.

Candidates for the master's degree may major in theory, applied music or music education.

MUSIC EDUCATION

Requirements:

12 to 15 hours—30 hours in all subjects

1. Courses in the field: 12-15 hours
   Thesis: A written literary work involving original research.

2. Applied Music (6 hours minimum)
   Continuation of one's applied instrument.

3. Minor Cognates: Any one:
   Aural Theory
   Written Theory
   Music Literature

683. The Teaching of Music Literature. (Music 683 Tchg Litr) (3-0) Credit 3. Problems in the presentation of music appreciation to high school students.

753. The Teaching of Vocal and Instrumental Music in the Elementary School. (Music 753 Elem Sch Tech) (3-0) Credit 3. Organizational and administration of rhythm bands and small instrumental groups in the elementary school, and of choral groups.

773. Problems in Teaching Sight-Singing and Ear Training. (Music 773 Sight Sing) (3-0) Credit 3. Student must audit first-year courses and engage in practice teaching plus one hour of theory and one hour of lecture.

873. Teaching of Vocal Music in High School. (Muse 873 HS Vocal) (3-0) Credit 3. Organization and administration of (a cappella) choirs, boys' chorus or glee club, girls' chorus or glee clubs, and voice training classes.

893. The Teaching of Instrumental Music in the High School. (Music 893 HS Instrum) (3-0) Credit 3. Organizational and administration of bands and orchestras in the junior and senior high schools.
GRADUATE SCHOOL

911, 921, 931, 941, 951, 961, 971, 981, 991. Music Workshop (Mus 911, 921, 931, 941, 951, 961, 971, 981, 991 Workshop) Credit 1. A comprehensive four day course offered the first six weeks of the summer school embracing the organization and conducting of bands, choirs and piano classes and presenting evaluative criteria of music teaching in elementary and high schools. Music fee: $3.00.

943. Drill and Band Formation in the High School. (Mus 943 HS Band) (3-0) Credit 3. Signals, formations, maneuvers for the Marching Band; band shows and pantomines.

963. Piano Class Teaching. (Mus 963 Piano Meth) (3-0) Credit 3. Methods of teaching piano in groups of 10 to 30 students in the elementary and high schools.

973. Seminar in Music Education. (Mus 973 Seminar) (3-0) Credit 3. Current philosophy of education; the place of music in the curriculum; review and criticism of music curricula, and evaluation of materials and methods of the various types of music schools, existing in America; special study of some problems associated with the aspect of music teaching in which interested.

THEORY

12 to 15 hours—30 hours total for degree

1. Thesis: A written literary work involving original research or an arrangement of a work, or an original work for full symphony orchestra.
2. Student must include 953, 783, and 793 or 763.
3. Applied Music: (6 hours) Continuation of one's applied instrument
4. Minor cognate: Any one:
   School Music
   Applied Music
   Music Literature

Twelve to fifteen hours (30 hours total in all subjects)

653. Advanced Score Reading. (Mus 653 Score Reading) (3-0) Credit 3. Transposition and study of various clefs for instruments all voices; ranges of instruments; introduction to the playing of voice and instrumental scores since the 10th century; practice in sight reading and studying such scores.

673. Dictation and Sight-Singing. (Mus 673 Dictation) (3-0) Credit 3. Advanced courses in aural theory.

693. Analysis of Form. (Mus 693 Analysis) (3-0) Credit 3. Practical analysis of intermediate and larger forms; eighteenth and nineteenth century harmony as illustrated in the works of Haydn, Mozart, Beethoven, Brahms, Franck, etc.

763. Advanced Orchestration. (Mus 763 Orchestration) (3-0) Credit 3. Scoring for full symphony orchestra.

783. Contrapuntal and Chromatic Dictation. (Mus 783 Dictation) (3-0) Credit 3. Dictation in two and three-part counterpoint, and four-point chromatic harmony.

793. Chromatic and Modern Harmony. (Mus 793 Mod Harmony) (3-0) Credit 3. Harmonic materials and technique from creative and analytical angles; harmonic idiom on the period from the late nineteenth century to the present.

833. Advanced Orchestral Conducting. (Mus 933 Conducting) (3-0) Credit 3. Conducting from chamber music and classical symphonic scores; conducting from Romantic and Modern scores. Examination of school music materials and classical symphonic scores. Interpretation of the large forms of instrumental music.

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PIANO

Requirements:

Undergraduate recital already given.
1. Three complete concertos
2. Material for two programs
3. Public performance of a concerto; chamber ensemble, and one recital program piano.
4. Must have two sequences in minor cognates as:
   Aural Theory
   Written Theory
   Music Literature
   Music Education

Four hours of daily practice; two one-hour lessons, one-hour studio class each week, if possible. Three hours each semester.

12 to 15 hours credit required. (In Piano alone 30 hours total for degree)

Music 613. Piano. (Musc 613 Piano) (3-0) Credit 3. Three concertos of contrasting type (Mozart, Beethoven, Brahms, Schumann, Chopin, Liszt, Tschaikowsky, Rachmaninoff, etc.).

Music 623. (Musc 623 Piano) (3-0) Credit 3. Sufficient material for two programs including three or four major compositions of the classical and romantic school. These programs should also include a varied selection of the representative modern compositions.

Bach—Italian Concerto toccatas, transcription by Tausig, Busoni, Liszt, etc. Chromatic Fantasy and Fugue.

Beethoven—A sonata of the grade of difficulty of Op. 53, 57, 109, 110, 111, or Chopin Sonata, and an earlier sonata; or one of Mozart, or a modern one.

Music 713. Piano. (Musc 713 Piano) (3-0) Credit 3. Romantic Composers—Schumann—(Etude Symphoniques); Franck—(Prelude, Chorale and Fugue); Brahms-Handel—(Variations and Fugue); Liszt—(Sonata, etc.)

Music 723. Piano. (Musc 723 Piano) (3-0) Credit 3. Modern Composers—Debussy, Ravel, Schiabin, etc., Contemporary Moderns including American Composers.

VOICE

Requirements:

Undergraduate recital already given.
1. Two complete roles appropriate to the voice
2. Two complete oratorio roles
3. Public performance with orchestra (an aria)! one recital (artist's)

Three hours of daily practice; 2 one-hour lessons; one-hour studio class if possible each week. Three hours credit each semester.

12 to 15 hours credit required in voice alone (30 hours total for degree)

Voice 613. (Musc 613 Voice) Credit 3. A minimum of 6 songs in each of the four languages (in addition to the undergraduate degree)—English, French, German and Italian.

Voice 623. (Musc 623 Voice) Credit 3. Four arias (Languages not specified).
GRADUATE SCHOOL

Voice 713. (Musc 713 Voice) Credit 3. Romantic Composers—Schumann; Schubert, Wagner, Liszt, etc.

Voice 723. (Musc 723 Voice) Credit 3. Modern Composers—DeBussy; Rachmaninoff, etc., Contemporary writers including American Composers.


INSTRUMENTAL MUSIC

Music 613, 623, 713, 723, 813, 823. (Musc 613-823 Flute) (3-0) Credit 3.

DIVISION OF NATURAL SCIENCES

The Division of Natural Sciences includes the Departments of Biology, Chemistry and Physics. Each Department has a head and its respective requirements for major and minor students.

BIOLOGY

Requirement for the Master's Degree:

A student entering graduate study in the field of biology must present at least an undergraduate minor of 22 hours in biology, plus the additional requirements which includes: general zoology, botany, and physiology. It is expected that the average grades in these courses in related fields be not less than a grade of "C." Prerequisite courses such as Vertebrate Embryology (Biol 414) and Comparative Anatomy (Biol 424), which the student does not usually take while an undergraduate must be taken before he begins the courses in the graduate program.

If the transcript of the undergraduate record of a student does not meet the above qualifications, additional satisfactory undergraduate work will be required before the student is admitted to graduate status.

The course requirements for the Master’s degree are rigidly fixed, however, the choice and number of allied courses may be arranged by conferring with an assigned advisor and will depend on the student’s field of specialization and on his or her previous training.

(a) In order to be considered worthy of undertaking work toward the Master's degree, a student must display notable ability in biology, an aptitude in research, and facility in the use of the English Language. To demonstrate the student’s fitness in these respects, the Department requires an examination. Action on admission for candidacy for a Master's Degree will be taken after the student has been in residence for at least twelve (12) hours of graduate work in biology with an average of "B" or better.

(b) An advisor will be appointed for each student to aid in arranging his program and in carrying it to completion. The sequence of courses to be taken in the Department and the choice of work in allied fields depend on the student’s previous training and objectives. An understanding of the basic techniques and concepts of biology, chemistry, physics and mathematics are required.

(c) The language requirements may be fulfilled by (1) a comprehensive examination in French or German or (2) a reading knowledge of French or German. With departmental staff approval another modern language may be substituted for French or German, if it is of major importance in the candidate's field of specialization.
In addition to the examinations required by the Graduate Division, the student must pass a written comprehensive examination covering the fundamentals of biology and an oral comprehensive examination defending his research and the fundamentals of biology.

The following courses are required for a major who plans a Master’s degree in Biology:

1. Advanced Physiology (Biol 534)
2. Systematic Botany (Biol 564)
3. Vertebrate Zoology (Biol 684)
4. Experimental Embryology (Biol 554)
5. Research (Biol 600 or 700)
   a. No more than 2 hours credit in research will be counted toward requirements for the Master’s degree.

Electives may be selected from the list of graduate biology courses in the catalog.

In order to completely satisfy the requirements for a Master’s degree in Biology a major must successfully complete with a grade of “B” or above, at least twenty (20) hours of biology with ten (10) hours in a minor discipline, plus an acceptable research project along with two (2) photos of him or herself, and the other requirements previously mentioned. No more than six (6) hours of graduate work in biology will be accepted from another institution.

The following courses are required by a student who plans a Master’s degree with a minor in biology:

1. Advanced Physiology (Biol 534)
2. Systematic Botany (Biol 564)
3. Invertebrate Zoology (Biol 554)

A minor must successfully pass the previous mentioned courses with a grade of “B” or above.

No more than the equivalent of two (2) different biological science courses in a National Science Foundation sponsored program will be counted toward a Master’s Degree in Biology.

The student failing to meet the above requirement will be continued on probation for a second semester. In the event he does not meet the requirements for candidacy at this time, it will be understood that no more graduate credits by him will be applicable to the M.S. Degree in Biology.

It is highly recommended that persons who plan to qualify for the M.S. Degree in Biology plan to spend one semester or at least one summer which can be devoted entirely to research.

**DESCRIPTION OF COURSES**

504. Embryology. (Biol 504 Embryology) (2-4) Credit 4. Descriptive embryology; vertebrate development with special reference to mammals; dissections and examination of selected embryological materials, including serial sections of the fetal pig. Prerequisite: Biology 114 and 124. Lab fee: $3.00.


523. Principles of Plant Pathology. (Biol 523 Pathology) (2-3) Credit 3. The fundamentals of parasitism as they effect plants and the means of controlling the diseases resulting from the various parasites which are detrimental to plants. Lab. fee: $3.00.
523. Histology. (Biol 524 Histology) (2-4) Credit 4. Microscopic study of tissues and organs of vertebrates; relation of structure to function. Lab. fee: $3.00.

533. Workshop for Elementary Teachers. (Sci 533 Elem Wkshp) (3-0) Credit 3. Workshop in the teaching of Elementary School Science for in-service teachers or supervisors. Lectures, discussions, demonstration, and construction of teaching materials with special projects; experiences in science principles and generalizations which teachers are called upon to present to and interpret for pupils in their classes.

534. General Physiology. (Biol 534 Physiology) (2-4) Credit 4. Organs of internal secretion, embryology, physiology, microscopic anatomy, and physiology. Prerequisite: Biology 114, 124 and 324.

543. Earth Sciences. (Sci 543 Earth Sci) (3-0) Credit 3. Introduction to astronomy; for teachers of science and mathematics in secondary schools; celestial sphere and coordinates thereon; measures of time; the solar system including the earth, moon, planets, comets, meteors, satellites, and the sun; the stars and their classifications; constellation study; double and variable stars; clusters; interstellar materials; the galactic system; and extra galactic systems. Prerequisite: Mathematics 103, 123.

544. General Entomology. (Biol 544 Entomology) (3-2) Credit 4. The structure, life history, habits and means of recognizing and classifying the more common insects. Attention is also given to their relations with man and other animals as well as plants. Lab. fee: $3.00.

553. Earth Sciences. (Sci 553 Earth Sci) (3-0) Credit 3. Introduction to geology and weather; for teachers; general principles of physical geology, physiography geologic processes and an introduction to historical geology and introduction to the fundamental principles of weather.

554. Experimental Embryology. (Biol 554 Embryology) (2-4) Credit 4. Modern problems and techniques of the development of the principles and mechanisms of development; analysis in factors operating in the morphogenesis, regeneration and development of selected vertebrates. Prerequisite: Biology 414 and 504.

564. Systematic Botany. (Biol 564 Botany) (2-9) Credit 4. Local flora, giving training in the identification and classification of the higher plants. Prerequisite: Botany 134.

574. Genetics. (Biol 574 Gentics) (2-4) Credit 4. Laws and principles governing heredity in plants and animals; relation to plant and animal improvement and to Eugenics. Prerequisite: Biology 134, 114. Lab. fee: $2.00.

