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1962

# Announcement Graduate and Undergraduate - The School Year 1960-62

Prairie View A&M College

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# PRAIRIE VIEW

*Announcements for 1960-61 and 1961-62*

**AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS**
**PRAIRIE VIEW, TEXAS**

# CALENDAR

## 1961

### JANUARY

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
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| 29 | 30 | 31 | | | | |

### FEBRUARY

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| 26 | 27 | 28 | | | | |

### MARCH

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| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
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### APRIL

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### MAY

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| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 39 | 31 | | | |

### JUNE

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| 18 | 19 | 29 | 21 | 22 | 23 | 24 |
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### JULY

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| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

### SEPTEMBER

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### OCTOBER

| S | M | T | W | T | F | S |
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| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
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### NOVEMBER

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| 26 | 27 | 28 | 29 | 30 | | |

### DECEMBER

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| 31 | | | | | | |

## 1962

### JANUARY

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| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 39 | 31 | | | |

### FEBRUARY

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| 18 | 19 | 29 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | | | |

### MARCH

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| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

### APRIL

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
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| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
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### MAY

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| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
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### JUNE

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| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

### JULY

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| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 39 | 31 | | | | |

### AUGUST

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| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

### SEPTEMBER

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| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | | | | | | |

### OCTOBER

| S | M | T | W | T | F | S |
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| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

### NOVEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
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| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

### DECEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
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| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

# Bulletin of

# PRAIRIE VIEW Agricultural and Mechanical College of Texas

*Undergraduate and Graduate*

Eighty-first Catalog Edition 1959-60

with Announcements for

1960-61 and 1961-62

## RECOGNITION

*This institution is accredited by the Texas Education Agency, the Southern Association of Colleges and Secondary Schools, and the Association of Texas Colleges. It is accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary teachers, secondary teachers, and school service personnel, with the master's degree as the highest degree approved.*

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# Officially Approved College Calendars
## 1960-1961-1962

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June 7 ..... Classes Begin
June 13 ..... Registration Closes
July 4 ..... American Independence Holiday
July 17 ..... First Term Closes
July 18 ..... Registration, Second Term
July 19 ..... Classes Begin
July 25 ..... Registration Closes
August 27 ..... Second Term Closes

REGULAR SESSION—1960-61

September 12-14 ..... Faculty Orientation
September 15-18 ..... Freshman Orientation
September 19-21 ..... Registration
September 22 ..... Classes Begin
September 24 ..... Registration Closes
November 16-17 ..... Mid-Semester Examinations
November 23 (Noon)-Nov. 28 (8:00 a.m.) ..... Thanksgiving Holidays
December 20 (Noon) ..... Christmas Holidays Begin

1961

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May 22-26 ..... Final Examinations
May 27 ..... Second Semester Closes

SUMMER SESSION—1961

June 5 ..... Registration, First Term
June 6 ..... Classes Begin
June 12 ..... Registration Closes
July 4 ..... American Independence Holiday
July 16 ..... First Term Closes
July 17 ..... Registration, Second Term
July 18 ..... Classes Begin
July 24 ..... Registration Closes
August 26 ..... Second Term Closes

## College Calendars (Continued)

REGULAR SESSION 1961-62

| | |
|---|---|
| September 11-13 | Faculty Orientation |
| September 14-17 | Freshman Orientation |
| September 18-20 | Registration |
| September 21 | Classes Begin |
| September 23 | Registration Closes |
| November 15-16 | Mid-Semester Examinations |
| November 22 (Noon)-Nov. 27 (8:00 a.m.) | Thanksgiving Holidays |
| December 19 (Noon) | Christmas Holidays Begin |

1962

| | |
|---|---|
| January 2 | Classes Resume |
| January 22-27 | Final Examinations |
| January 28 | First Semester Closes |
| January 28-29 | New Students Report |
| January 29-30 | Registration, Second Semester |
| January 31 | Second Semester Classes Begin |
| February 9 | Registration Closes |
| March 21-22 | Mid-Semester Examination |
| April 19 (Noon)-Apr. 24 (8:00 a.m.) | Easter Holidays |
| May 21-25 | Final Examinations |
| May 26 | Second Semester Closes |

SUMMER SESSION 1962

| | |
|---|---|
| June 4 | Registration, First Term |
| June 5 | Classes Begin |
| June 11 | Registration Closes |
| July 4 | American Independence Holiday |
| July 15 | First Term Closes |
| July 16 | Registration, Second Term |
| July 17 | Classes Begin |
| July 23 | Registration Closes |
| August 25 | Second Term Closes |

## The Texas Agricultural and Mechanical College System

Composed of all colleges, agencies and services under the supervision of the Board of Directors of the Agricultural and Mechanical College of Texas, including:

The Agricultural and Mechanical College of Texas
- The Texas Agricultural Experiment Station
- The Texas Agricultural Extension Service
- The Texas Engineering Experiment Station
- The Texas Engineering Extension Service
- The Texas Transportation Institute

The Arlington State College

The Tarleton State College

The Prairie View Agricultural and Mechanical College

The Texas Forest Service

## Board of Directors

H. B. ZACHRY, *Construction Engineer* ..... San Antonio
PRESIDENT

A. E. CUDLIPP, *Industrial Executive* ..... Lufkin
VICE PRESIDENT

L. H. RIDOUT, JR., *Business Executive* ..... Dallas

PRICE CAMPBELL, *Utilities Executive* ..... Abilene

EUGENE B. DARBY, *Construction Engineer* ..... Pharr

JOHN W. NEWTON, *Business Executive* ..... Beaumont

STERLING C. EVANS, *Rancher* ..... Houston

S. B. WHITTENBURG, *Publisher* ..... Amarillo

WILLIAM J. LAWSON, *Attorney* ..... Austin

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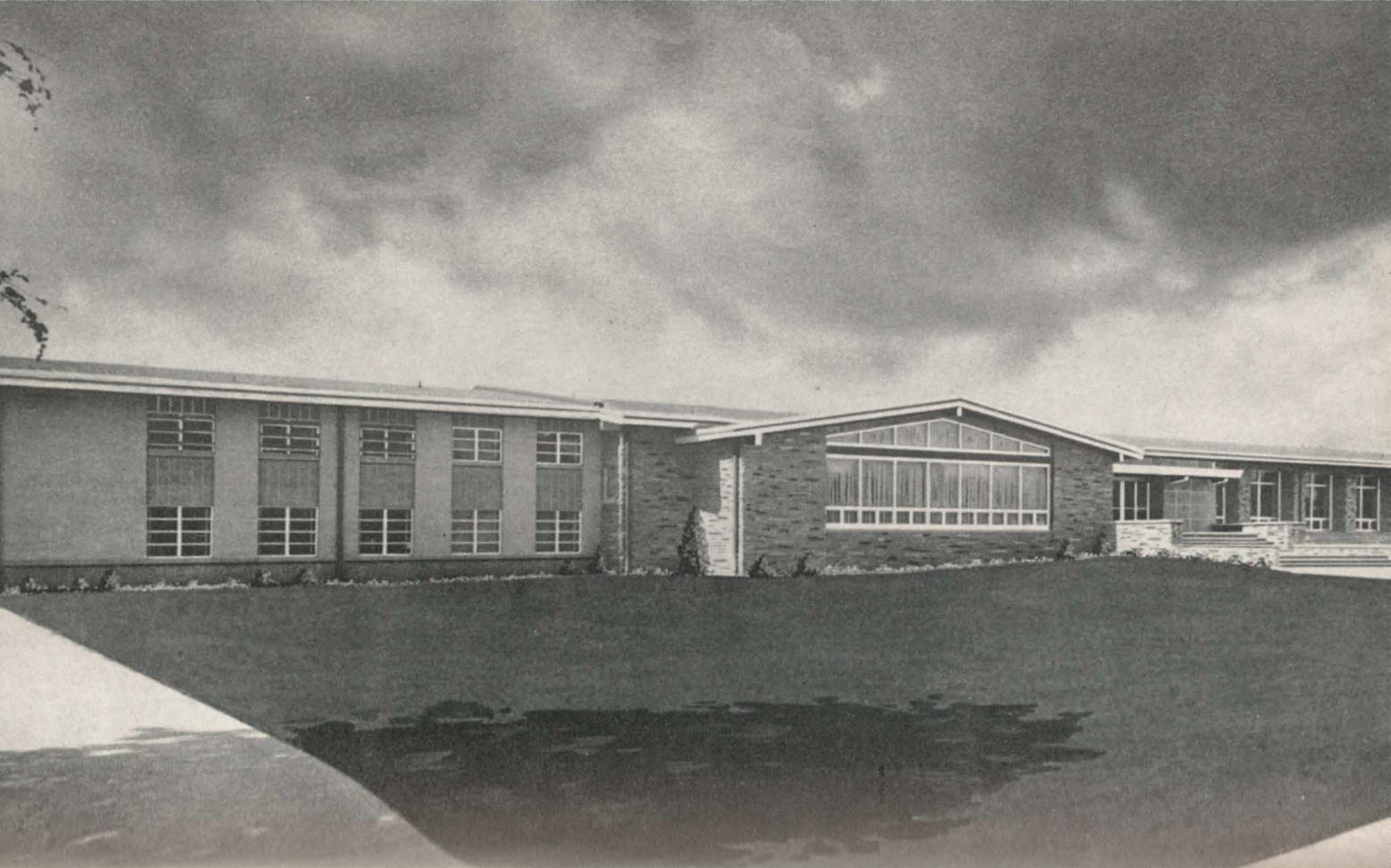
E. L. ANGELL ..... *Vice Chancellor and Secretary of the Board*