594. General Microbiology. (Bacteriology) (Biol 594 Microbiology) (2-4) Credit 4. Morphology, physiology, classification, cultivation and microorganisms, relation to agriculture, premedics, and industry. Prerequisite: General Chemistry, Biology 314 and 114. Lab. fee: $3.00.

600. Research in Zoology. (Biol 600 Research). This course will vary in credit according to work performed, its value being indicated at registration. Research in Zoology may be carried on in any area listed which the student has a sufficient background. Lab. fee: $8.00.

624. General Parasitology. (Biol 624 Parasitology) (2-4) Credit 4. Morphology, life history, diagnosis and control of the important parasites affecting man and other animals. Prerequisite: Biology 614. Lab fee: $3.00.

634. Neurology. (Biol 634 Neurology) (2-4) Credit 4. A brief review of the brain and cranial nerves of the shark; the morphology of the spinal cord and brain of a mammal; the principle tracts and nuclei reaction systems of the cord and brain of the human nervous system. Lab. fee: $3.00.

643. Field and Animal Ecology. (Biol 643 Ecology) Credit 3. A study of the composition, dynamics and distribution of biotic communities in various sections of the southwest. Outdoor camping and cooking; one week-end and 8 Saturday field trips (subject to change and/or approval). Transportation defrayed by student. Prerequisite: Biology 115, 125 and 134. Laboratory fee: $2.00.

664. General Invertebrate Zoology. (Biol 664 Invertebrate) (2-4 Credit 4. Classification, morphlogy, embryology, physiology, and life histories of invertebrate exclusive of insects. Prerequisite: Biology 124. Lab. fee: $3.00.

674. Plant Breeding. (Biol 674 Breeding) (2-4) Credit 4. The application of the principles of genetics to plant improvement. Discussions, reports, lectures, demonstrations and individual participation in techniques and methods are to be used as procedures of instruction. Prerequisite: Biology 254 Genetics.

683. Experimental Genetics. (Biol 683 Genetics) (3-0) Credit 3. Thorough experimentation to show how variations may be brought about; the techniques of mating and breeding to support accepted facts. Lab. fee: $3.00.

684. Vertebrate Zoology. (Biology 684 Vertebrate) (Credit 4. The course is primarily concerned with phylum Chordata. It is to be presented in accordance with the recognized system of classification of Chordates. Emphasis is placed on evolution, development, physiology, and anatomy of major taxonomic groups of chordates. Prerequisites: Biology 414, 424 or equivalent, or permission of the instructor. Laboratory fee: $3.00.

700. Research in Botany. (Biol 700 Research). This course will vary in credit according to the work performed, its value being indicated at registration. Research in Botany may be carried on in any area listed which the student has a sufficient background. Lab. fee: $8.00.

703-713. Selected Topics in Biology. (Biol 703-712 Select Topics) (2-2) Credit 3. Basic concepts and recent advances and techniques in physiology, bacteriology, botany, genetics and entomology. Experiments, demonstration and field trips. Prerequisite: General Zoology, Botany or Biology.

704. Biology for Teachers. (Biol 704 Teachers). A training course for prospective teachers of Zoology and Botany. Lectures or conferences, field and laboratory work. Prerequisite: at least Biology 604 and 644. Lab. fee: $3.00.

724. Dairy Bacteriology. (Biol 724 Bacteriology) (3-4) Credit 4. Importance of bacteria in dairy products; the number and types of bacterial in dairy products and significance of their occurrence. Lab. fee: $3.00.

CHEMISTRY

Persons who plan to work toward the MS degree in chemistry must fulfill the undergraduate requirements, which are essentially: one year of inorganic chemistry, one year of analytical chemistry, one year of organic chemistry, one year of physical chemistry. It is expected that the average grades in these courses and of courses in related fields be not less than a grade of "C." The department reserves the right to give a qualification test to students and will make recommendations for the courses needed to enable a student to do graduate work in chemistry.
Students who plan to minor in chemistry on the graduate level must have fulfilled all requirements for a minor in chemistry on the undergraduate level stipulated in the catalog.

Upon acceptance as a graduate student in chemistry an advisor will be assigned who shall advise the student on courses to pursue, etc.

At the conclusion of a minimum of twelve semester hours of graduate work in chemistry, satisfactorily completed with an average of "B" or better, a formal application must be made for admission to candidacy. This application must be approved by the heads of the major and minor department and submitted to the Director of Graduate Studies for approval. Research projects for the thesis will be assigned after the student has been approved as a candidate.

A reading knowledge of French or German is required for all candidates.

After approval of the thesis, the candidate will be given a written and/or oral preliminary examination in his major and minor fields. It is required that this exam must be taken at least six weeks before graduation.

The final examination will be oral and shall be over subject materials not covered in the preliminary exam and the thesis.

It is recommended that persons who plan to qualify for the M.S. Degree in chemistry spend at least one year in residence and that those who plan to study during the summer periods plan to spend at least one summer which can be devoted entirely to research. It is further required that the thesis be of such quality that it may be published in an accepted scientific journal. Below is a suggested outline of study for the various fields of chemistry. These, of course, represent the minimum requirement.

Only six (6) hours credit for courses designed especially for summer institutes may be applied toward an M.S. degree in Chemistry, only three (3) hours for a minor. The minimum number of hours required for a minor is ten (10) hours of courses on the graduate level.

Each candidate is expected to successfully complete a minimum of 23 semester hours of course work exclusive of research. These courses must include: Chem 543, Chem 613, Chem 623, Chem 732, Chem 764, Chem 783, and enough graduate electives in chemistry to satisfy the semester-hour requirements.

**DESCRIPTION OF COURSES**

500. Research. (Chem 500 Research) Credit arranged. I or II. Problems for investigation may be selected from one of the following fields of chemistry: 1. Analytical; 2. Biochemistry; 3. Inorganic; 4. Organic; 5. Physical. Lab fee: $8.00.

513. Seminar. (Sci 513 Seminar) (3-0) Credit 3. I or II. Seminar in biology, chemistry and physics for in-service teachers. Lectures, demonstrations, reports on current trends in the fields of science.

533. Workshop for Elementary Teachers. (Sci 533 Elem Wkshp) (3-0) Credit 3. I or II. Workshop in the teaching of Elementary School Science for in-service teachers or supervisors. Lectures, discussions, demonstrations, and construction of teaching materials and special projects; experiences in science principles and generalizations which teachers are called upon to present to and interpret for pupils in their classes.

534. General Biochemistry. (Chem 534 Biochemistry) Credit 4. I or II and Summers. (2-4) Graduate. A basic and extensive course designed for graduate students planning to major or minor in Biochemistry or related fields.
and who require more than an elementary knowledge of the subject. Physio-
chemical relation of living matter; chemistry of foodstuffs and tissues; quan-
titative analysis of blood tissue and urine constituents; enzymes, digestion,
absorption, metabolism, nutrition and biophysics. Prerequisite: Chemistry
244, or 315 or permission of instructor.

613 and 623. Advanced Inorganic Chemistry. (Chem 613-623 Inorganic) (3-0)
Credit 3. I or II. The periodic law, several forms of the table. Quantum
numbers. A brief discussion of chemical bonds and resonance. Structure and
properties of typical non-metallic compounds. Behavior of electrolytes in
non-aqueous solvents.

I. or II. A study of the theories of nuclear structure, nuclear energy, nuclear
reactions and radioactivity. Radiation detection and measurement; interaction
of radiation with matter; health physics; radioisotope technology. Prerequi-
site: Consent of instructor. Lab. fee: $2.00.

703 and 713. Chemical Principles. (Chem 703, 713 Principles) (2-4) Credit
3. I or II. Fundamental concepts and principles of chemistry; designed espe-
cially for persons interested in the teaching of chemistry. Prerequisite: Grad-
uate or advanced undergraduate standing.

704. Advanced Analytical Chemistry. (Chem 704 Analytical) (1-6) Credit
4. I or II. Lecture-recitation: Theory and picture of sampling, solution of
refractory materials, special methods of precipitation, use of radioactive mate-
rial, water analysis, special types of calculations. Laboratory: Gravimetric and
electrolytic separation (limestones and alloys), evolution methods, gas analysis,
electrometric oxidation, reduction. Lab. fee: $2.00.

714. Identification of Organic Compounds. (Chem 714 Compounds) (Qual
Organic Analysis) (2-4) Credit 4. I or II. The separation and identification
of pure organic compounds and mixtures. Lab fee: $2.00.

723. Quantitative Organic Chemistry. (Chem 723 Quan Organic) (1-4)
Credit 3. I or II. The determination of elements and functional groups by
micromethods with an introduction to micromethods. Lab. fee: $3.00.

743. Advanced Topics in Organic Chemistry. (Chem 743 Topics) (3-0).
I or II. (a) Stereochemistry; (b) Reaction Mechanism; (c) Terpenes and
carbohydrates; three hours credit for each topic.

I or II. A review of elementary organic chemistry with an extension of more
advanced topics. Includes assigned current subject material.

752. Intermediary Metabolism. (Chem 752 Metabolism) (0-4) Credit 2.
I or II. A quantitative student of the intermediate formed in cellular meta-
bolism of fats, carbohydrates, proteins, and minerals employing equipment
currently used in biochemical research. Both manometric and spectromatic
methods are included. Prerequisite: 434, or taken concurrently with 753. Lab
fee: $3.00.

753. Intermediary Metabolism. (Chem 753 Metabolism) (3-0) Credits 3.
I or II. The intermediates formed in the metabolism of fats, carbohydrates,
proteins, minerals and nucleic acids and interrelationship between the metabolic
pathways in both plants and animals. Prerequisite: 434 and 424.

762. Organic Synthesis. (Chem 762 Synthesis) (1-4) Credit 2. I or II.
Conferences and laboratory work dealing with the syntheses of various organic
compounds. Prerequisite: one year of organic chemistry. Lab fee: $3.00.

763. Biochemical and Clinical Analysis. (Chem 763 Clinical) (0-6) Credit
3. I or II. Conference and laboratory work dealing with analysis of blood,
urine and vitamin essay. Prerequisite: Chemistry 435. Lab fee: $3.00.
764. Instrumental Analysis. (Chem 764 Analysis) (1-3) Credit 4. I or II. The theory and use of modern optical and electrical instruments in chemical analysis. These include the polarograph, oscilimenter, geiger counter, nephelometer, colorimeter, titrimer, potentiometer, pH meter and spectrophotometer. Prerequisite: Chemistry 424. Lab fee: $2.00.

782. Topics in the Chemistry of Nutrition. (Chem 782 Nutrition) (2-0) Credit 2. I or II. Lectures, assigned readings on the most recent developments in research on vitamins, amino acids, proteins, minerals and hormones as related to human and animal nutrition. Prerequisite: Chemistry 453.

783. Advanced Physical Chemistry. (Chem 783 Physical) (3-0) Credit 3. I or II. A lecture course consisting of advanced topics in physical chemistry: Thermodynamics, chemical kinetics, theories of solutions, phase rule. Prerequisite: Chemistry 434 and mathematics through differential and integral calculus.

784. Nutrition. (Chem 784 Nutrition) Credit 4. I or II. Lectures on recent developments in nutritional and biochemical role of vitamins, amino acids, proteins, mineral and hormones as related to humans and animals. Laboratory work will include experiments on use of synthetic diets for animals and production of vitamin deficiencies. Lab fee: $3.00.

800. Research. (Chem 800 Research) I or II. See Chemistry 500. Lab fee: $8.00.

802. Electrochemistry. (Chem 802 Electro) (0-4) Credit 2. I or II. Conferences assigned readings and exercises in the laboratory dealing with fundamental theories of electrochemistry and the preparation of certain inorganic and organic compounds. Prerequisite: Chemistry 424.


Chem. 813. Quantum Chemistry. (Chem 813 Quantum) (3-0) Credit 3. I or II. Elementary quantum mechanics, hydrogen atom, hydrogen molecule, bond types, resonance, wave mechanics and applications of quantum mechanics to chemical topics. Lecture three hours a week. Prerequisite: Graduate standing and the consent of Instructor.

Chem. 823. Chemical Thermodynamics. (Chem 823 Thermodyn) (3-0) Credit 3. I or II. The application of the laws of thermodynamics to chemical systems. Calculations of heat of reaction, free energy, entropy and equilibria with application to various processes.


911 or 913. Seminar. (Chem 911 or 913 Seminar) (1-0 or 3-0) Credit 1 or 3. I or II. Discussion of topics which are current in the various fields of chemistry.


SCIENCE EDUCATION

543. Earth Science. (Sci 543 Earth Sci) (3-0) Credit 3. Introduction to astronomy; for teachers of science and mathematics in secondary schools; celestial sphere and coordinates thereon; measures of time; the solar system including the earth, moon, planets, comets, meteors, satellites, and the sun.

553. Earth Sciences. (Sci 553 Earth Sci) (3-0) Credit 3. Introduction to geology and weather; for teachers; general principles of physical geology, physiography; geologic processes and an introduction to historical geology and introduction to the fundamental principles of weather.
613-623. Modern Concepts in Physical Science. (Sci 613-623) (2-2) Credit 3. Modern Concepts and Principles of the Physical Sciences. The course deals with the Physical, Chemical and Electrical Characteristics of Matter. Special emphasis will be placed on experimentation, demonstrations and new approaches in the teaching of Physical Sciences. The course is primarily designed for in-service secondary teachers. Prerequisite: 1 course in Physical Science or Consent of Instructor.