JOHN C. CALHOUN, JR. ..... *Vice Chancellor for Development*

W. C. FREEMAN ..... *Comptroller*

R. H. SHUFFLER ..... *Director of Information and Publications*

T. R. SPENCE ..... *Manager of Physical Plants*



# General Information

## 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 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.

## 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 Division of Industrial Education
The Division of Nursing Education
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.

**MEMORIAL STUDENT CENTER . . . Offers excellent Air Conditioned facilities for social and recreational activities. Houses the Center Director and Alumni Offices.**

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 Education 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 this 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 Banks' 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 Leigslature 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 1947-1948 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 Agriculture, Arts and Sciences, Home Economics, and Mechanic Arts were changed to Schools 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 seniors 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 warehouse 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 1929 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), 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 College System approved a $3,000,000.00 building and improvement program for the college in 1957. The new $1,000,000.00 Student Union was completed early in 1960 and construction on a $2,000,000.00 Science building began about the same time. Other construction during this period included building utilities, street extensions, storm sewers, and underground electric facilities.

The College was accepted for membership in the Southern Association of Colleges and Secondary Schools in December, 1958, and later received re-

endorsement 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.

## THE W. R. BANKS LIBRARY

The library named in honor of the former chief executive, Willette Rutherford Banks, is located between Evans and Luckie Halls—just north of the Administration Building. It has a book capacity of some 100,000 volumes, study space for some 500 students, simultaneously, and was erected at a cost of $171,867.91. The building has three floors and a book stack section with five levels.

The library, being air-conditioned, is ideal for serious study, for investigation and research, and for recreational reading for those who wish to use its facilities. Its beautiful and convenient study appointments include the Reference Room, seating 176; the Reserves Reading Room, seating 144; the Graduate Study Room, seating 50; the Current Periodicals Room, seating 42; the Special Collection Room, seating 20; and the Reading Lounge, seating 30. Artistic tastes of readers are fostered in the Art Room.

The various collections of the library contain 60,593 books, 8,594 bound magazines, 50,518 uncataloged documents, 1,808 pictures, 688 subscriptions as well as films, filmstrips, maps, microcards, microfilm, records, slides, etc., etc.

In addition to the resources of the W. R. Banks Library readers may have access to those of other libraries through interlibrary 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.

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: 8:00 a.m. - 9:30 p.m.

Saturday: 8:00 a.m. - 5:00 p.m.

Sunday: 2:00 - 5:00 p.m.

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

There are no services available on the Top Floor of the library and in the Current Periodicals Room on Friday evenings and Saturday and Sunday afternoons.

## EXTRA-CURRICULAR ACTIVITIES

### Religious Influences

While no particular denominational influence is exerted at Prairie View A. and M. College, the authorities of the institution are thoroughly committed to the belief that religious training benefits the student. Religious activities, promoted under the direction of the College Chaplain, include Sunday School, Morning Worship, and Vesper Services.

### 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. Such organizations are **Home Town Clubs** (where ten or more students are from the same town); **Departmental or Divisional Clubs:** New Farmers of America, New Homemakers of Texas, Industrial Education Club, Spanish-French Club, Scientific Society (Beta Ph Club), Business Administration and Business Education, Inc., Home Economics Club, Mathematics Club, Physical Education Club, Society of Architects and Engineers, Student National Education Association, Mu Alpha Sigma Music Society, Library Science Club, Charles Gilpin Dramatic Club, National Society of Pershing Rifles, Les Beaux Cultural Club, Charm Club; **Religious:** YMCA, YWCA, Sunday School, Usher Board, Newman Club, Methodist Student Movement, Church of Christ; **Social:** Barons of Innovation, Club Crescendo, Club 26, Les Belles Lettres, K. O B's, Progressive Veterans; **Honorary Society:** Alpha Pi Mu (of Alpha Kappa Mu).

### Athletics

The Department of Athletics sponsors the following major varsity sports for men: football, basketball, track, tennis, baseball, and golf. The varsity program for women includes basketball, track and tennis.

The intramural sports program, conducted for all students, includes boxing, football, basketball, baseball, tennis, track, softball, golf and volley ball. Each student is expected to participate in at least one intramural sport.

Athletes from Prairie View participate in national and international athletic events.

Prairie View A. and M. College is a member of the Southwestern Athletic Conference. The College is nicknamed "Panthers," and the School Colors are purple and gold.

## AWARDS AND PRIZES

Prizes and awards are made for accomplishments in various fields of endeavor throughout the College. They are sometimes monetary in nature and sometimes in the form of keys, cups, pins, or insignia. A short description of them is given below.

HARRISON-VALIEN SCHOLARSHIP PRIZE. A cash award presented to the graduating senior who has maintained the highest scholastic average over the four-year period.

T. K. LAWLESS AWARD. A cash award to the graduating senior who during four years at Prairie View A. and M. College, has made the most outstanding contributions to the institution.

ALEXANDER SUNDAY SCHOOL AWARD. A cash award of $50.00 for tuition to the student who, during the school year, has made an outstanding or noteworthy contribution to the Sunday School program. The student should have at least a satisfactory grade point average and be in need of financial assistance.

JAMES E. GUINN-EMMA J. GUINN AWARD. A cash award presented each year to the science major of junior standing having the highest scholastic average.

HILLIARD MONTGOMERY AWARD. A cash award presented to the science major having the highest average in science courses during the year.

LOCAL PRAIRIE VIEW ALUMNI AWARD. A cash award of $50.00 for tuition to the student most deserving from the standpoint of need plus consideration of scholarship and citizenship records while in attendance at the College.

ANNE L. CAMPBELL AWARD. A cash award presented to the junior English major having the highest scholarship average and the most outstanding record of participation in extracurricular activities.

MAY-GALLOWAY AWARD. $25.00 for outstanding Freshman Home Economics student.
HOME ECONOMICS FACULTY AWARD. $50.00 to the outstanding Sophomore Home Economics student.

CHARM AND HOME ECONOMICS CLUBS AWARD. $25.00.

## 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, 302 Walton Building, Austin, Texas.

## LOAN FUNDS

Prairie View A. and M. College has five loan funds available to students:

1. The Hogg Memorial Loan Fund of $25,000.00 was given to Prairie View by the late W. C. Hogg in the year 1936. The interest from this fund is available for loans to students. At present the amount available for loans is in excess of $5,000.00.
2. The Abner Davis Memorial Loan Fund was established in 1937 by the students at Prairie View in memory of Abner Davis, who died in 1930 from injuries received in a football game between Prairie View College and Texas College. The fund has grown each year from the proceeds of the Miss Prairie View contest. At present $3,000.00 are available for loans to students.
3. The Church Bank Loan Fund was established in 1938 by the students who were enrolled in vocational agriculture courses under the supervision of Mr. Banks at the time of his accidental death. This loan is available to seniors in Agriculture. The amount available for loans is $136.00.
4. The Class of 1927 left a loan fund of $53.15.
5. The Prairie View Club of Los Angeles, California, donated $52.50 for student loans.

Students desiring loans should make inquiries at the Offices of the Fiscal Department and the Director of Student Life. In all cases, loans are made with the endorsement of some member of the College staff.

## THE MARY GIBBS JONES AND JESSE H. JONES SCHOLARSHIP PRIZES

Mr. and Mrs. Jesse H. Jones of Houston, Texas, made available to Prairie View $25,000.00 for a scholarship fund in Home Economics (Mary Gibbs Jones), $25,000.00 for a scholarship fund in Agriculture (Jesse H. Jones). Students who are selected receive scholarships of approximately $250.00 per year. Twenty such awards are scheduled to be made annually until 1966. They are divided equally between women and men in Home Economics and Agriculture, respectively. The fund is administered by Houston Endowment, Inc., of Houston, Texas.

Mr. and Mrs. Jesse H. Jones of Houston, Texas also made available $25,000.00 for Nursing Education Scholarships (A. Jeannette Jones Scholarship Fund) and $10,000.00 for scholarships in Fine Arts.

All inquiries and applications for these scholarships should be addressed to the Chairman of the Scholarship Committee, Prairie View A. and M. College, Prairie View, Texas.

## STATE OF TEXAS SCHOLARSHIPS

The State of Texas provides a scholarship for the ranking student of each one of the four-year accredited high schools in Texas for the school year im-

mediately following the date of graduation. The scholarship will apply on tuition to the amount of $50.00 per semester. The Committee on Scholarships may terminate, at the beginning of the second semester, the scholarship of a student who, without warrant, fails to maintain a satisfactory scholastic record.

## 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.

## TUITION SCHOLARSHIPS

The College is authorized to award a limited number of Tuition Scholarships, not to exceed $25.00 a semester, to needy students who are residents of the State of Texas. Awards will be made on the basis of need, worthiness, and character. Applications for this scholarship should be addressed to the Chairman of the Scholarship Committee, Prairie View A. and M. College, Prairie View, Texas.

## 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 Hazlewood 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 Hazlewood 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 of 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.

## JESSE H. JONES COOKING AND BAKING SCHOLARSHIP

Mr. Jesse H. Jones of Houston, Texas, made available to Prairie View $6,200.50 for a scholarship fund in Cooking and Baking. This scholarship is to cover a five-year period, at $1,200.50 per year.

All inquiries and applications for this scholarship should be addressed to the Chairman of the Scholarship Committee, Prairie View A. and M. College, Prairie View, Texas.

## SCHOLARSHIP IN NURSING

The State of Texas provides a stipend for each student in the Division of Nursing. This monthly stipend covers the major cost of the student's maintenance.

In addition to the State stipend, the A. Jennette Jones Scholarship Fund ($25,000.00) is made available to a selected number of students in the Collegiate program. Recipients of the scholarship are given tuition and activity fee assistance.

The College reserves the right to recommend that either the stipend or the scholarship, or both, be denied the student if the student has not maintained at least a "C" average during his first semester of work.

## THE CHARLES T. AND KATIE B. BRACKINS SCHOLARSHIP GRANT

The College has a scholarship agreement with an Advisory Board of the Mercantile National Bank at Dallas whereby Mrs. Eloise M. Willis, grantor, makes funds available in the amounts 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 or Washington Technical High School or to the Chairman of the Scholarship Committee at Prairie View.

## REGULATIONS

### Discipline and Government

All students reporting to the institution for registration are subject to the disciplinary rules and regulations of the institution upon date of arrival on the campus.

The College compels no student to enroll or to remain who finds that he cannot meet its academic requirements cheerfully. A student who cannot meet the requirements of the College will be asked to withdraw.

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.

**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.

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.

When the administration finds that a student cannot adjust himself to the life of the College, and when the student's conduct appears to be unsatisfactory, the officers of the College may request his withdrawal.

The continuance of each student upon the rolls of the College, the receipt by him of academic credits, 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.

No student shall have in his posession any motor vehicle kept on or near the campus or in any adjacent town without the prior approval and permission of the Administrative Head of the College. Violation of this regulation subjects the student to immediate dismissal from the institution.

Hazing is prohibited by law in State educational institutions of Texas. The law provides that: "Any student of any State educational institution of Texas 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."

### 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.

## Total Fees For All Students Except Nurses

*(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. **Personal checks will not be accepted.**

Maintenance fees are due and payable on the first day of each month. A delinquent fee of one dollar 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 September 1, 1960, 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*

Resident students, for 12 or more semester hours.....$ 50.00 per semester
(For less than 12 semester hours, a reduction of $4.00 per semester hour with a minimum of $15.00 per semester)

For registration in absentia (but for no courses).....$ 15.00 per semester

Non-resident students, for 12 or more semester hours.....$200.00 per semester
(For less than 12 semester hours, a reduction of $16.00 per semester hour)
A penalty of $5.00 shall be collected for failure to pay the proper fee at the beginning of each semester.

For registration in absentia (but for no courses).....$ 17.50 per semester

*Summer Session*

Resident students, for 4 or more term hours.....$ 25.00 per term
(For less than 4 term hours a reduction of $4.00 per term hour with a minimum of $15.00 per term)

For registration in absentia (but for no courses) ..... $ 15.00 per term

Non-resident students, for 4 or more term hours ..... $100.00 per term
(For less than 4 term hours, a reduction of $25.00 per term hour)

For registration in absentia (but for no courses) ..... $ 17.50 per term

Audit Fee ..... $ 5.00 per term

**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 for each day of late registration, with a maximum of $5.00.

September 19-21 is the registration period for the first semester, 1960-61. January 30-31 is the registration period for the second semester, 1960-61; September 18-20, for 1961 and January, 29-30, 1962.

**Degrees, Certificates, Etc.**

College Diploma Fee ..... $ 5.00
Graduate School Diploma and Graduation Fee ..... $10.00
Graduate Nursing Fee ..... $ 5.00
Transcript Fee (per copy after first copy) ..... $ 1.00
Trade Certificate Fee ..... $ 3.00
Entrance Examination Fee for students from non-accredited high schools ..... $ .50
Deficiency Examination Fee per course ..... $ 1.00
(Deficiency Grades are I and K)

**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 students class schedule is approved.

**General Property Deposit** ..... $10.00

This fee is refundable approximately 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.

**Student Services Fee (Required)**

Student Services Fee Per Semester ..... $19.50
Student Services Fee Per Term ..... $ 8.75

**Music Fees**

*Regular Session*

Piano or Voice (2 lessons per week), per semester ..... $12.00
Organ, per month ..... $ 5.00
Other instruments, same as piano.

**R.O.T.C. Uniform Handling Fee**

*Regular Session* ..... $ 7.00

No refund of the ROTC Uniform Handling Fee will be made after the uniform or any part thereof has been issued.

**Maintenance Fee**

*Regular Session*

Room rent, board and laundry, per month.....$53.00
(Room rent $14.00, board $36.00, laundry $3.00)
Roomers only pay $17.00 per month for room and laundry.