513-523. Physics for In-Service Teachers. (Phys 513, 523 Phys In-Serv Teach) (2-3) Credit 3. Designed primarily for secondary school teachers of physics; graduate credit may be obtained; offered usually during the summer; theoretical and experimental techniques of teaching physics in secondary schools, including those developed by the PSSC group at MIT and the Harvard Project Physics Group at Harvard.

PHYSICS

Physics 513, 523. General Physics (for the In-Service Teacher) (Phys 513-523 Gen Physics) (3-3) Credit 3. Fundamental Principles of Physics with laboratory. Emphasis on principles and new approaches to the teaching of physics. Prerequisite: Consent of Instructor. $2.00.

POLITICAL SCIENCE

Students who concentrate their graduate studies in political sciences must elect Political Science 563—Bibliography and Methods in Political Science. Each student must also complete a Master's thesis which has been prepared under the direction of and approved by the faculty of the Department of Political Science.

Prerequisites for a major in political science are: (1) an undergraduate major in political science, 30 semester hours of credit; or (2) undergraduate minor in political science, 18 semester hours; or (3) a major in social science with six semester hours in American Government. Those students who had an undergraduate major in political science may elect at least twenty semester hours in political science from four or five fields. Those who present a minor in political science will be required to elect 24 semester hours in four of the five fields required. Social Science majors will be required to present 24 semester hours in five fields of concentration. All other students desiring to major in political science will be required to complete thirty semester hours in the five fields of concentration.

Programs of study should be constructed in consultation with an advisor from the faculty of the Department of Political Science.

DESCRIPTION OF COURSES

513. Propaganda Public Opinion and Pressure Groups. (PoSc 513 Propaganda) (3-0) Credit 3. Functions and techniques of pressure groups; the nature, role and identification of public opinion and propaganda.

523. Municipal Administration and Politics. (PoSc 523 Municipal Adm) (3-0) Credit 3. An examination of the organization, planning and problems of municipal administration and government; operation of the policy making process at the municipal level.

563. Bibliography and Methods in Political Science. (PoSc 563 Bibliography) (3-0) Credit 3. The discipline, its authorities and its methodology; use of public documents and other source materials. (Required of all majors in political science.)

603. Ancient and Medieval Political Theory. (PoSc 603 Ancient Thry) (3-0) Credit 3. Political theories of the Greek, Roman and medieval European thinkers; special attention to Plato, Aristotle, Cicero, St. Augustine, John of Salisbury, St. Thomas Aquinas and Dante.

613. Modern Political Theory. (PoSc 613 Modern Thry) (3-0) Credit 3. Political theories from the Reformation to the present; special attention to Machiavelli, Bodin, Hubbes, Montesquieu, Locke, Rousseau, Jefferson, the Mills, Hegel, Marx and the socialist theorists.

633. Seminar in American Foreign Policy. (PoSc 633 Frgn Policy) (3-0) Credit 3. Analytical and historical study of the content of American foreign policy; government machinery and political processes in its formulation.


693. Seminar in Areal Politics. (PoSc 693 Seminar) (3-0) Credit 3. An analysis of the international implications of domestic and foreign policies pursued by countries located in the East, Europe, Africa and Latin America.

703. Seminar in American Political Thought. (PoSc 703 Amer Thought) (3-0) Credit 3. The theoretical adaptions and modifications of historic democratic concepts of government by leading American theorists.

723. The Presidency. (PoSc 723 Presidency) (3-0) Credit 3. Evolution of the office of the president of the United States; his powers in the areas of politics, administration, legislation, war and foreign affairs.

763. Public Personnel Administration. (PoSc 753 Persnl Admin) (3-0) Credit 3. Development and problems of the public service; recruitment, examination, placement, renumeration, morale, retirement, loyalty and responsibility.

SOCIOLOGY

Students seeking a Master's degree in Sociology should consider the following objectives and requirements:

1. A development of knowledge sufficient to make community surveys necessary for the formulation of programs of community organization.
2. A development of interest and ability of the student in the field of scientific sociology.
3. The development of an appreciation for the ability to interpret native and folk culture of the Nation and the Southwest.
4. The development of the ability to interpret mass behavior so as to make such interpretation functional in leadership.

Requirements

Students who major in Sociology must present a minimum of 9 semester hours in undergraduate Sociology with substantial credits in History, Political Science or Economics. Students who have had fewer than 18 hours of Social Sciences will be required to complete additional undergraduate hours in Sociology before receiving a Master's Degree.

503. American Social Welfare. (Soc 503 Soc Welfare) (3-0) Credit 3. I or II. Historical development of social work as an institution. Fields of specialization, functions of agencies. Research papers tracing the development of specific areas of social work are required.
543. Sociology of Urban Areas. (Soc 543 Urban) (3-0) Credit 3. I or II. Considers the city and its hinterland as a sociological entity; urban neighborhoods, population groupings and movements, social processes, trends, and problems are treated in the light of historical, ecological and social factors.

563. Social Research. (Soc 563 Research) (3-0) Credit 3. II. A study of the various methods of social investigation, such as the social survey, the case study methods, historical, statistical and ecological techniques. Emphasis is placed on the collection, analysis and interpretation of different types of information in connection with special problems of social research. Students are required to complete an individual piece of social investigation.

573. Seminar. (Soc 573 Seminar) (3-0) Credit 3. I or II. A consideration of sociological issues; classical and current investigations of social phenomena. Individual investigation of selected problems in the sociological aspects of behavior.

583. Social Anthropology. (Soc 583 Anthropology) (3-0) Credit 3. I or II. A study of the origin and development of human culture. Special emphasis is placed upon schools of culture and contemporary culture.

593. Sociology of Education. (Soc 593 Education) (3-0) Credit 3. I or II. Analyses of factors influencing the structure and function of the educational institution. Focus on the school as a social institution.

603. Programs for Child Welfare. (Soc 603 Child Welfare) (3-0) Credit 3. I or II. A study of child welfare movements and contemporary children's agencies and their services. Includes programs for improving the home and for substitute care, safeguarding health, employment protection, delinquency prevention, and other needs of children and youth.

614. Socio-Psychological Aspects of Poverty. (Soc 614 Poverty) (3-2) Credit 4. I or II. The sub-cultural of poverty as an influence in producing one's self-image; the correlation of self-image with receptivity for learning; techniques for the school in re-directing self-images. Case studies of disadvantaged youth.

643. Social Disorganization. (Soc 643 Disorganization) (3-0) Credit 3. I or II. Analysis of the social process; the disorganization of the society and the individual.

664. Sociology for Community Workers. (Soc 664 Comm Work) (3-2) Credit 4. I or II. Analysis of the whole complex of social arrangements, group characteristics, traits and institutions that are concerned with rural living and go on to make up rural society. Emphasis on techniques for analyzing special social problems and utilizing social organization as a means of achieving program objectives. Students will be assigned studies of the social structure and social organization of the communities in which they work as a part of the laboratory offered with the course. Corpsmen will learn the dynamics of community involvement and imitate projects for the laboratory requirement.

683. Sociology of Youth. (Soc 683 Youth) (3-0) Credit 3. I or II. The culture of adolescence and youth in modern societies, with emphasis on Western Civilization's Youth roles as influenced by social, class and ethnic statuses. Youth and the influences of the family and other societal institutions.


700. Individual Research. (Soc 700 Research) Credit Arranged I or II. Individual study and research on selected Sociological topics.
Students desiring to major in Home Economics on the graduate level must present undergraduate subject matter credits in the following areas: the social sciences, the physical sciences, biological sciences, arts, and education which shall be satisfactory to the adviser under whose direction the major work is to be done. In addition adequate preparation in undergraduate work in Home Economics is necessary.

Majors may be taken in Home Economics Education and General Home Economics. Minors may be taken in Education, Administration and Supervision Home Economics Education and General Home Economics.

Twenty (20) semester hours or more are required for a major, and ten (10) semester hours or more are required for a minor for the Master of Science Degree. Six additional hours, including the Master's Essay are required for the Master of Education Degree. Consult the Dean or major professor for additional information.

For the general requirements for admission to candidacy, residence, course requirements, transfer of credit, quality of work, thesis, and application for the Master's Degree, apply in the School of Home Economics. The student is urged to refer to the graduate bulletin for all desired information.

GENERAL HOME ECONOMICS COURSES

513. Studies in Home Management. (HE 513 Home Mgmt) (3-0) Credit 3. A review of management studies, trends in the field and research related to home management. Topics for consideration based upon student needs and interests. Special consideration to such problems as tension and fatigue, physically handicapped, management problems of homemakers employed outside of home, leisure time, and the aged. One major paper required. Abstracts of research studies due weekly.

553. Family Life Problems. (HE 553 Family Life) (3-0) Credit 3. A study of effects of parenthood, sibling and intergeneration relationships on family solidarity; an analysis of current forces influencing attitude and behavior; review and analysis of current literature related to human development and interpersonal relationships within the family; exploration of current and emerging factors in marriage and family life. One major paper required. Other projects adapted to special needs and interest of students.

563. Consumer Economics. (HE 563 Consumer Econ) (3-0) Credit 3. Consumer problems including credit; an analysis of buying practices and problems in securing household commodities; consideration of the consumer's viewpoint of the market; a study of home economists' responsibility as representatives of consumers. Special projects based upon students' needs and interests.

583. Methods and Techniques of Child Study. (HE 583 Child Study) (3-0) Credit 3. A study of a variety of methods and techniques, both projective and non-projective, for studying children; analysis of procedures in the selection and development of data collection techniques useful in child development research; consideration of such methods as motion pictures, plays, creative activities, direct observation, interviews, questionnaires, rating methods and projective techniques as a means of considering children's needs and guidance. Experience in development and use of selected techniques.

703. Seminar in Nutrition. (Fds 703 Seminar) (3-0) Credit 3. Review and interpretation of selected materials from the scientific literature in nutrition; state, national, and international nutrition problems in nutrition; emphasis on recent advances in nutrition science. Individual assignments and reports; abstract writing.
713. Problems in Costume Design. (Clo 713 Costume Dsgn) (0-6) Credit 3. Draping, pattern making and design for students with adequate background. Lab fee: $2.00.

733. Seminar in Foods. (Fds 733 Seminar) (3-0) Credit 3. Review and interpretation of selected materials from the literature in foods; emphasis on recent advances in food technology and experimentation; state, national and interpretation of selected materials from the literature in foods; emphasis on foods; implications for teaching at secondary level. Individual assignments and reports; abstract writing.

753. Clothing Seminar. (Clo 753 Seminar) (3-0) Credit 3. A study of the production and consumption of clothing and textiles as related to social science theories; an analysis of clothing behavior of individuals and groups in the United States and other societies. Special related topics may be considered with permission of the instructor.

763. Problems in Home Economics. (HE 763 Problems) (3-0) Credit 3. Current trends and issues in home economics, the school program and profession of home economics; special work in area of major interest. Reports, discussions, term projects. Registration with permission of instructor.


803. Draping and Construction. (Clo 803 Draping) (0-6) Credit 3. A study of the principles of design; draping of fabric on dress form; interpretation of design in relation to different figures; application of design and pattern making principles to various fabrics and styles. Construction of the draped garment.

813. Child Development Curriculum. (HE 813 Child Dvlp) (3-0) Credit 3. A study of modern curriculum approaches in the Nursery School; an analysis of program innovations resulting from research findings and developmental projects. A study of objectives, program organization, content and teaching materials.

883. Personal and Family Finance. (HE 883 Fmly Finance) (3-0) Credit 3. A study of general problems of individual and family handling of money; factors influencing income-expenditure relationships; an analysis of problems and programs for improving adequacy and security of income during the family life cycle. Especially planned for students with limited background experiences on the graduate level.

913. Problems of Youth. (HE 913 Youth) (3-0) Credit 3. Problems concerned with youth during adolescent years; current concerns and research literature review; attention to problem cases as represented in secondary home economics classes. One major paper required.

HOME ECONOMICS EDUCATION


523. Research Problems. (HE Ed 523 Problems) (3-0) Credit 3. A study of research methods in social sciences applicable to research in Home Economics. Planning a research study; understanding research reports; needed research in home economics. Abstract writing. One major paper required.
543. Advanced Methods. (HE Ed 543 Adv Methods) (3-0) Credit 3. A study of newer trends in teaching home economics with specific emphasis on the concept approach as applied to home economics substantive materials and teaching for generalizations; an analysis of research findings, vocational education changes and changes in contemporary society as related to the formulation of educational objectives, subject matter selection, method and organization, and the role of evaluation in the teaching-learning process. One major paper required.


593. Home Economics Curriculum. (HE Ed 593 Curriculum) (3-0) Credit 3. Clarification of the philosophy and objectives of home economics and the relationship to the home economics program and community; an analysis of techniques for cooperative program planning based upon student, home and community needs; sociocultural foundations of the home economics curriculum; significant research and vocational education legislation related to organization, content and techniques; study of emerging programs in home economics. Development of curricula for use in individual situations. Selection of area and topic with instructor's permission.


643. Adult Education (HE Ed Adult Educ) (3-0) Credit 3. A study of organizing, administering and planning adult programs; emphasis on methods and materials for teaching adults; evaluation of research and instruction in adult education; supervision of programs; consideration of new programs derived from vactional education legislation. One major paper is required.