*Summer Session*

Room rent, board and laundry, per term of 6 weeks.....$83.86
(Room rent $19.60, board $59.64, laundry $4.62)

Graduate students only—room rent for Summer Session per term of six weeks.....$24.22

Room Key Deposit, (Full amount returnable if receipt is presented at the cashier's window).....$ 1.00

## REFUNDS

*For all Colleges of Texas Agricultural and Mechanical College System*

**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. Refunds of the tuition for the Veterans Administration and other U. S. Government agencies shall be as follows:

| | |
|---|---|
| For students withdrawing within one week from date of enrollment | 80 per cent |
| Between one and two weeks from date of enrollment | 80 per cent |
| Between two and three weeks from date of enrollment | 60 per cent |
| Between three and four weeks from date of enrollment | 40 per cent |
| Between four and five weeks from date of enrollment | 20 per cent |
| After the fifth week from the date of enrollment | None |

**Maintenance**

No deductions will be made from charges for board, laundry, and room rent 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 as aforesaid, charges for board, laundry and room rent will be refunded pro rata in case of withdrawal during a semester.

**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.

**Student Services Fee**

A student may claim a refund of the Student Services 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.

## EXPENSES AND FEES FOR 1960-61

*(These fees are subject to change without notice)*

### FIRST SEMESTER

| | New Students | Old Students |
|---|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 | $ 50.00 |
| Student Services Fee (Required) | 19.50 | 19.50 |
| General Property Deposit | 10.00 | - 0 - |
| *Maintenance—Entrance to October 10, 1960 | 45.93 | 38.87 |
| Total Entrance Fees for Women | $125.43 | $108.37 |
| Uniform Service Charge | 7.00 | 7.00 |
| [1]Total Entrance Fees for Men | $132.43 | $115.37 |
| *Maintenance—Oct. 11-Nov. 10 | 53.00 | 53.00 |
| *Maintenance—Nov. 11—Dec. 10 | 53.00 | 53.00 |
| *Maintenance—Dec. 11—Jan. 10 | 37.40 | 37.40 |
| *Maintenance—Jan. 11—Feb. 10 | 53.00 | 53.00 |
| Total Fees for First Semester | $328.83 | $311.77 |
| Book and Supplies—Estimated | 30.00 | 30.00 |
| Total Estimated Expenses—First Semester | $358.83 | $341.77 |

### SECOND SEMESTER

| | New Students** | Old Students‡ |
|---|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 | $ 50.00 |
| Student Services Fee (Required) | 19.50 | 19.50 |
| General Property Deposit | 10.00 | - 0 - |
| *Maintenance—Feb. 11—Mar. 10 | - 0 - | 53.00 |
| *Maintenance—Jan. 29—Mar. 10 | 74.20 | - 0 - |
| Total Entrance Fees for Women | $153.70 | $122.50 |
| Uniform Service Charge | 7.00 | - 0 - |
| [1]Total Entrance Fees for Men | $160.70 | $122.50 |
| *Maintenance—Mar. 11—Apr. 10 | 53.00 | 53.00 |
| *Maintenance—Apr. 11—May 10 | 53.00 | 53.00 |
| *Maintenance—May 11-27 | 30.03 | 30.03 |
| Total Fees for Second Semester | $296.73 | $258.53 |
| Book and Supplies—Estimated | 20.00 | 20.00 |
| Total Estimated Expenses—Second Semester | $316.73 | $278.53 |

Room key deposit, returnable. (Payable to Dean of Men or Dean of Women—$1.00).

[1]World War II Veterans attending under benefits of G.I. Bill have tuition and books paid for by Veterans Administration. Korean Veterans (PL-550) must secure authorizations for enrollment from the Veterans Administration prior to registration and must come prepared to pay all fees indicated above for male students.

*Maintenance includes board, room and laundry.

**Entering for first time during current year.

‡Includes first semester "new" students.

## NURSING FEES

**First Year**

FIRST SEMESTER

| | |
|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 |
| Student Services Fee | 19.50 |
| General Property Deposit (Required) | 10.00 |
| *Maintenance—Entrance to October 10, 1960 | 45.93 |
| Total Fees for Entrance | $125.43 |
| *Maintenance—October 11—November 10 | 53.00 |
| *Maintenance—November 11—December 10 | 53.00 |
| *Maintenance—December 11, 1960—January 10, 1961 | 37.40 |
| *Maintenance—January 11—February 10 | 53.00 |
| Total Fees for First Semester | $321.83 |
| Books and Supplies—Estimated | 30.00 |
| Total Expenses—First Semester | $351.83 |

SECOND SEMESTER

| | |
|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 |
| Student Services Fee | 19.50 |
| *Maintenance—February 11—March 10 | 53.00 |
| Uniforms — Approximately | 100.00 |
| Total Fees for Entrance | $222.50 |
| *Maintenance—March 11—April 10 | 53.00 |
| *Maintenance—April 11—May 10 | 53.00 |
| *Maintenance—May 11-27 | 30.03 |
| Total for Second Semester | $358.53 |
| Total for First Semester | $321.83 |
| Total for Both Semesters | $680.36 |

SUMMER SESSION

| | |
|---|---|
| Tuition for both terms (Non-residents pay $200.00) | $ 50.00 |
| *Maintenance—both terms | 167.72 |
| Student Services Fee—both terms | 17.50 |
| | $235.22 |

## SECOND YEAR

FIRST SEMESTER

| | |
|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 |
| Books — Estimated | 30.00 |
| Room and board furnished by Jefferson Davis Hospital | |
| Total for First Semester | $ 80.00 |

SECOND SEMESTER

| | |
|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 |
| Room and board furnished by Jefferson Davis Hospital | |
| Total for both semesters | $130.00 |

SUMMER SESSION

| | |
|---|---|
| Tuition for both terms (Non-residents pay $200.00) | $ 50.00 |
| Room and board furnished by Jefferson Davis Hospital | |

*Maintenance includes board, room and laundry.

## THIRD YEAR

### FIRST SEMESTER

| | |
|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 |
| Books — Estimated | 10.00 |
| Room and board furnished by Jefferson Davis Hospital | |
| Total for First Semester | $ 60.00 |

### SECOND SEMESTER

| | |
|---|---|
| Tuition (Non-residents pay $200.00) | $ 50.00 |
| Room and board furnished by Jefferson Davis Hospital | |
| Total for Second Semester | $ 50.00 |
| Total for both Semesters | $110.00 |

### SUMMER SESSION

| | |
|---|---|
| Tuition for both terms (Non-residents pay $200.00) | $ 50.00 |
| Student Services Fee—both terms | 17.50 |
| Diploma | 5.00 |
| State Board Examination | 15.00 |
| Picture for State Board | 1.50 |
| Photostatic Copy of Records | 1.00 |
| Total for Summer Session (Maintenance not included) | $ 90.00 |

**Note.**—The following articles are to be brought by student nurses enrolling as freshmen: 4 sheets, 3 pillowcases, 1 pillow, sufficient covers, umbrella, raincoat, overshoes, white oxfords with low rubber heels, 2 spreads, 4 face towels, 4 bath towels, a workbox containing instruments for mending, and an inexpensive watch with second hand.

### Non-resident Student Registration Fees

BE IT RESOLVED, by the Board of Directors of the Prairie View Agricultural and Mechanical College of Texas that the following schedule of tuition fees for non-resident students be and the same is hereby established, effective on and after September 1, 1960:

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 his 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 (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" means "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 is that of the mother. Upon divorce of the parents, the residence of the minor is determined by the legal

residence of the person to whom custody is granted by the court. In the absence of any grant of custody, the residence of the father continues to control. Upon death of both parents, 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 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 military 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 Servics 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 Service being transferred out of the State of Texas, his children shall be classified as to residence under Section One (1) 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.

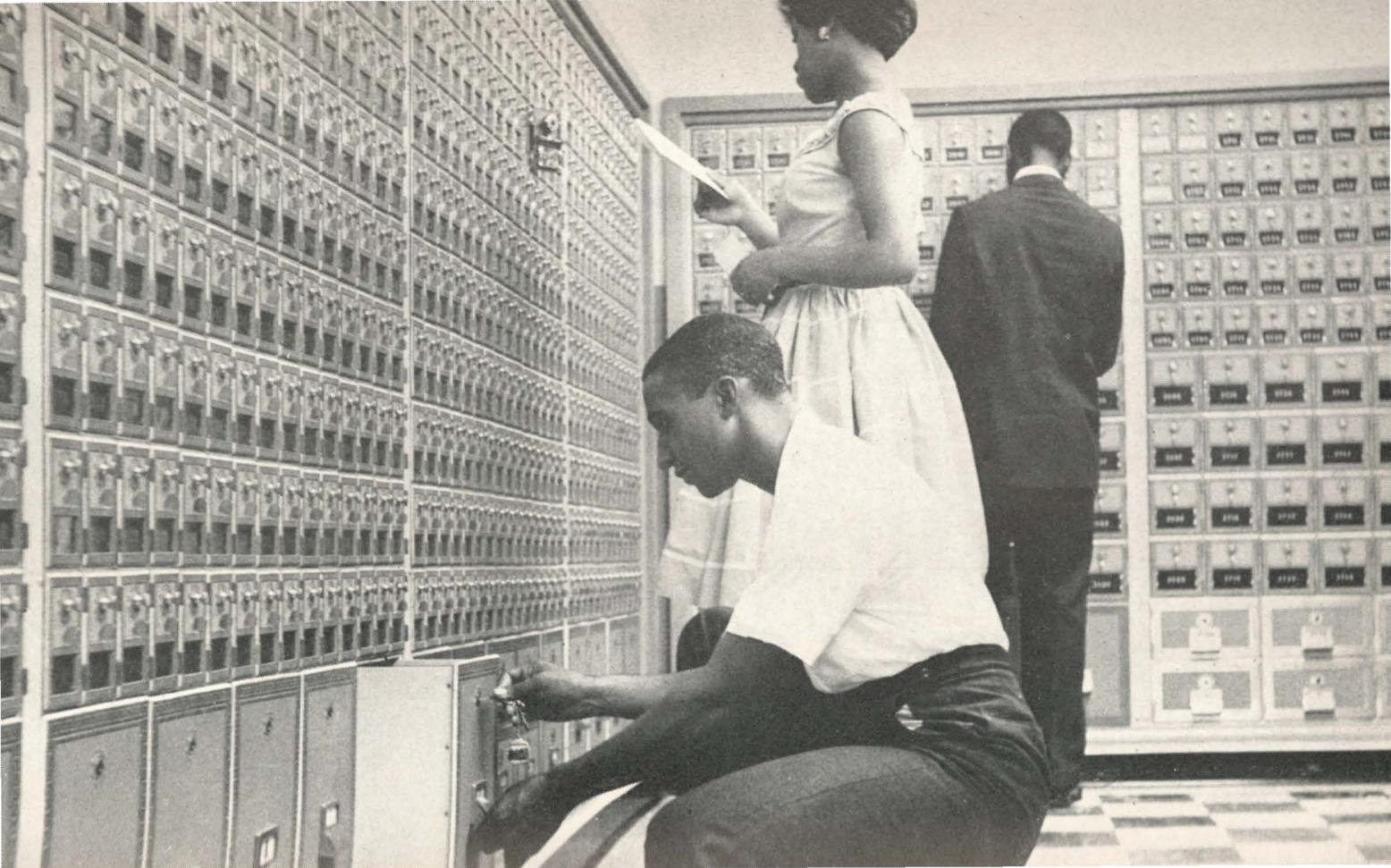
10. Appointment as a member of the teaching or research staff or the holding of a fellowship, scholarship, or assistantship shall not affect a student's residence status or the tuition fee to be paid.

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 fees set forth above.

## Student Services 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 survey, special drugs and certain X-rays.



# Academic Information

## ADMISSION

### General Admission Requirements

All communications in regard to admission to the College should be addressed to the Registrar, 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 school 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 units acceptable for admission from high school, eight are required while seven are elective. The following represents the distribution of required units:

| | |
|---|---|
| English | 3 units |
| Algebra | 1 unit |
| Plane Geometry | 1 unit |
| History and Civics | 2 units |
| Natural Science (with laboratory) | 1 unit |

For admission to the Division of Nursing Education, nine units are required as follows:

| | |
|---|---|
| English | 3 units |
| Mathematics | 2 units |
| History | 2 units |
| Natural Science (with laboratory) | 2 units |

Applicants for admission to the Division of Nursing Education must be at least 17 years of age. Records submitted by applicants for entrance into the Division of Nursing Education must be approved by the State Board of Nurse Examiners before such applicant may be accepted in the Division as preliminary student.

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:

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

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

**Students without this credit will take Solid Geometry first semester, which will add three credit hours to requirements for graduation.

**MAIL CALL . . . In the modern U. S. Post Office of the Student Center.**

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 Registrar's Office before the student may attain academic status of any kind. Transcripts should be on file in the Registrar's 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 Registrar 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.

All entering students are requested to take a placement test in English grammar and may be required to take a psychological test.

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.

Work completed at institutions which maintain standards of admission and graduation similar to those of this college will be given equivalent credit so far as it applies to courses offered in this college and has been completed with a grade of "C" or better.

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 eight required and seven elective 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 pranted for completion of Freshman science. Any or all of these admission units may be absolved by examination. The remaining seven elective 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. Such permission is usually confined to those desiring to enroll in trade courses.

**Special Admission Requirements for Veterans**

Under certain circumstances, veterans who have not completed high school may enter the College on individual approval. After successful 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 Veterans 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 educational, 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.

## SCHOLASTIC REGULATIONS

### Unit of Credit

The unit of credit at Prairie View A. and M. College is the semester hour. A semester hour represents the equivalent of one recitation or lecture hour per week for eighteen (18) weeks. Two laboratory, practice or demonstration hours represent the equivalent of one recitation or lecture per week of eighteen (18) weeks except that in the School of Engineering, and the Division of Industrial Education, and Military Science three practice or laboratory hours are required to equal one lecture or recitation hour.

### 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 of 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. No course may be added after the tenth working day of any semester. The total number of hours must not become fewer than fourteen. A student who drops a course after the first ten days of either semester for any cause other than withdrawal from the College is given, at the discretion of the Dean, a grade of "F" in the course for the semester. To drop a course unofficially (and persistent absence from class amounts to dropping) means to sever one's connection with the College.

*Minimum Load.* Every student enrolled in the College will be expected to carry a minimum load of fourteen semester hours. Students who wish to carry less than fourteen semester hours must have the approval of the Dean of Instruction.

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

**Extra Load**

Any credit course taken in addition to a program of 17 semester hours constitutes an extra load in the School of Arts and Sciences, and 18 semester hours in the other Schools. To carry an extra load the student must obtain written permission from the Classification Committee. Permission to carry an extra load may be granted to students maintaining a scholastic average of "B" or above during the last previous semester or term in residence. The maximum load will not exceed 18 semester hours for the School of Arts and Sciences; 19 hours in all other Schools.

**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.

**Symbols of Grading**

The grading symbols are: A (95-100); B (85-94); C (75-84); D (65-74); F (below 65); I—Incomplete; K—Delinquent Account; Q—Withdrew, while failing or withdrew unofficially; W—Withdrew while passing or withdrew officially. A grade of "I" means that some relatively small part of the session's work remain undone because of illness or other unavoidable reason. Grades of "I" and "K" may become passing grades upon completion of the work prescribed by the instructor. (See section 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.

**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 may 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.

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

**Grade Points (Effective September 1, 1956)**

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 earned.