723. Measurement. (HE Ed 723 Measurement) (3-0) Credit 3. A study of the basic concepts of measurement and evaluation; consideration of standards appropriate to evaluating the achievement of educational goals; an analysis of the use of measurement in improving instruction and providing a basis for guidance. Experience in construction of varied evaluative instruments. One major paper based upon problems experienced in individual situation. Approval of problem by instructor required.

793. Supervision. (HE Ed 793 Supervision) (3-0) Credit 3. Principles of supervision as applied to home economics education programs, teaching and learning; analysis of leadership functions, program effectiveness, and supervision.

In the School of Industrial Education and Technology, advance work is offered leading to the Degree of Master of Science, and Master of Education in the field of Industrial Education.

Prerequisite to graduate work in these fields, is the completion of a four-years curriculum from a College or University or recognized standing, substantially equivalent to that required of undergraduates in the School of Industrial Education and Technology. Students desiring to do graduate work who do not have the necessary prerequisites will be required to make up all deficiencies as directed by the Dean of the School of Industrial Education before they will be permitted to begin graduate courses.

To qualify for the Master's Degree with a major in Industrial Education at least fifteen (15) semester hours of the total required must be in courses offered to graduate students only. Also, all students will be required to take a course in Industrial Education 763—Research and Thesis Writing. Two-thirds of the work should be in the major field of Industrial Education, and one-third should be in a minor field chosen with the advice and approval of the Dean of the School of Industrial Education and Technology.

For advanced work in the School, good library facilities and laboratory equipment are provided to carry out the work suggested. Certain research problems may be made available in cooperation with other departments of the college.

**AUDIO-VISUAL EDUCATION**

503. Audio-Visual Materials in Instruction. (Audio 503 Materials) (2-2) Credit 2. I and II. The improvement of learning and teaching through the effective use of Audio-Visual instructional materials; operational procedures for all types of Audio-Visual equipment.

513. Administration and Supervision of Audio-Visual Education. (Audio 513 Administratn) (3-0) Credit 3. I. Emphasis on the supervision of budget and planning of an audio-visual program—for teachers appointed as audio-visual coordinators in their schools, as well as for principals, classroom teachers and students planning a teaching career.

523. Preparation of Graphic Materials. (Audio 523 Graphic Matl) (1-6) Credit 3. II. Emphasis on the construction of audio-visual materials for classroom teaching. Basic production techniques as audio-visual material for various teaching areas. Lab fee: $2.00.

AV 543. Laboratory in Audio-Visual Materials. (Audio 543 Laboratory) (1-6) Credit 3. II. Practical experience in the mechanical manipulation of the various audio-visual materials and devices. Includes mechanical theory of materials and equipment.

**DRIVER EDUCATION**

503. Driver Education and Traffic Safety II. (Dr Ed 703 Traffic II). Credit 3. I, II. This course is primarily devoted to methods of teaching, and traffic safety needs of secondary schools. Laboratory experience in teaching beginners to drive in dual control cars; psycho-physical testing, teaching materials and procedures, state laws and regulations. (Approved Certification Course).

703. Driver Education and Traffic Safety II. (Dr Ed 703 Traffic II) Credit 3. I, II. This course is primarily devoted to methods of teaching, and the administration of high school driver and traffic safety education. (Approved Certification Course). Prerequisites: D.E. 303 or 503.
GRADUATE SCHOOL

INDUSTRIAL EDUCATION

IE 502-3. Shop Organization and Classroom Management (IE 502-3 Organization) (2-0) (3-0) Credit 2 or 3 (45 clock hours) Devising and organizing procedures to facilitate instruction; procedures for issuing tools, materials, and supplies; keeping inventory; effective use of assignment and progress charts; use of student leadership in routine non-teaching class and laboratory duties; setting up roll checking devices; keeping class records; safety and accident prevention.

IE 512-3. Development and Effective Use of Industrial Instructional Materials (IE 512-3 Instr. Materials) (2-0) (3-0) Credit 2 or 3 (45 clock hours) The study of ways and techniques of developing portions of current industrial literature into teachable content; its application and adaptability to specific instructional areas; development and preparation of teaching aids; organizing materials for effective use with courses of study.

523. Tests and Measurements in Industrial Education (IE 523 Test Measrmt) (3-0) Credit 3. II. Sources of instructional testing and evaluating materials; construction and use of test and evaluating devices; administering, scoring, recording and interpreting tests, progress charts, diagnosis of difficulties, analysis of teaching problems as related to evaluation.

533. Instructional Methods in Industrial Education. (IE 533 Methods) (3-0) Credit 3. I. Study of methods, devices, techniques as applied to teaching industrial subjects; analysis and evaluation of student learning difficulties and teaching responsibilities in industrial classes; also study of the nature, preparation and use of instruction sheets.

IE 542-3. Occupational Analysis and Course Making. (IE 542-3 Course Making) (2-0) (3-0) Credit 2 or 3 (45 clock hours) Analyzing various vocational occupations for teachable content for training purposes; study of analysis techniques developed by various leaders of vocational education; study of related content information and its place in occupational analysis; study of principles of analysis and course making; organization and development of courses of study to fit individual teachers’ specific needs.

563. The General Shop. (IE 563 General Shop) (3-0) Credit 3. II. The general shop organization, its contribution to attainment of cardinal objectives of the modern high school, current practices as to type of shops, equipment, instructional materials and procedures.

IE 572-3. Selection, Placement, and Follow-up in Vocational Education (IE 572-3 Placement) (2-0) (3-0) Credit 2 or 3 (45 clock hours) Factors which affect selection, advisement, work opportunities, and educational objectives of young people; techniques of interviewing and advising young people in regard to occupational choices; factors affecting placement, training stations, follow-up and coordination; advisory committee; related study materials; child labor laws and regulations; wages and hours laws.

583. Industrial Arts for the Elementary School. (IE 583 Elem Sch Art) (2-0) Credit 2. I and II. A course designed for teachers, supervisors, principles of elementary schools. Fundamental concepts, philosophies of Industrial Arts in the elementary school; function and scope, organization, administration, activities and methods of teaching Industrial Arts on the elementary level.

IE 592-3. Problems in Cooperative Training. (IE 592-3 Problems) (2-0) (3-0) Credit 2 or 3 (45 clock hours) Review of the duties of the teacher-coordinator; discussion of probable solutions of actual problems; procedures and techniques involved in community surveys; interpretation of survey data; guidance and counseling; related study materials; placement of trainees; advisory committees; organization and coordination of on-campus and off-campus training classes; child labor laws; wages and hours laws.
603. Workshops and Institutes in Industrial Education. (IE 603 Workshop) Credit 3. I and II. A study of the development of solutions for problems in Industrial Education.

A. Cosmetology Institute  
B. Industrial Arts Teacher Workshop  
C. Vocational-Industrial Teachers Workshop  
D. Administrators Workshop

712-3. Administration and Supervision of Industrial Arts Education. (IE 712-3 Administration) (2-3) (3-0) Credit 2 or 3. I. How to organize, supervise and administer functioning programs of Industrial Arts; the duties of a supervisor and director of Industrial Arts; special problems of supervision and administration of Industrial Arts; relationships to local, state and federal education authorities, correlating Industrial Arts with other phases of education.

720. Thesis in Industrial Education. (IE 720 Thesis) (2-0) (3-0) (4-0) Credit 2, 3 or 4. Conferences and advisement in relationship to the selection and preparation of an acceptable thesis for the Master of Science Degree. Prerequisite: I.E. 763.

IE 732-3. Philosophy and Objectives of Vocational Education (IE 732-3 Philosophy and Objectives) (2-0) (3-0) Credit 2 or 3 (45 clock hours) Fundamental concepts, beliefs, principles, and assumptions regarding vocational education; the relationship of its objectives with objectives of general education; its economic, social, and educational values; different phases of vocational education; Federal and State laws; its place and justification in the total scheme of modern education.

743. The History of Industrial Education. (IE 743 History) (3-0) Credit 3. II. A survey of the early movements, experiments and writings concerning leaders of the United States and European countries. Intensive study of developments in Industrial Education since 1850. A comparative study of leaders, movements, institutions and literature in the field of Industrial Education.

753. Practicum and Industrial Education. (IE 753 Practicum). Maximum credit 6 hours. Development of current problems are reflected through the merging of practical experience with theoretical and scientific concepts.

763. Research and Thesis Writing. (IE 763 Research) (3-0) Credit 3. I and II. Required of all majors in Industrial Education. Methods and techniques of research writing and reporting. Designed especially for students who are to write thesis or lesser reports.

783. Problems in Industrial Education. (IE 783 Problems) (3-0) Credit 3. I and II. Conferences and advisement in selection and preparation of an acceptable term paper or essay. Prerequisite: I.E. 763.
OFFICERS OF INSTRUCTION, 1972-73

RAGLAND, GEORGE R. (1955) .......................... Professor of Sociology and Acting Dean of the College
B.S. 1938, Langston University
M.A. 1939, Ph.D. 1955, University of Iowa
Further Study: State University of Iowa

ABLER, RONALD J., (LT.) (1972) ......................... Naval Science
B.S. 1966, Loyola University
Further Study: Prairie View A&M College

ADAMS, AMBROSE D. (1972) .......................... Assistant Professor of Industrial Education
B.S. 1958, Prairie View A&M College
M.Ed. 1965, North Texas State University
Ed.D. 1972, North Texas State University

ADAMS, WILLIE L. (1964, 1968) .............. Assistant Professor of Woodworking
B.S. 1961, Prairie View A&M College
M.S. 1968, Kansas State College

ALLEN, LENOLA B. (1972) ......................... Associate Professor of Home Economics
B.S. 1962, Prairie View A&M College
M.Ed. 1972, Prairie View A&M College

ALLEN, LINDA (1972) ................................ Instructor of Political Science
B.A. 1971, Houston Tillotson
M.S.P.A. 1972, Florida State University

ADMUNDSON, THEODORE (1971) .............. Assistant Professor of Health and Physical Education
B.A. 1949, Concordia College
M.A. 1959, University of Minnesota
Ph.D. 1971, University of New Mexico

ANDERSON, HOLMES EDISON, SR. (1958) ............. Professor of Music
B.S. 1938, Prairie View A&M College
M.A. 1941, State University of Iowa
Specialist Diploma 1947, Columbia University
Ph.D. 1967, State University of Iowa

ANDOH, CHRISTIAN K. (1965) ........................ Assistant Professor of Architectural Engineering
B.Arch in Engineering 1963, Chicago Technical College
M.R.P. 1965, Kansas State College

B.S. 1954, Hampton Institute
M.E. 1972, Prairie View A&M College

ARNOLD, RUTH B. (1967) ............................. Instructor of English
B.A. 1938, M.A. 1965, Florida A&M University
Further Study: University of Wisconsin; Jacksonville University; Southeastern State College (Oklahoma)

ARMSTRONG, R. L. (1971) .......................... Assistant Professor of Education
B.S. 1958, Tuskegee Institute

ASHFORD, JAMES T. (1971) .......................... Associate Professor of Music
B.S. 1945, Central State College
M.A. 1947, New York State University
Ph.D. 1955, University of Iowa
Further Study: University of Southern California

ASKEW, VERA (1972) ................................. Instructor of Nursing
B.S. 1963, Tennessee State University
M.S. 1964, Tennessee State University
Further Study: North Texas State University

BARGE, WENDELL P. (SPC) USA (1971) ............ Operations NUO - Army Military Science

BATTLE, JOSEPH R. (1960) ........................ Assistant Professor of Commercial Foods
B.S. 1941, Tuskegee Institute
M.S. 1949, Texas Southern University
Further Study: University of California at Los Angeles
University of Texas (Extension)
OFFICERS OF INSTRUCTION

BEASLEY, JOHN (1970) Professor of Education
B.A. 1958, M.A. 1961, Texas Southern University
Ed.D. 1967, Washington State University

BELTON, GEORGE (1972) Instructor of Physical Education
B.S. 1970, Arkansas AM&N
M.S. 1972, Jackson State University

BELL, BILLIE (1957) Assistant Professor of Nursing
B.S. 1958, Prairie View A&M College
M.S. 1971, Texas Woman's University

BELL, WILLIE JAMES (1949) Associate Professor and Head, Department of Printing
Certificate in Printing 1947, Prairie View A&M College
Certificate in Mechanism of the Linotype Machine 1951, Mergenthaler Linotype School
B.S. 1959, M.S. 1965, Prairie View A&M College

BERRY, JEWEL E. (1956) Associate Professor of Biology
A.B. 1951, M.A. 1953, Fisk University
Ph.D. 1956, Notre Dame University

BERRY, R. O. (1970) Professor of Animal Science
B.S. 1928, North Texas State University
M.S. 1932, Texas A&M University
Ph.D. 1939, The John Hopkins University

BLACK, CHARLES S., (LTJG) USN (1972) Naval Science
B.A. 1969, Ohio University
Further Study: Prairie View A&M College

BLACK, NANCY MARIE (1972) Assistant Professor of Education
B.A. 1952, Wiley College
M.A. 1971, Prairie View A&M College

BONNER, HAROLD (1970) Assistant Professor of Industrial Education
B.S. 1962, M.S. 1970, Prairie View A&M College
Further Study: Texas A&M University

BONNER, PAULINE (1971) Assistant Professor of Business
B.A. 1964, Prairie View A&M College
A.B.A. 1965, University of Houston