### 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.

## FAILING TO PASS—PROBATION

1. Any student who fails in 50 per cent or more of his semester hour registration any semester is automatically dropped from the institution.
2. Freshmen failing in less than 50 per cent of their semester hour registration must show a minimum of 1.5 (D-plus) grade points for each semester hour passed or be dismissed from school.
3. Freshmen with no failures but who have grade point averages of less than 1.5 of each semester hour registration are placed on probation and, if the grade point average is not met (see 4) the succeeding semester, are dropped.
4. In order to be eligible for re-admission any semester without special permission a student must be able to meet the following requirements in addition to 1, 2 and 3 above: At the end of each semester freshmen students must have a grade point total equal to 50 per cent more than total number of semester hour registration; sophomore students must have 75 per cent more; and junior students must have 87 per cent more.
5. Students who do not meet the grade point requirements (in 4) may be admitted for one semester on probation upon the recommendation of the Dean of the School and approval of the Registration and Classification Committee. It at the end of the semester the student has not met the grade point requirement, such student is automatically dropped.

### Grade Reports From the Registrar

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. Courses, grades, semester hours, and/or grade points are available to each student from the Registrar's Office 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 requirements 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.

## EXAMINATIONS AND TESTS

### Semester Examinations

Examinations in all college courses are given at the end of the first and second semesters. Exceptions 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 nine-week period 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 semesters work.

## MEN CALLED TO THE ARMED SERVICES

**Re: Academic Credit**

Seniors who are in their last semester and are taking all the work for graduation are allowed their credits at the time they are called, provided it is past mid-semester, nine weeks.

Other students are allowed their grades up to the time of leaving if they are called as follows:

a) If two weeks after mid-semester, eleven weeks, their "A," "B," and "C" grades.

b) If after January 1 or May 1, their "A," "B," and "C" grades.

c) "D" grades are allowed only when semester is completed.

In each case the student is expected to stay in college as long as possible before he goes to enter the Army. This is considered to be one week before his actual date of reporting.

A student who leaves earlier than the dates indicated above may be granted permission to take up his studies at a corresponding time in a later semester if he can come back. If he is out a considerable length of time, he should return earlier in order that the first part of the semester's work should be fresh in his mind when he comes to the latter part.

## DEGREES, DIPLOMAS AND CERTIFICATES

**Applying for Graduation**

Any student expecting to graduate at the end of a regular long session is required to file application for the degree, diploma or certificate of proficiency expected, by October 15th, on a blank available in the Registrar's Office. If graduation is expected at the end of the First Semester, the application for degree, diploma or certificate of proficiency should be made by March 15th of the year preceding the date of graduation. Those who expect to graduate at the close of the Summer Session, must file application for the degree, diploma or certificate of proficiency by March 15th.

If a candidacy is postponed, the application for graduation must be renewed during a corresponding period in any later semester or summer session in which the student expects to receive his degree.

**Degrees and Diplomas Offered**

1. From the School of Agriculture, Bachelor of Science.
2. From the School of Arts and Sciences, Bachelor of Arts, Bachelor of Music, 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 Education, Bachelor of Science.
5. From the School of Engineering, Bachelor of Science.
6. From the Division of Industrial Education, Bachelor 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. 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.

**Requirements for Degrees and Diplomas**

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

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

*Special Requirements in Major Subject.* 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 undergradate 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 meetng 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:

| | |
|---|---|
| English Usage (Eng. 113-123-213) | 9 semester hours |
| Humanities (Eng. 223, Foreign Language, etc.) | 3-15 semester hours |
| Mathematics (113-123 or 173-183) | 6 semester hours |
| Science (113-123 or Biol. 114-124 or Chem. 114-124) | 6-8 semester hours |
| Social Science (Hist. 173-183 plus Pol. Sc. 113-123 plus 3 semester hours of social science elective) | 15 semester hours |
| Non-technical elective | 3 semester hours |
| Physical Education (Women) or Military Science (Men) (111-121-211-221) | 4 semester hours |
| Total | 46-60 semester hours |

*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 or division 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 Requirement.* No degree will be conferred without campus residence equivalent to two semesters comprising thirty-six weeks or three summer sessions comprising thirty-six weeks, and the completion in residence of at least thirty semester hours of work counting toward graduation provided also that the last 30 semester hours of work have been completed in continuous residence.

*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 three (3) hours of credit in a course in Military Science as provided in an approved Senior R.O.T.C. unit."

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

*Prerequisites for Student Teaching.* The following criteria will be used in determining the eligibility of a student to enroll in student teaching:

1. Complete courses 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 minor field, if scheduled to do student teaching in the minor.
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 teaching assignment.
9. Present evidence of professional laboratory experiences prior to student teaching.

*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 or essay before August first. January candidates must file their reports on the first day of class following the Christmas holidays.

*Basic Military Science Requirement.* Completion of two years of Basic Military Science is required for all physically qualified male students who are citizens of the United States, except for veterans, students who are past their 25th birthday upon initial enrollment, and those who enter with Advanced Standing in excess of sophomore year first semester academic requirements.

*Skills Requirement.* Candidates for graduation from the Schools of Agriculture and Home Economics are required to complete special skills in these respective fields, before they may be approved for graduation.

*Graduation Honors.* Eligible candidates for graduation will be designated on commencement programs 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 point 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 term 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 also pay $15.00.

*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 Certificates of Proficiency**

Certificates of Proficiency are awarded for completion of special trade courses as follows: Automotive Science, Carpentry and Cabinetmaking, Electrical Repair, Food Technology, Laundering and Dry Cleaning, Machine Shop Estimating, Painting and Decorating, Plumbing and Steamfitting, Printing, Radio and Television, Shoemaking, Tailoring, Welding, Secretarial Science and Dressmaking. For specific requirements of each trade see the school in which the trade is scheduled.

**Requirements for Texas Teacher Certificates**

All teachers' certificates valid in Texas are issued by the Texas Education Agency, Austin, Texas. Under the revised Teacher Certification Program, effective September 1955, two types of certificates are provided: *Provisional* and *Professional.*

The *Provisional Certificate* ($2.00) is awarded at the bachelors degree level upon satisfactory completion of an approved Teacher Education Program. The *Professional Certificate* ($3.00) is awarded upon completion of at least thirty (30) semester hours of graduate work beyond the bachelor's degree requirements in an approved graduate Teacher Education Program.

*Students in Progress Prior to September 1, 1955*

Any undergraduate student who started his college work prior to September 1, 1955, can receive a certificate under the old certification law upon completion of the requirements for a baccalaureate degree.

Undergraduate students who completed a minimum of six semester hours in education and a course in Texas and Federal Constitutions prior to September 1, 1955 and who wish to obtain a temporary certificate before completing the requirements for the bachelor's degree should send a transcript to the Texas Education Agency for evaluation.

A person with a bachelor's degree from a Texas college who had completed the required courses in Texas and Federal Constitutions (or six semester hours in American Government) and at least six semester hours in education prior to September 1, 1955 can receive a certificate under the old certification law.

*Steps in Obtaining a Certificate*:

1. Complete the program in teacher education which was started prior to September 1, 1955, and obtain the bachelor's degree or complete the additional certificate requirements beyond the bachelor's degree.
2. Meet the other requirements for the type of certificate for which college preparation entitles applicant, using the application form prescribed by the Texas Education Agency. File this application with the Registrar of the institution in which preparation is completed.
3. The institution shall certify:
   a. That the applicant was enrolled in a teacher education program leading to bachelor's degree prior to September 1, 1955.
   b. That the teacher education program has been completed and the bachelor's degree has been conferred, or additional requirements beyond the bachelor's degree have been completed.
   c. That the applicant has completed a course or courses that give special emphasis on the Constitutions of the United States and the State of Texas.
   d. That the applicant has completed at least six semester hours in American History, or three semester hours of American History plus three semester hours of Texas History. Persons completing a program of teacher education prior to July 1, 1956, are exempt from this requirement.
4. Payment of fee of $1.00 (money order payable to Texas Education Agency). Fee is not required for a certificate of approval.

A person who holds a bachelor's degree from an out-of-state institution is expected to meet the requirements of the new certification program. Applications should be sent to the Director of Teacher Relations, Texas Education Agency, Austin, Texas.


SUBSTATION NO. 18
TEXAS AGRICULTURAL EXPERIMENT STATION
and
PRAIRIE VIEW A.&M. COLLEGE
parts of the
TEXAS A.&M. COLLEGE SYSTEM
VISITORS WELCOME

# School of Agriculture

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. Total Semester Hours Required for Graduation, 140.

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 high schools and agricultural colleges. It offers training for students who plan to process and market agricultural products. The technical subjects covered in this curriculum are agronomy, agricultural economics, animal husbandry, dairy husbandry, dairy manufacturing, horticulture, ornamental horticulture and poultry husbandry.

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 year 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.

**BASIC FRESHMAN AND SOPHOMORE PROGRAM**

FRESHMAN YEAR

| First Semester | Hrs. |
|---|---|
| English 113 | 3 |
| Grammar and Composition | |
| Mathematics 173 | 3 |
| Applied Mathematics | |
| Animal Husbandry 113 | 3 |
| Types and Market Classes | |
| Biology 134 | 4 |
| General Botany | |
| Chemistry 114 | 4 |
| Inorganic Chemistry | |
| Agricultural Education 111 | 1 |
| Orientation | |
| Military Science 111 | 1 |
| Elementary | |
| | 19 |

| Second Semester | Hrs. |
|---|---|
| English 123 | 3 |
| Reading and Composition | |
| Mathematics 183 | 3 |
| Applied Mathematics | |
| Agronomy 123 | 3 |
| Fundamentals of Crop Production | |
| Biology 114 | 4 |
| General Zoology | |
| Chemistry 124 | 4 |
| Inorganic Chemistry | |
| Military Science 121 | 1 |
| Elementary | |
| | 18 |

**THE E. B. EVANS PLANT AND ANIMAL INDUSTRIES BUILDING . . . Named for the current College Administrator, it houses the Dean of the School of Agriculture, members of the Agriculture Staff and the I. C. A. Liberian Project Staff.**

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| English 213 | 3 |
| Fundamentals of Speech | |
| Political Science 113 | 3 |
| National Government | |
| History 173 | 3 |
| United States 1492-1876 | |
| Dairying 213 | 3 |
| Elements of Dairying | |
| Chemistry 314 | 4 |
| General Organic | |
| Horticulture 233 | 3 |
| Vegetable Gardening | |
| Military Science 211 | 1 |
| Elementary | |
| | 20 |

| Second Semester | Hrs. |
|---|---|
| English 223 | 3 |
| Introduction to Literature | |
| Political Science 123 | 3 |
| State Government | |
| History 183 | 3 |
| United States 1877-Present | |
| Dairying 223 | 3 |
| Dairy Production | |
| Agricultural Engineering 123 | 3 |
| Farm Shop | |
| Poultry 223 | 3 |
| Poultry Production | |
| Military Science 221 | 1 |
| Elementary | |
| | 19 |

## AGRICULTURAL EDUCATION

JUNIOR YEAR

| | |
|---|---|
| Agricultural Education 313 | 3 |
| New Farmers of America | |
| Veterinary Science 323 | 3 |
| Livestock Diseases and Sanitation | |
| Biology 334 | 4 |
| Bacteriology | |
| Horticulture 313 | 3 |
| Fruit Growing | |
| Animal Husbandry 313 | 3 |
| Feeds and Feeding | |
| Military Science 313 | 3 |
| Advanced | |
| | 16 or 19 |

| | |
|---|---|
| Agricultural Education 323 | 3 |
| Special Methods | |
| Sociology 233 | 3 |
| Rural Sociology | |
| Agronomy 323 | 3 |
| Field and Forage Crops | |
| Agricultural Economics 213 | 3 |
| Fundamentals of Economics | |
| Entomology 323 | 3 |
| General Entomology | |
| Military Science 323 | 3 |
| Advanced | |
| Agricultural Engineering 214 | 4 |
| Farm Machinery | |
| | 19 or 22 |

SENIOR YEAR

| | |
|---|---|
| Animal Husbandry 422 | 2 |
| Problems | |
| Agricultural Economics 323 | 3 |
| Marketing Agricultural Products | |
| Education 383 | 3 |
| Educational Psychology | |
| Agricultural Engineering 313 | 3 |
| Farm Drainage | |
| Animal Husbandry 343 | 3 |
| Farm Meats | |
| Agronomy 423 | 3 |
| Soil Conservation | |
| Military Science 413 | 3 |
| Advanced | |
| | 17 or 20 |

| | |
|---|---|
| Agricultural Education 426 | 6 |
| Practice Teaching | |
| Agricultural Economics 423 | 3 |
| Farm Management | |
| Poultry Husbandry 433 | 3 |
| Incubation and Brooding | |
| Agricultural Education 433 | 3 |
| Special Problems | |
| Animal Husbandry 422 | 2 |
| Problems | |
| Military Science 423 | 3 |
| Advanced | |
| Horticulture 423 | 3 |
| Landscape Gardening | |
| | 18 or 21 |

## AGRICULTURAL ENGINEERING

FRESHMAN YEAR

| | |
|---|---|
| Mathematics 115 | 5 |
| College Algebra and Trigonometry | |
| Chemistry 114 | 4 |
| Inorganic Chemistry | |
| General Engineering 113 | 3 |
| Engineering Graphics I | |
| General Engineering 111 | 1 |
| Engineering Lectures | |
| English 113 | 3 |
| Grammar and Composition | |
| Military Science 111 | 1 |
| Elementary | |
| | 17 |

| | |
|---|---|
| Mathematics 124 | 4 |
| Trigonometry and Analytical Geometry | |
| English 123 | 3 |
| Reading and Composition | |
| Chemistry 124 | 4 |
| Inorganic Chemistry | |
| General Engineering 122 | 2 |
| Engineering Graphics II | |
| General Engineering 162 | 2 |
| Engineering Problems and Slide Rule | |
| Agricultural Engineering 123 | 3 |
| Farm Shop | |
| Military Science 121 | 1 |
| Elementary | |
| | 19 |

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Mathematics 214 Differential Calculus | 4 | Mathematics 224 Integral Calculus | 4 |
| Physics 215 Engineering Physics I | 5 | Physics 225 Engineering Physics II | 5 |
| English 213 Public Speaking | 3 | English 223 Introduction to Literature | 3 |
| Animal Husbandry 113 Types and Market Classes | 3 | Civil Engineering 324 Soil Engineering | 4 |
| Architecture 222 Freehand Drawing II | 2 | Civil Engineering 122 Elementary Surveying | 2 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 18 | | 19 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Civil Engineering 243 Applied Mechanics I—Statics | 3 | Civil Engineering 314 Strength of Materials | 4 |
| Mechanical Engineering 313 Thermodynamics I | 3 | Civil Engineering 322 Strength of Materials Lab. | 2 |
| Agronomy 123 Fundamentals of Crop Production | 3 | Agricultural Engineering 423 Farm Engines and Tractors | 3 |
| Political Science 113 American National Government | 3 | Political Science 123 State Government | 3 |
| Agricultural Engineering 214 Farm Machinery | 4 | Civil Engineering 364 Fluid Mechanics | 4 |
| Mechanical Engineering 262 Foundry | 2 | Civil Engineering 343 Engineering Materials | 3 |
| | 18 | | 19 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Agricultural Engineering 212 Farm Machinery | 2 | Electrical Engineering 304 Principles of Electrical Engineering | 4 |
| Civil Engineering 213 Topographic Surveying | 3 | Agricultural Economics 423 Farm Management | 3 |
| Agricultural Engineering 343 Farm Building and Construction | 3 | Agronomy 423 Soil Conservation | 3 |
| Economics 213 Principles of Economics | 3 | History 183 U. S. History 1877 to Present | 3 |
| Agricultural Engineering 413 Farm and Home Utilities | 3 | Agricultural Engineering 313 Farm Drainage | 3 |
| Horticulture 343 Food Preservation | 3 | Non-technical Elective | 3 |
| History 173 U. S. History 1492 to 1876 | 3 | | 19 |
| | 20 | | |