BOSWORTH, PATRICIA (1972) Assistant Professor of Nursing
B.S. 1953, University of Texas
M.A. 1959, University of Houston
Ed.D. 1971, University of Houston

BOUCHER, LINDA K. (1972) Instructor of Education
B.S., Sul Ross University
M.A., Sul Ross University
Further Study: Texas University; University of Houston; University of St. Thomas

BOWLES, LINDA (1972) Instructor, Librarian W. R. Banks Library
B.A. 1971, Howard University
M.S.L.S. 1972, Atlanta University

BOOKER, CLARISSA (1969) Assistant Professor of Education
B.S. 1967, Prairie View A&M College
M.S. 1969, Colorado State College

B.A. 1949, Allen University
M.S. 1954, South Carolina State College
Further Study: Texas Southern University, University of Utah; University of Houston

BOYDEN, LLOYD R. (1957) Assistant Professor of Industrial Education and Technology
Certificate in Plumbing and Heating, 1950, B.S. 1952, Hampton Institute
M.A. 1959, New York University
Ph.D. 1972, Texas A&M University

BRAMS, EUGENE (1971) Associate Professor of Agriculture
B.S. 1948, University of Wisconsin
M.S. 1949, University of Wisconsin
Ph.D. 1967, University of Florida
Further Study: Barry College
OFFICERS OF INSTRUCTION

BRIDGES, HARRIETTA (1972) ........................................ Instructor, Librarian
W. R. Banks Library
B.S. 1971, Southern University
M.S.L.S. 1972, Atlanta University

BRIDGEWATER, HERBERT (1972) .................................... Assistant Professor of Physical Education
B.S. 1961, Oklahoma City University
M.S. 1966, University of New Mexico
Further Study: Oklahoma State University

BRIGGS, KENNETH (1968) ............................................ Assistant Professor of Business Administration
B.S. 1963, Bethune-Cookman College
M.B.A. 1964, Atlanta University
LL.D. 1967, La Salle University
Further Study: University of Washington

BROWN, JONEL LEONARD (1943) ................................ Division of Education
B.A. 1930, Morehouse College
M.A. 1942, Ph.D. 1946, University of Wisconsin

BROWN, SAMUEL E. (1972) ......................................... Instructor of Civil Engineering
B.S. 1954, Prairie View A&M College

BURRELL, DONALD O., X.O., LIEUT. COM. (1971) .......... Naval Science
B.S. 1963, University of Kansas
Further Study: Prairie View A&M College

BURRS, AL THERIA (1970) ......................................... Instructor, Biology
B.S. 1962, M.S. 1970, Prairie View A&M College

BURSH, TALMAGE P. (1972) ....................................... Professor of Chemistry
B.S. 1956, Southern University
Ph.D. 1963, Alfred University

BYRD, FLOSSIE MARIAN (1962) ................................ Professor and Dean, School of Home Economics
B.S. 1948, Florida A&M University
M.Ed. 1954, Pennsylvania State University
Ph.D. 1963, Cornell University

CAMPBELL, ANNIE LUCILLE (1932) ............................. Professor and Head, Department of English
B.A. 1930, Bradley University
M.A. 1935, Northwestern University
Ph.D. 1956, New York University

CARDEN, HOOVER (1972) ........................................... Assistant Professor of Agriculture
B.S. 1964, Prairie View A&M College
M.S. 1964, Prairie View A&M College
Further Study: Lamar University

CARNEY, CHARLES P. (1969) ....................................... Associate Professor of Education
B.S. 1951, M.Ed. 1959, Ed.D. 1964, University of Houston

CARREATHERS, RAYMOND E. (1967) ......................... Assistant Professor of Education
B.S. 1946, Prairie View A&M College
M.Ed. 1966, Southeastern State College

CARTER, JEAN (1972) ............................................. Assistant Professor of Foreign Languages
B.A. 1950, Seton Hill College
M.A. 1958, Xavier University
Ph.D. 1965, St. Louis University

CARTER, PURVIS M. (1956) ...................................... Associate Professor of History
A.B. 1948, Tillotson College
M.A. 1950, Howard University
Ph.D. 1970, University of Colorado

CHAN, SUSAN (1972) ................................................ Assistant Professor of Economics
B.A. 1967, University of Hong Kong
M.A. 1972, Indiana University

CHANG, ING (1969) .................................................. Assistant Professor of Mechanical Engineering
B.S.M.E. 1961, National Taiwan University
M.S.M.E. 1965, John Marsh Rice University
Ph.D. 1969, John Marsh Rice University
<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
<th>Title/Position</th>
<th>Education Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPMAN, WILLIAM H.</td>
<td>1966</td>
<td>Assistant Professor of English</td>
<td>B.S. 1959, The A&amp;T College of North Carolina; M.A. 1966, University of Iowa; Further Study University of London, University of Iowa</td>
</tr>
<tr>
<td>CHARLESTON, CUBE</td>
<td>1953</td>
<td>Assistant Professor of Printing</td>
<td>B.S. Certificate in Printing 1951, Prairie View A&amp;M College; Certificate in Linotype Operation 1953, Mergenthaler Linotype School</td>
</tr>
<tr>
<td>CHERRY, EMERY D.</td>
<td>1970</td>
<td>Assistant Professor of Industrial Education</td>
<td>B.A. 1953, M.Ed. 1957, Stephen F. Austin University</td>
</tr>
<tr>
<td>CHOPRA, BALDEO K.</td>
<td>1970</td>
<td>Assistant Professor of Biology</td>
<td>B.S. 1960, Benares Hindu University, India; M.S. 1962, Benaras Hindu University, India; Ph.D. 1968, Auburn University</td>
</tr>
<tr>
<td>CHRISTOPHER, CLYDE</td>
<td>1963</td>
<td>Assistant Professor of Mathematics</td>
<td>B.S. 1950, Prairie View A&amp;M College; M.A. 1960, Texas Southern University; Further Study: University of Kansas, University of Missouri; Texas A&amp;M University</td>
</tr>
<tr>
<td>CLARK, CLIFTON</td>
<td>1971</td>
<td>Instructor of Education</td>
<td>B.S. 1946, East Texas State; M.Ed. 1953, University of Houston</td>
</tr>
<tr>
<td>CLARK, MARY</td>
<td>1970</td>
<td>Assistant Professor of Education</td>
<td>B.S. 1954, M.Ed. 1969, Prairie View A&amp;M College</td>
</tr>
<tr>
<td>CLARK, ROSS DARRYE</td>
<td>1972</td>
<td>Associate Professor of Education</td>
<td>B.S. 1960, Texas Technology University; M.A. 1965, Sul Ross University; Further Study: Texas A&amp;M University</td>
</tr>
<tr>
<td>CLEM, MARIE</td>
<td>1972</td>
<td>Instructor, Librarian</td>
<td>B.S. 1959, Arkansas A&amp;M; M.S. 1961, Prairie View A&amp;M College</td>
</tr>
<tr>
<td>CLEM, WILLIAM W.</td>
<td>1970</td>
<td>Professor and Dean, School of Arts and Sciences</td>
<td>B.A. 1938, Southern University; M.A. 1939, Fisk University; Ph.D. 1949, University of Wisconsin; Further Study: Ohio State University; Columbia University</td>
</tr>
<tr>
<td>COFIELD, WILLIAM L.</td>
<td>1969</td>
<td>Associate Professor of Physical Education</td>
<td>B.A. 1963, McKendree College; M.A. 1968, University of Kentucky</td>
</tr>
<tr>
<td>COLE, LARRY</td>
<td>1972</td>
<td>Associate Professor of Chemistry</td>
<td>B.S. 1966, Texas Southern University; Ph.D. 1971, University of Houston</td>
</tr>
<tr>
<td>COLE, ROBERT V., JR.</td>
<td>1961</td>
<td>Assistant Professor of Food and Nutrition</td>
<td>B.S. 1951, Prairie View A&amp;M College; M.S. 1961; M.S. 1961, Michigan State University; Further Study: University of Wisconsin</td>
</tr>
<tr>
<td>COLLIER, SAVANNAH M.</td>
<td>1968</td>
<td>Instructor of Business Education</td>
<td>B.S. 1946, M.S. 1965, Prairie View A&amp;M College; Further Study: Texas Southern University; University of Houston; Lee College</td>
</tr>
<tr>
<td>COLLINS, JOHNNIE B.</td>
<td>1971</td>
<td>Associate Professor of Agriculture</td>
<td>B.S. 1965, Alcorn A&amp;M; M.S. 1967, Michigan State University; Ph.D. 1971, Michigan State University</td>
</tr>
<tr>
<td>COLLINS, LIMMONE C.</td>
<td>1953</td>
<td>Professor and Head, Department of Biology</td>
<td>B.S. 1947, M.S. 1953, Prairie View A&amp;M College; Ph.D. 1961, University of Iowa; Further Study: University of California at Livermore</td>
</tr>
<tr>
<td>COLLINS, SAMUEL</td>
<td>1949</td>
<td>Professor and Dean, School of Industrial Education and Technology</td>
<td>B.S. 1949, M.S. 1953, Prairie View A&amp;M College; Ed.D. 1962, University of California at Los Angeles</td>
</tr>
</tbody>
</table>

*On Leave*
COOKSEY, DYMPLE C. (1964) .......... Associate Professor of Food and Nutrition
B.S. 1958, M.S. 1964, Oklahoma State University
Ph.D. 1972, Texas Woman's University

COPELAND, ROSANNA (1972) .......... Instructor of Physical Education
B.S. 1970, Oklahoma State University
M.A. 1972, Texas Woman's University

CROMWELL, MARIE (1969) .......... Instructor of Education
B.A. 1960, Southern University

CURTIS, WILSON A. (1966) .......... Assistant Professor of English
B.S. 1951, Sam Houston State
M.A. 1960, University of Houston
Further Study: University of Houston; Prairie View A&M College

DABNEY, RUBY F. (1969) .......... Instructor of English
B.A. 1958, Prairie View A&M College
M.A. 1967, Wayne State University

*DABNEY, RUFUS F. (1969) .......... Assistant Professor and Acting Head, Department of Sociology
B.A. 1956, Prairie View A&M College
M.S. 1959, George Williams College
Further Study: Texas A&M University

DADE, BILLY (1972) .......... Instructor of Education
A.B. 1942, Bishop College
M.S. 1948, Prairie View A&M College
A.M. 1954, University of Chicago
Ed.D. 1969, University of Chicago

DANIELS, JILES P., (LT. COL.) (1972) .......... Professor of Military Science and Commandant AROTC
B.S. 1954, Prairie View A&M College
M.E. 1972, Prairie View A&M College

DANZ, EULA J. (1972) .......... Associate Professor of English
B.S. 1955, Tuskegee Institute
M.S. 1959, University of Wisconsin
Further Study: Yale University; Southern University, University of Alabama

DANZ, THEOPHILUS (1972) .......... Associate Professor of Physical Education
B.S. 1958, Alabama State (College) University
M.E. 1966, Tennessee A&I State
Further Study: Northeastern University, Tennessee A&I University

DARUVALLA, SAM R. (1965) .......... Associate Professor of Electrical Engineering
B.S. 1958, University of Bombay
L.E.E. 1961, Victoria Jubilee Technical Institute, Bombay
M.S.E.E. 1965, Kansas State University
Further Study: Kansas State University; Prairie View A&M College

DAVIS, HULEN M. (1965) .......... Assistant Professor and Acting Head, Department of Political Science
B.A. 1957, M.Ed. 1963, Prairie View A&M College
Further Study: University of Houston; Texas A&M University

DAVIS, LEROY (1971) .......... Instructor of Music
B.S. 1970, Southern University
M.S. 1971, Michigan State University

DAVIS, SANDRA (1971) .......... Instructor of Business
B.S. 1970, Southern University

DAVIS, THOMAS L. (1972) .......... Instructor of Music
B.S. 1970, Southern University
M.A. 1971, Michigan State University

DAVIS, WENDELL C. (1968) .......... Instructor of Education
B.S. 1958, M.S. 1962, Prairie View A&M College

DEWAN RAJINDER NATH (1972) .......... Assistant Professor of Civil Engineering
B.Sc. 1940, Delhi University
M.Sc. 1942, University of Lucknow
M.S. 1953, University of Missouri
M.S.E.E. 1957, University of Missouri
Further Study: New Mexico State University; UCLA

*On Leave
OFFICERS OF INSTRUCTION

DOCTOR, VASANT M. (1967) Associate Professor of Chemistry
B.S. 1946, Royal Institute of Science (Bombay)
M.S. 1951, University of Wisconsin
Ph.D. 1953, Texas A&M University
Further Study: University of Texas; University of Houston

DRAKE, RICHARD S. (LT. USNR) (1969) Assistant Professor of Naval Science
B.S. 1964, Sam Houston State

DUNN, CHARLETA J. (1972) Associate Professor of Education
B.S. 1951, West Texas University
M.E. 1954, West Texas University
Ed.D. 1966, University of Houston
Further Study: University of Texas

DURLEY, ALEXANDER (1969) Assistant Professor of Mathematics and Director of Athletics
B.A. 1935, Texas College
M.A. 1942, Atlanta University

ECHOLS, JACK W. (1954) Professor and Dean, Graduate School
B.S. 1934, M.S. 1951, Prairie View A&M College
Ed.D. 1954, University of Denver

EDMOND, THETIS CHARLENE (1962) Assistant Professor of English
B.A. 1956, Huston-Tillotson College
M.A. 1964, Prairie View A&M College
Further Study: University of Houston; Southeastern State College

EDMONDSON, VANCE (1972) Associate Professor of Agriculture
B.S. 1948, University of Arkansas
M.S. 1950, Oklahoma State University
Ph.D. 1956, Cornell University

EDWARDS, CHARLES T., JR. (1957) Assistant Professor of Industrial Technology
Certificate in Trowel Trades 1952
B.S. 1954, Hampton Institute
M.A. 1960, Kansas State College
Further Study: University of Missouri; University of Houston; Oklahoma State University

ENGLISH, LEON (1969) Assistant Professor of Physical Education
B.S. 1948, M.S. 1949, Prairie View A&M College
M.S. 1952, University of Southern California

ENGRAM, LEWIS W. (1948) Assistant Professor of Dairy Science
B.S. 1940, Hampton Institute
M.S. 1946, Michigan State University
Further Study: University of Minnesota

FAGGETT, HENRY (1970) Professor and Director, Division of Freshman Studies
B.A. 1941, Hampton Institute
M.A. 1945, Ph.D. 1947, Boston University

FLEMING, WILLIE D. (1972) Instructor of Political Science
B.A. 1970, Texas Southern University
M.A. 1972, Texas Southern University

FONTENOT, DEWEY (1958) Assistant Professor of Automobile Mechanics
B.S. 1954, Southern University
M.S. 1961, Bradley University
Certificates Sun Electric Corporation, 1954
Certificates General Motors Corporation 1955, 1956, 1957, 1958
Certificate Chrysler Corporation 1962
Certificate Perfect Circle Corporation 1962
Certificates General Motors Corporation 1964, 1965, 1966
Certificates Briggs and Stratton Corporation 1965, 1966
Certificates Ford Motor Company, 1962, 1967

MONTENOT, UNA (1972) Instructor of Economics
B.A. 1965, Tougaloo Mississippi
M.A. 1971, University of Minnesota

FOY, FRANCES (1972) Instructor of Education
B.A. 1968, University of Texas
M.A. 1969, University of Texas
OFFICERS OF INSTRUCTION

FRANCIS, LUTHER V. (1950) Assistant Professor of General Engineering and Head, Physical Plant Planning and Engineering
B.S. 1950, Prairie View A&M College
M.S. 1952, Prairie View A&M College
Further Study: Prairie View A&M College

FRANCIS, FRANK, JR. (1969) Professor and Head, Librarian, W. R. Banks Library
B.S. 1958, Grambling College
M.L.S. 1966, Louisiana State University
Further Study: University of Pennsylvania

FRAZIER, FREDDIE L. (1967) Instructor of Mathematics
B.S. 1962, M.S. 1966, Prairie View A&M College

GARRETT, CONALLY SHELTON (1948) Assistant Professor of Music
B.R. 1943, Prairie View A&M College
M.Mus. 1948, New England Conservatory of Music
Further Study: Harvard University, Eastman School of Music; Private Piano Study with Albert Hirsch; University of Arizona; University of Houston; University of Missouri

GREENBON, BOBBY G. (1972) Instructor of Education
B.S. 1969, Wesleyan
M.S. 1968, Texas Wesleyan
Further Study: University of Houston; North Texas State University

GIBSON, KATHRYN SNELL (1953) Assistant Professor of Education
B.A. 1941, Wiley College
M.A. 1947, Columbia Teacher College
Further Study: Columbia Teachers College

GIBSON, ROBERT E. (1963) Assistant Professor of Science Education
B.S. 1942, Alcorn A&M College
B.S. 1950, Northwestern University
Further Study: Northwestern University; Illinois Institute of Technology

GLOVER, ESTHER E. (1970) Assistant Professor of Food and Nutrition
B.S. 1968, A.M. & N College
M.S. 1970, Purdue University

GOOD, SAMUEL MANSEL (1961) Assistant Professor of Mathematics
B.S. 1957, South Carolina State College
M.S., Atlanta University of Wisconsin
Further Study: Portland State College, Texas A&M University

GORDON, IRVINE C. (1968) Professor of Education
B.A. 1950, M.Ed. 1957, Florida A&M University
B.D. 1958, Union University
D.D. 1958, Virginia Seminary and College
Further Study: Marshall University, Toledo University; Georgia State University; Michigan State University

GRAY, BARBARA J. (1961, 1969) Instructor of History
B.A. 1958, Xavier University
M.A. 1960, Howard University
Further Study: University of Colorado; University of California at Berkeley

GRAY, FREDERICK RUSSELL (1962) Assistant Professor of Mathematics
A.B. 1959, Talladega College
M.S. 1962, Atlanta University
Further Study: University of Wisconsin; University of Georgia; University of Indiana

GREAUX, AUSTIN E. (1951) Professor of Architectural Engineering and Dean, School of Engineering
B.Arch. 1960, The Catholic University of America
Further Study: The Catholic University of America, Kansas State University; Deans of Engineering Institute at University of Puerto Rico, Deans of Engineering Institute at the Naval Postgraduate Academy

GROSSMAN, GWENDOLYN (1969) Professor of Education
B.S. 1948, Southern Methodist University
M.Ed. 1956, D.Ed. 1967, University of Houston

HALL, WALTER J. (1950, 1965) Associate Professor of Industrial Education
B.S. 1940, Kansas State Teacher College
M.Ed. 1966, Prairie View A&M College
Further Study: Texas A&M University

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HAMILTON, RALPH, JR. (CPT) (1971) Assistant Professor of Military Science AROTC
B.S. 1967, South Carolina State College
Further Study: Monmouth College, N.J.; Newark State College, N.J.; Prairie View A&M College

HARRISON, ELTON C. (1972) Assistant Professor of Business
B.S. 1966, Southern University
M.B.A. 1972, Texas Southern University

HARPER, JOE W. (1971) Instructor of Education
A.A. 1943, Paris Jr. College
B.S. 1948, Southwest Texas State University
M.A. 1958, Southwest Texas State University
Ph.D. 1964, North Texas State University

HARVEY, CLINNON (1966) Instructor of Mathematics
B.S. 1969, M.S., Prairie View A&M College

HAWKINS, DORISULA D. (1966) Assistant Professor of Business Education
B.S. 1962, Jarivs Christian College
M.S. 1967, Prairie View A&M College

HAWKINS, FRANK T. (1965) Assistant Professor of Mathematics
B.S. 1968, M.S. 1965, Prairie View A&M College
M.A. 1968, University of Illinois

HEARN, ALBERT (1969) Assistant Professor of Drafting and Design
B.S. 1966, Prairie View A&M College
Further Study: Prairie View A&M College

HENDERSON, LEE E. (LTJG) USN (1971) Naval Science
B.S. 1963, Prairie View A&M College
Further Study: Prairie View A&M College

HENDRICKS, HARRY G. (1961) Associate Professor of Education, Director of Teacher Education
B.A. 1937, Texas College
M.Ed. 1949, D.Ed. 1960, Colorado University

HENRY, JOSEPH (1969) Assistant Professor of Physical Education
B.S. 1952, Prairie View A&M College
Further Study: Texas Southern University; Prairie View A&M College

HENRY, MARION (1956) Professor and Director of the Division of Educational Technology
B.S. 1952, Southern University
M.S. 1953, Bradley University
Ph.D. 1972, Syracuse University

HENRY, ROBERT A. (1967) Professor and Head, Department of Music
B.A. 1937, Prairie View A&M College
M.Mus. 1945, University of Southern California
Ph.D. 1966, Indiana University

HIGGS, OLIVETA JACKSON (1956) Assistant Professor and Acting Head, Department of Modern Foreign Languages
B.A. 1954, Arkansas AM&N College
M.A. 1956, Atlanta University
Further Study: University of Colorado; University of Texas

HOLLIS, WARDELL, JR. (CPT) (1970) Assistant Professor of Military Science AROTC
B.S. 1966, Oklahoma State University
Further Study: Officer Maintenance Course; Field Artillery Officer Basic; Field Artillery Officer Advance Course; Prairie View A&M College

HOOD, WILLIA (1954) Associate Professor of Foreign Languages
A.B. 1939, Tillotson College
M.A. 1949, La Universidad Nacional de Mexico
Ph.D. 1962, La Universidad Inter-American

HORNBY, GENTRIS (1971) Instructor of Business
B.S. 1960, Prairie View Agricultural and Mechanical College
M.S. 1966, Prairie View Agricultural and Mechanical College
Further Study: Midwestern University

HUGHREY, R. D. (1970) Associate Professor of Biology
B.S. 1960, M.S. 1963, Colorado State University
Ph.D. 1970, University of Texas
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Years</th>
<th>Details</th>
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<tbody>
<tr>
<td>HUNT, Delia M. (1947)</td>
<td>Assistant Professor of Clothing and Textiles</td>
<td>1947</td>
<td>B.S. 1936, M.S. 1945, Prairie View A&amp;M College</td>
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<td>Further Study: University of California, Traphagen School of Fashion,</td>
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<td>Colorado A&amp;M College, Prairie View A&amp;M College, Texas Woman's University</td>
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<td>HUNT, John R. (1972)</td>
<td>Associate Professor of Education</td>
<td>1972</td>
<td>B.S. 1958, Sam Houston State University</td>
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<td>M.Ed. 1961, Sam Houston State University</td>
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<td>HUNTER, Betty (1971)</td>
<td>Instructor of Nursing</td>
<td>1971</td>
<td>B.S. 1969, Texas Woman's University</td>
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<td>M.A. 1971, Wayne State University</td>
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<td>HYMAN, LaDelle Marie (1957)</td>
<td>Assistant Professor of Business</td>
<td>1957</td>
<td>B.S. 1957, Arkansas A&amp;M College</td>
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<td>M.B.A. 1958, Marquette University</td>
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<td>Further Study: University of Illinois</td>
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<tr>
<td>INGERSOLL, George CPT (1972)</td>
<td>Assistant Professor of Military Science AROTC</td>
<td>1972</td>
<td>B.S. 1968, Tuskegee Institute</td>
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<td>JACKET, Barbara J. (1964)</td>
<td>Instructor of Physical Education</td>
<td>1964</td>
<td>B.S. 1958, Tuskegee Institute</td>
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<td>M.S. 1968, Prairie View A&amp;M College</td>
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<td>JACKSON, Eugene G. (1955)</td>
<td>Associate Professor of Driver and Safety Education</td>
<td>1955</td>
<td>B.S. 1954, M.S. 1955, Kansas State Teachers College</td>
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<td>Certificate in Advanced Driver Education 1955</td>
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<td>Certificate in College Driver Education 1956, University of Oklahoma</td>
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<td>Further Study: University of Texas, New York University, Michigan</td>
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<td>State University, Texas A&amp;M University</td>
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<td>JACKSON, Sheryl (1972)</td>
<td>Assistant Professor of Home Economics</td>
<td>1972</td>
<td>B.S. 1970, Southern University</td>
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<td>JACKSON, Tillman V. (1972)</td>
<td>Professor of Education</td>
<td>1972</td>
<td>B.S. 1955, Knoxville College</td>
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<td>M.Ed. 1963, University of Oklahoma</td>
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<td>JAMES A. D. (1970)</td>
<td>Assistant Professor of Business Administration</td>
<td>1970</td>
<td>B.S. 1966, Langston University</td>
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<tr>
<td>JOHNSON, ERIC J. (1957)</td>
<td>Instructor of Agricultural Engineering</td>
<td>1957</td>
<td>B.S. 1947, Prairie View A&amp;M College</td>
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<td>Further Study: Texas A&amp;M University</td>
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<td>JOHNSON, Harold (1963)</td>
<td>Assistant Professor of Education</td>
<td>1963</td>
<td>B.A. 1942, Prairie View A&amp;M College</td>
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<td>M.Ed. 1965, Texas Southern University</td>
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<td>JOHNSON, Lewis (MAJ. INF.)</td>
<td>Assistant Professor of Military Science AROTC</td>
<td>1970</td>
<td>B.S. 1961, Florida A&amp;M University</td>
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<td>Further Study: The United States Army Civil Affairs School, The</td>
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<td>United States Army Infantry School, The United States Defense</td>
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<td>Language Institute, Prairie View A&amp;M College</td>
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<td>JOHNSON, Winfred Van (1958)</td>
<td>Assistant Professor of Sociology</td>
<td>1958</td>
<td>A.B. 1949, Livingston College</td>
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<td>JONES, Earl K. (1954)</td>
<td>Associate Professor and Acting Head, Chemistry</td>
<td>1954</td>
<td>B.S. 1937, Knoxville College</td>
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<td>M.S. 1949, Virginia State College</td>
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<td>Further Study: Ohio State University, Montana State College,</td>
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<td>Washington University, University of Oklahoma</td>
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</table>

*On Leave*
OFFICERS OF INSTRUCTION

JONES, HARDING L. Assistant Professor of Industrial Arts
B.S. 1951, Tennessee A&I University
M.Ed. 1963, Prairie View A&M College
Further Study: University of Illinois; AFS Seminar; Armco Steel Quality Control; Rice University

JONES, HERMAN L. (1971) Instructor of Education
B.S. 1967, Prairie View A&M College
Further Study: Prairie View A&M College

*JORDAN, KATHRYN NELL Associate Professor of Music
B.A. 1945, Langston University
M.A. 1949, State University of Iowa
Further Study: State University of Iowa; University of Indiana
Harvard University

KASIRAJ, JOTHI (1968) Instructor of Mathematics
B.S. 1953, University of Maddras
M.A. 1968, University of New Mexico

KING, VERA R. (1967) Instructor of Mathematics
B.S. 1960, M.S. 1965, Prairie View A&M College
Further Study: The University of Texas, The University of Illinois

KINNEY, ROBERT (1971) Instructor of Health and Physical Education
B.S. 1966, Wiley College
Further Study: Prairie View Agricultural and Mechanical College

KIRKPATRICK, DAVID A. (1968) Assistant Professor and Head of Electronics Department
B.S. 1967, Prairie View A&M College
M.S. 1968, Kansas State College

KIRKWOOD, JAMES I. (1953) Associate Professor of Soil Science
B.S. 1952, M.S. 1953, Kansas State University
Ph.D., Michigan State University

KNIGHTEN, JAMES A. (1972) Associate Professor of Education
B.M. 1959, North Texas State University
M.M.E. 1959, North Texas State University
Further Study: Texas A&M University

KNOTTS, CLIFTON D. (1970) Assistant Professor of Agricultural Education
B.S. 1961, M.Ed. 1962, Sam Houston State University
Ph.D. 1970, Texas A&M University

KNOTTS, ROSE (1970) Assistant Professor of Business
Ph.D. 1972, Texas A&M University

KUVLESKY, WILLIAM P. (1972) Associate Professor of Agriculture
B.S. 1958, Penn State University
M.S. 1960, Penn State University
Ph.D. 1966, Penn State University

KYNARD, ALFRED T. (1953) Associate Professor of Industrial Education
B.S. 1950, Hampton Institute
M.A. 1951, New York University
Ed.D. 1960, University of California

LARA, JESUSA (1971) Instructor of Nursing
B.S.N. 1954, University of Philippines College
M.A. 1960, New York University

*LEDBETTER, FRANKIE B. (1952) Associate Professor of English
A.B. 1935, Bishop College
M.A. 1952, University of Colorado
Further Study: University of Colorado; University of Indiana

LEWIS, JAMES L. (1972) Instructor of Education
B.S. 1957, University of Southern Mississippi
M.Ed. 1963, University of Houston
Further Study: University of Houston

LEWIS, ROSCOE W. (1972) Professor of Agriculture
B.S. 1939, Prairie View A&M College
M.S. 1952, Kansas State University
Ph.D. 1955, Kansas State University

*On Leave

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OFFICERS OF INSTRUCTION

*LINDSAY, SAMUEL E. (1967) Professor of Physical Education
B.S. 1957, Paul Quinn College
M.Ed. 1959, North Texas State University
Ed.Spec. 1967, Wayne State University
Further Study: Wayne State University

LOKEY, JAMES (1972) Associate Professor of Education
B.S. 1966, University of Houston
M.Ed. 1968, University of Houston
Ed.D. 1971, University of Houston

LONDOW, MATTIE (1969) Associate Professor of Health and Physical Education
B.S. 1948, Prairie View Agricultural and Mechanical College
M.S. 1953, Prairie View Agricultural and Mechanical College
Ph.D. 1969, Texas Woman's University

LOTT, MARY (1971) Instructor of Nursing
B.S. 1967, M.S. 1968, Texas Woman's University

LUKE-CHEN-TIEN (1964) Assistant Professor of Engineering
B.S. 1953, Maroetta College
B.S.C.E. 1956, Massachusetts Institute of Technology
M.S.C.E. 1959, Massachusetts Institute of Technology
Further Study: Illinois Institute of Technology, University of Notre Dame

McCLOUD, MAMIE J. (1957) Assistant Professor of Romance Languages
A.B. 1943, Xavier University
M.A. 1945, Atlanta University
Further Study: University of California, Louisiana State University, University of Texas

McDONALD, LUCY (1956) Professor of Education
A.B. 1940, Prairie View A&M College
M.A. 1948, Prairie View A&M College

McGOWAN, BILLY J. (CPT) (1972) Assistant Professor of Military Science (AROTC)
B.S. 1967, Prairie View A&M College
Further Study: Prairie View A&M College

MACK, JOSEPH (1963) Associate Professor of Industrial Arts
B.S. 1943, Hampton Institute
M.S. 1949, Pennsylvania State University
Further Study: Pennsylvania State University

MADDOX, WELDON (1970) Instructor of Electronics
B.S. 1964, Prairie View A&M College
Further Study: University of Houston, Texas Instruments, Inc.; Prairie View A&M College

MANGAROO, ARTHUR S. (1969) Associate Professor of Soil Science
B.S. 1962, Agricultural & Technical State University
M.S. 1963, Ph.D. 1967, Ohio State University

MANGAROO, J. (1969) Professor and Dean, School of Nursing
B.S. 1958, Meharry Medical College
M.S. 1961, Washington University
Ph.D. 1968, Ohio State University

MANNING, ARCHIE H. (1969) Assistant Professor of Industrial Education
B.S. 1958, M.S. 1967, Prairie View A&M College

MANNING, JEAN (1972) Assistant Professor of Education
B.A. 1958, Bishop College
M.Ed. 1964, North Texas State University
Ed.D. 1970, North Texas State University

MARCHAK, ALVIN (1971) Instructor of Education
B.A. 1955, University of Texas at Austin
M.Ed. 1966, University of Houston

MARTIN, EDWARD W. (1952) Associate Professor of Biology
A.B. 1950, Fisk University
M.A. 1952, Indiana University
Ph.D. 1962, State University of Iowa

*On Leave

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MEYERS, ELLIOTT (1969) Assistant Professor of Electronics
B.S. 1964, Prairie View A&M College
Further Study: Philco Corporation; Prairie View A&M College

MOORE, CARL (1969) Instructor of Education
B.S. 1967, M.S. 1969, Prairie View A&M College

MOORE, FRANCIS (1971) Instructor, Librarian
W. R. Banks Library
B.S. 1969, Prairie View A&M College
M.L.S. 1971, Texas Woman's University

MORGAN, L. B. (1971) Assistant Professor of Mechanical Engineering
B.S. 1965, University of Kansas
M.S. 1966, University of Kansas
Ph.D. 1971, University of Illinois

MOSLEY, JAMES P., II (1970) Associate Professor of Music

MUSIL, D. S. (1971) Associate Professor of Electrical Engineering
B.S. 1941, Kansas State University
M.S. 1945, University Pittsburgh
Ph.D. 1968, Iowa State University

MURPHY, SAM (1972) Assistant Professor of Business
B.B.A. 1959, University of Houston
M.Ed. 1966, University of Houston
Ed.D. 1972, Arizona State University

NEAL, WENDELL (1969) Assistant Professor of Mathematics
B.S. 1962, M.S. 1969, Prairie View A&M College

NELLUM, JUNIOR (1965) Instructor of Education
B.A. 1931, Bishop College
M.Ed. 1946, UCLA
Ed.D. 1955, University of Texas

NELSON, IVORY V. (1968) Professor of Chemistry and Vice President for Research and Special Programs
B.S. 1959, Grambling College
Ph.D. 1963, University of Kansas

NEWSON, JOHN (1971) Assistant Professor of Music
B.S. 1968, Southern University
M.A. 1971, Northeast Louisiana University

NICKS, WILLIAM JAMES (1945) Associate Professor of Physical Education
B.S. 1928, Morris Brown College
M.A. 1941, Columbia University

OLIVER, PEDRO (1964) Assistant Professor of Physics
B.S. 1944, Matanzas Institute
M.S. 1948, Ph.D. 1949, Havana University
Further Study: Havana University, Texas A&M University

OLMEDO, JULIANO (1969) Assistant Professor of Foreign Languages
B.S. 1956, Institute San Isidro
M.A. 1962, Universidad Central
Ph.D. 1968, Universidad De Cuenca

ORMAN, BILL E. (1964) Associate Professor of Education and Director of Teacher Center
B.A. 1948, Samuel Huston College
M.Ed. 1956, Prairie View A&M College

OSBORNE, TOMMY T. (CPT) (1969) Assistant Professor of Military Science AROTC
B.S. 1964, Prairie View A&M College
Further Study: Prairie View A&M College

OUTLY, ERNESTINE L. (1957) Assistant Professor of Child Development
A.B. 1947, Tillotson College
M.S. 1958, Texas Southern University
Further Study: Texas Southern University; University of Wisconsin; Colorado State University; University of Wisconsin; Merrill-Palmer Institute
OFFICERS OF INSTRUCTION

PARKER, MEREDITH (1969)  Assistant Professor of Nursing
BSM 1962, Florida A&M University
MSN 1967, Indiana University

PARROT, PRESTON A. (CPT) (1970)  Assistant Professor of Military Science AROTC
B.S. 1964, Sam Houston State Teachers College
Further Study: Airborne School, Infantry Officers Basic Course, Chemical Biological and Radiological Welfare Course; Organizational Maintenance for Officers Course; Military Advisors Training Assistance Course, Vietnamese Language Course, Infantry Officers Course Ranger School

PARSONS, LOIS (1969)  Instructor of Business
B.S. 1961, Lincoln University

PATTERSON, JOHN (1967)  Assistant Professor of Business Education
B.S. 1945, New York University
C.P.A., State of Texas

PAYNE, BILLY FRED (1972)  Assistant Professor of Industrial Education
B.A. 1950, East Texas State University
M.S. 1954, East Texas State University
Ph.D. 1970, University of Houston

PAYNE, JAMES S. (1958)  Assistant Professor of History
B.A. 1952, Prairie View A&M College
M.A. 1958, University of Denver
Ph.D. 1972, University of Denver

PETERSON, ALANDRUS A. (1956)  Instructor, Dry Cleaning and Tailoring
Certificate 1947, B.S. 1952, M.S. 1962, Prairie View A&M College

PETERSON, CARL A. (1972)  Instructor of Education
B.S. 1952, Texas A&M University
M.Ed. 1959, Texas A&M University

PHILLIPS, JOSEPH R. (1961)  Assistant Professor of Engineering
B.S. 1949, M.S. 1955, Prairie View A&M College
Further Study: University of Utah

PLUMMER, LETITIA W. (1972)  Associate Professor of Education
B.S. 1942, Tillotson College
M.Ed. 1952, Texas Southern University
Further Study: University of Michigan

PLYER, ROYCE (1971)  Assistant Professor of Business
B.A. 1963, M.B.A. 1966, University of Texas

POINDEXTER, ALFRED N. (1945)  Instructor of Veterinary Science
D.V.M. 1945, Kansas State College
Further Study: Kansas State University

POINDEXTER, JIMMIE (1971)  Assistant Professor and Acting Head of Sociology
B.A. 1955, Prairie View A&M College
M.S.M. 1957, Howard University
Further Study: Texas Southern University

PRYOR, HAROLD (1972)  Instructor of Education
B.A. 1950, Austin College
M.Ed. 1962, North Texas State University
Further Study: East Texas State University

PULLEN, JOHN W. (1971)  Assistant Professor of Industrial Education
B.S. 1953, A&M College of Texas
M.Ed. 1955, A&M College of Texas

RANDLE, CHARLES F. (1963)  Associate Professor of Education
B.S. 1949, M.S. 1950, Prairie View A&M College
Further Study: University of Texas

RAO, ANASUYA S. (1972)  Assistant Professor of History
B.A. 1951, Maharani's College for Women
B.Ed. 1956, R. V. Teacher's College Bangalore
M.Ed. 1965, Rutgers—The State University, New Brunswick, N.J.
Ph.D. 1972, Texas A&M University

348
RAO, SHANKARANARAYANA R. N. (1964) Professor of Civil Engineering
B.E. 1946, University of Mysore
M.E. 1958, University of Roorke
M.S. 1961, University of Connecticut
Ph.D. 1965, Rutgers State University

REED, HENRY L. (CPT) UAMC (1971) Naval Science
B.S. 1963, Hampton Institute
Further Study: Prairie View A&M College

REID, WILLIAM E. (1954) Assistant Professor of Chemistry
B.S. 1944, North Carolina A&T College
M.S. 1953, North Carolina College

REISINGER, MICHAEL (1972) Assistant Professor of Physics
B.A. 1964, St. Mary's College
M.S. 1966, John Carroll University
Ph.D. 1971, Oklahoma State University

REYNOLDS, GEORGE (1969) Associate Professor of Foreign Languages
B.A. 1948, University of California
M.A. 1949, University of Michigan
Ph.D. 1960, University of Laval

RETTIG, EOLUS B. (1953) Assistant Professor of Physical Education
B.S. 1934, Wilberforce University
M.S. 1953, Prairie View A&M College

RICE, HOMER L. (MSG) (1971) Principal Drill Instructor of Army Military Science
B.S. 1965, Prairie View Agricultural and Mechanical College

RICHARDSON, CHARLES ETTA (1971) Instructor of Nursing
B.S. 1965, Prairie View Agricultural and Mechanical College

RICHARDSON, LEE VAN (1958) Instructor of Chemistry
B.S. 1953, M.S. 1958, Prairie View A&M College
Further Study: University of Texas; Washington State University

ROBINSON, JUNIOUS (1971) Instructor in Business
B.S. 1962, Southern University

ROBINSON, SARAH (1972) Assistant Professor of Sociology
B.A. 1970, University of Texas at Austin
M.S. 1972, University of Houston

ROLLINS, BERNICE B. (1972) Professor and Head
B.S. 1952, Southern University
M.A. 1955, New York University
Ed.D. 1971, Arizona State University

RORIE, CHARLES D. (1971) Instructor of Education
B.A. 1961, Sam Houston State University
M.S. 1964, East Texas State University
Further Study: North Texas State University; University of Texas at Austin

ROGER, MYRTLE (1971) Instructor in English
B.S. 1964, Mary Hardin Baylor
M.L.S. 1971, Texas Woman's University

RUGELEY, VERA C. (1967) Instructor of Mathematics
B.S. 1960, M.S. 1965, Prairie View A&M College
Further Study: The University of Texas; The University of Illinois

SCOTT, DONALD J. (LT) (1970) Naval Science
B.A. 1968, Langston University
M.A. 1972, Prairie View A&M College

SHEELY, H. (1971) Instructor of Machanical Engineering
B.S.M.E. 1969, Prairie View Agricultural and Mechanical College
M.S.M.E. 1971, Southern Methodist University

SHERROD, EDDIE C. (1972) Instructor of Physical Education
B.S. 1964, Arkansas A&M
Further Study: Jackson State College

SHINE, THEODIS (1969) Assistant Professor of English
B.A. 1963, Howard University
M.A. 1958, State University of Iowa
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<tr>
<th>Name</th>
<th>Position</th>
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<tr>
<td>Smith, Hubert D. (1968)</td>
<td>Associate Professor of English and Administrative Assistant to The President</td>
<td>B.A. 1948, Texas Southern University, M.A. 1951, New York University, Further Study: New York University; Columbia University</td>
</tr>
<tr>
<td>Smith, Oliver Emmett (1949)</td>
<td>Assistant Professor of Agronomy</td>
<td>B.S. 1949, Prairie View A&amp;M College, M.S. 1949, University of Nebraska, Further Study: Texas A&amp;M University</td>
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<tr>
<td>Sneed, Theresa B. (1972)</td>
<td>Assistant Professor of Education</td>
<td>B.A. 1956, Bishop College, M.S. 1969, Prairie View A&amp;M College, Further Study: Prairie View A&amp;M College</td>
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<tr>
<td>Sohel, M. S. (1970)</td>
<td>Associate Professor of Electrical Engineering</td>
<td>B.S. 1967, Punjab University (India), M.S.E.E. 1969, University of Houston, Further Study: University of Houston</td>
</tr>
<tr>
<td>Soliman, Mostfa (1971)</td>
<td>Assistant Professor of Economics and Geography</td>
<td>B.S. 1952, Caire University, M.S. 1955, Cornell University, Ph.D. 1967, Iowa State University</td>
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<tr>
<td>Solomon, Pearl E. (1971)</td>
<td>Assistant Professor of Home Economics</td>
<td>A.B. 1935, Howard University, M.A. 1939, Teacher College, Further Study: Michigan State University; Prairie View A&amp;M College</td>
</tr>
<tr>
<td>Spalding, Sidney W. (1944)</td>
<td>Assistant Professor of English</td>
<td>A.B. 1929, Eureka College, A.M. 1930, University of Illinois, Further Study: University of Michigan, University of Colorado, Columbia University</td>
</tr>
<tr>
<td>Stein, Isreal (1972)</td>
<td>Associate Professor of Architecture Engineering</td>
<td>B.S. 1952, University of Houston, B.Arch. 1953, University of Houston, Further Study: Technische Hochschule; University of North Carolina</td>
</tr>
<tr>
<td>Stewart, A. D. (1954)</td>
<td>Professor and Head, Department of Mathematics</td>
<td>A.B. 1940, M.S. 1949, Howard University, Ph.D. 1964, University of Texas</td>
</tr>
<tr>
<td>Stubblefield, Cedric T. (1954)</td>
<td>Associate Professor of Chemistry</td>
<td>B.S. 1942, Texas Southern University, M.S. 1947, Prairie View A&amp;M College, Ph.D. 1954, University of Iowa</td>
</tr>
<tr>
<td>Stubblefield, Cedric T. (1954)</td>
<td>Associate Professor of Chemistry</td>
<td>B.S. 1942, Texas Southern University, M.S. 1947, Prairie View A&amp;M College, Ph.D. 1954, University of Iowa</td>
</tr>
<tr>
<td>Sumners, Victor (1969)</td>
<td>Assistant Professor of Education</td>
<td>B.A. 1948, Louisiana Tech, M.A. 1948, University of Texas</td>
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</table>
SWANSON, JACQUELINE (1972) ........................................ Instructor of Nursing
B.S. 1967, Texas Woman's University
Further Study: Texas Woman's University

TATE, ANDERSON (1970) ............ Assistant Professor of Foreign Languages
B.A. 1962, Dillard University
M.A. 1969, Universidad Nacional Autonoma De Mexico
Further Study: Universidad Nacional Autonoma De Mexico

TATUM, CHARLES (1953) .............. Professor and Head of Economics and Geography
B.A. 1955, Prairie View A&M College
M.S. 1959, Indiana University
M.A.T. 1963, Indiana University
Ph.D. 1971, Michigan State University

TAYLOR, WILLIE E., JR. (1968) ........... Instructor of Mathematics
B.S. 1966, M.S. 1967, Prairie View A&M College

TAYLOR, REEVES R., (COM) USN (1972) ..................... Naval Science
B.S. 1953, United States Naval Academy
Further Study: Prairie View A&M College

TELGE, GEORGE (1971) .................. Instructor of Education
A.A. 1932, University of Houston Junior College
B.S. 1945, University of Houston
M.Ed. 1949, University of Houston
Further Study: Texas Southern University

TEMPTON, WILLIE (MAJ) (1972) ............ Assistant Professor of Military Science AROTC
B.S. 1961, Prairie View A&M College

TESSAR, CHARLES (1972) ................ Assistant Professor of Education
B.A. 1967, North Texas State University
M.S. 1970, University of Mexico
Further Study: University of Texas at Austin

THIAGARAJAN, K. R. (1967) ............. Assistant Professor of Economics
M.A. 1953, Anamalai University (India)
Further Study: University of Tennessee

THOMAS, CURTIS A. (1968) ............ Associate Professor Education
B.A. 1941, Sam Houston College
M.S. 1948, Prairie View A&M College
Further Study: University of Texas; University of Colorado; Columbia University

THOMAS, EMMA (1968) ................... Instructor of English
B.S. 1960, Tuskegee Institute
M.A. 1965, New Mexico Highlands University
Further Study: Washington State University

THOMAS, RICHARD G. (1968) ........... Professor and Head, Department of Physics
B.S. 1943, Hampton Institute
M.A. 1950, Columbia University
Ph.D. 1959, University of California

*TOMPSON, PAUL (1965) ................ Instructor of Foreign Languages
A.B. 1957, Morehouse College
M.A. 1963, University of Illinois
Further Study: University of Paris; Pennsylvania State University

THORNTON, EVELYN E. (1958) .......... Assistant Professor of Mathematics
B.S. 1954, M.S. 1957, Texas Southern University
Further Study: Iowa State University; University of California at Los Angeles

TOLSON, ROBIN (1971) ............... Instructor of Education
B.A. 1969, University of Texas at Austin
Further Study: S.E.T.S.U.; Prairie View A&M College

TOMP KINS, MYRTLE (1972) ................ Instructor of Industrial Education
B.S. 1966, Prairie View A&M College
M.S. 1971, Prairie View A&M College

TOMP KINS, OBRA (1968) ............ Assistant Professor of Building Construction
B.S. 1963, M.Ed. 1970, Prairie View A&M College
OFFICERS OF INSTRUCTION

TYLER, ESTER J. (1968) .................................. Instructor of Business Education
B.S. 1961, M.S. 1967, Prairie View A&M College
Further Study: University of Houston

URBAN, SAM (1972) ...................................... Professor of Education
B.S. 1964, University of Houston
M.Ed. 1966, University of Houston
Further Study: University of New York at Buffalo

VANDERPLAS, TERRY (1969) ................................. Instructor, Librarian
W. R. Banks Library
B.S. 1963, University of Kansas
M.S. 1969, University of Oklahoma

VON CHARLTON, RUDOLPH EVERETT (1942) .............. Associate Professor of Music
B.S. 1931, Hampton Institute
M.Mus. 1939, University of Michigan
Ph.D. 1948, Columbia University

WALTERS, WILLIAM (1969) ................................. Associate Professor of Education
B.S. 1949, M.Ed. 1951, Sam Houston State College
Ed.D. 1965, University of Houston

WASHINGTON, CHARLES (GYSGT) USN (1971) .......... Assistant Instructor, Naval Science

WEATHERSPOON, LINDSEY (1953) .......................... Assistant Professor of Animal Science
B.S. 1948, Georgia State College
M.S. 1953, Kansas State College
Further Study: University of Wisconsin, Iowa State University

WEAVER, LEROY C. (1952) ................................. Associate Professor of Art Education
B.A. 1943, Morehouse College
B.F.A. 1947, Art Institute of Chicago
M.A. 1957, State University of Iowa
Further Study: State University of Iowa

WEBSTER, BERNICE (1971) ................................. Assistant Professor of English
B.A. 1949, Prairie View A&M College
M.A. 1954, Texas Southern University
Further Study: University of Texas; Texas A&M University

WEBSTER, W. (1969) ....................................... Assistant Professor of Education
B.S. 1953, M.A. 1954, Prairie View A&M College
Further Study: Texas A&M University

WHITELEY, JOHN (1971) .................................. Instructor of Education
B.S. 1949, LeTourneau Technical Institute
B.S. 1951, East Texas State Teachers College
M.Ed. 1956, Texas A&M University

WILLIAM, ERNEST P. (1953) ............................. Assistant Professor of English
A.B. 1950, Morehouse College
M.A. 1952, State University of Iowa
Further Study: University of Texas; University of Colorado

WILLIAMS, J. C. (1972) ..................................... Instructor, Industrial Education
B.S. 1967, Alcorn A&M
Further Study: Tennessee State University; University of Southern Mississippi

WILLIAMS, JOHN CALVIN (1940) ......................... Associate Professor and Associate Dean, School of Agriculture
B.S. 1932, Hampton Institute
M.S. 1940, Kansas State University
Further Study: Kansas State University; Colorado State University
Connecticut University

WILSON, ANNIE M. (1969) ................................. Instructor of Nursing
B.S. 1964, Prairie View A&M College
M.S. 1970, Indiana University

WILSON, CALUDE L. (1925) ............................... Professor of Mechanical Engineering and Vice-President Physical Plant Planning and Engineering
B.S.M.E. 1925, M.E. 1929, M.S.M.E. 1933, Kansas State University
Further Study: Michigan State University, University of Minnesota, Massachusetts Institute of Technology, George Washington University
OFFICERS OF INSTRUCTION

WILSON, DOROTHY (1971) ........................................ Instructor, Librarian
W. R. Banks Library
B.S. 1969, Prairie View A&M College
M.L.S. 1971, Texas Woman's College

WILSON, URAL (1958) ........................................ Assistant Professor of Mathematics
B.S. 1940, Huston-Tillotson
M.S. 1958, North Texas State University
Further Study: Texas A&M University

WOOD, CURTIS A. (1947) ...................................... Associate Professor of Health Education
and Director, College Information Services
A.B. 1938, Knoxville College

WOODS, JOHNNIE J. (1945) ................................. Associate Professor of Poultry Science
B.S. 1938, Prairie View A&M College
M.S. 1940, Kansas State University
Further Study: Ohio State University, Pennsylvania State University; Certificate in
a Special Agricultural Training Program, Purdue University; Cornell
University; Arizona University

WOOLFOLK, GEORGE RUBLE (1943) ....................... Professor and Head,
Department of History
A.B. 1937, Louisville Municipal College
B.A. 1938, Ohio State University
Ph.D. 1947, University of Wisconsin

WRIGHT, HOOVER J. (1961) .............................. Associate Professor of Health and
Physical Education
B.S. 1948, Maryland State College
M.Ed. 1951, Pennsylvania State College
Further Study: State University of Iowa; North Texas State University

WYTCH, GLADYS (1970) ................................... Instructor of Business Education
B.S. 1968, Alcorn A&M College
M.Ed. 1970, Mississippi State University

YEH, HELEN (1972) ........................................... Instructor, Librarian
W. R. Banks Library
B.A. 1966, National Taiwan University
M.L.S. 1967, Oklahoma State University
Further Study: Cheng-Chih University

YEH, HSIANG-YUEH (1969) .............................. Assistant Professor of Civil Engineering
B.S.C.E. 1962, Cheng Kung University
M.S.C.E. 1967, Ph.D. 1969, University of New Mexico
Further Study: University of Illinois

*YELDELL, FLORIDA (1963) .............................. Assistant Professor of Social Sciences
B.A. 1936, Morris College
M.A. 1941, Howard University
Further Study: New York University; University of Denver; Carnegie Institute of
Technology, Texas A&M University

*On Leave
### SUMMARY OF DEGREES AND CERTIFICATES AWARDED

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# SUMMARY OF ENROLLMENT

First Semester 1971-72 (8-71)

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Second Semester 1971-72 (1-72)

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Enrollment Without Duplications

First and Second Semesters, 1971-72 (8-71 and 1-72)

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First Term Summer 1971-72 (6-72)

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Second Term Summer, 1971-72 (7-72)

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