## AGRICULTURAL ECONOMICS

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Agricultural Economics 313 Cooperatives | 3 | Agricultural Economics 343 Records and Accounts | 3 |
| Agricultural Economics 333 Advanced Economics | 3 | Agricultural Economics 363 Agricultural Credits | 3 |
| Agricultural Economics 353 Legal Relations of the Farmer | 3 | Agricultural Economics 373 Marketing Livestock and Products | 3 |
| Economics 203 Survey of Economics | 3 | Sociology 233 Rural Sociology | 3 |
| Military Science 313 Advanced | 3 | Military Science 323 Advanced | 3 |
| Electives | 6 | Electives | 6 |
| | 18 or 21 | | 18 or 21 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Agricultural Economics 323 Marketing Farm Products | 3 | Agricultural Economics 423 Farm Management | 3 |
| Agricultural Economics 413 Natural Resources and Conservation | 3 | Sociology 303 The Family | 2 |
| Agricultural Economics 403 International Agricultural Economics | 3 | Military Science 423 Advanced | 3 |
| Sociology 263 General Sociology | 3 | Electives | 8 |
| Military Science 413 Advanced | 3 | English 373 Journalism | 3 |
| Electives | 5 | | 17 or 20 |
| | 17 or 20 | | |

## ANIMAL SCIENCE

### JUNIOR YEAR

| First Semester | Hrs. |
|---|---|
| Biology 254 Genetics | 4 |
| Animal Husbandry 343 Farm Meats | 3 |
| Biology 334 Microbiology | 4 |
| Economics 203 Survey of Economics | 3 |
| Animal Husbandry 313 Feeds and Feeding | 3 |
| Military Science 313 Advanced | 3 |
| | 17 or 20 |

| Second Semester | Hrs. |
|---|---|
| Poultry 403 Marketing and Processing | 3 |
| Animal Husbandry 303 Fitting, Showing and Judging | 3 |
| Veterinary Science 313 Anatomy and Physiology | 3 |
| Agronomy 323 Field and Forage Crops | 3 |
| Sociology 233 Rural Sociology | 3 |
| Economics 213 Fundamentals of Economics | 3 |
| Military Science 323 Advanced | 3 |
| | 18 or 21 |

### SENIOR YEAR

| | |
|---|---|
| Veterinary Science 323 Livestock Diseases and Sanitation | 3 |
| Agricultural Engineering 413 Farm and Home Utilities | 3 |
| Animal Husbandry 413 Livestock Management | 3 |
| Animal Husbandry 403 Animal Breeding | 3 |
| Military Science 413 Advanced | 3 |
| | 12 or 15 |

| | |
|---|---|
| Entomology 323 General Entomology | 3 |
| Poultry 433 Incubation and Brooding | 3 |
| Animal Husbandry 423 Animal Nutrition | 3 |
| Agricultural Economics 373 Marketing Livestock and Products | 3 |
| Military Science 423 Advanced | 3 |
| Electives* | 6 |
| | 18 or 21 |

## PLANT SCIENCE

### JUNIOR YEAR

| | |
|---|---|
| Plant Science 464 Plant Physiology | 4 |
| Biology 254 Genetics | 4 |
| Horticulture 453 Plant Propagation | 3 |
| Agricultural Engineering 313 Farm Drainage | 3 |
| Biology 334 General Microbiology | 4 |
| Military Science 313 Advanced | 3 |
| | 18 or 21 |

| | |
|---|---|
| Horticulture 443 Floriculture | 3 |
| Entomology 323 General Entomology | 3 |
| Agronomy 323 Field and Forage Crops | 3 |
| Sociology 233 Rural Sociology | 3 |
| Agricultural Economics 213 Fundamentals of Economics | 3 |
| Military Science 323 Advanced | 3 |
| Plant Science 423 Plant Pathology | 3 |
| | 18 or 21 |

### SENIOR YEAR

| | |
|---|---|
| Agricultural Economics 323 Marketing Farm Products | 3 |
| Horticulture 313 Fruit Growing | 3 |
| Horticulture 433 Advanced Vegetable Gardening | 3 |
| Agronomy 433 Crop Judging | 3 |
| Agronomy 423 Soil Conservation | 3 |
| Electives | 3 |
| Military Science 413 Advanced | 3 |
| | 18 or 21 |

| | |
|---|---|
| Agronomy 443 Fertilizers | 3 |
| Plant Science 403 Plant Breeding | 3 |
| Horticulture 423 Landscape Gardening | 3 |
| Agricultural Economics 423 Farm Management | 3 |
| Military Science 423 Advanced | 3 |
| Electives | 6 |
| | 18 or 21 |

## SPECIFIED ELECTIVES FOR ANIMAL SCIENCE MAJORS
### To Be Offered in Alternate Years

**DAIRYING**

| | |
|---|---|
| Dairying 313 Dairy Cattle Feeding and Management | 3 |
| Dairying 453 Dairy Herd Operations | 3 |
| Dairying 403 Creamery Plant Management | 3 |
| Dairying 323 Dairy Cattle Production | 3 |
| | 12 |

**ANIMAL HUSBANDRY**

| | |
|---|---|
| Animal Husbandry 433 Beef Cattle and Horse Management | 3 |
| Animal Husbandry 443 Swine and Sheep Management | 3 |
| Animal Husbandry 412 Meat Selection | 2 |
| Animal Husbandry 453 Animal Physiology | 3 |
| | 11 |

**POULTRY**

| | |
|---|---|
| Poultry 323 Commercial Poultry Plant Management | 3 |
| Poultry 312 Poultry Judging | 2 |
| Poultry 453 Fundamentals of Poultry Nutrition | 3 |
| Poultry 443 Breeding | 3 |
| | 11 |

| | |
|---|---|
| Horticulture 343 Food Preservation | 3 |

## DESCRIPTION OF COURSES

### AGRICULTURAL EDUCATION

**111. Orientation. (AgEd 111 Orientation) (1-0) Credit 1.**

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

**323. (formerly 373) Special Methods of Teaching Vocational Agriculture in Secondary Schools. (AgEd 323 Spec Meth) (3-0) Credit 3. II.** Special emphasis given to making outlines, lesson plans, surveys, and to reference books and bulletins needed in teaching.

**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) (1-10) Credit 6.**

**433. Special Problems* (AgEd 433 Problems) (By Appointment Only.) Credit 3. II.**

### AGRONOMY

**123. Fundamentals of Crop Production. (Agrn 123 Crop Prod) (2-2) Credit 3. II.** Science of crop production; crop plants in relation to environment; botany of crop plants; crop improvement; tillage practices; crop rotation; seeds and seeding; and harvesting of crops. Lab fee: $2.00.

**323. Field and Forage Crops. (Agrn 323 Crops) (2-2) Credit 3. II.** Major field and forage crops in the United States; special reference to production areas, cultural practices and harvesting and storage. Lab fee: $2.00.

**423. Soil Conservation. (Agrn 423 Consrvatn) (2-2) Credit 3. II.** Erosion, as affected by climate and vegetation; controlling erosion, naturally and artificially. Lab fee: $2.00.

**433. Principles of Crop Judging. (Agrn 433 Crop Judg) (2-2) Credit 3. I.** Judging crop quality, germination, soundness with implications for improvement of major economic crops. Lab fee: $2.00.

**443. Fertilizers. (Agrn 443 Fertilizers) (2-2) Credit 3. II.** Basic fertilizers and materials; manures and liming. Lab fee: $3.00.

*For second semester in Agricultural Education.

## ANIMAL HUSBANDRY

**113. Types and Market Classes of Livestock. (A H 113 Livestock) (2-2) Credit 3. I.** Judging types, carcasses, market classes and marketing livestock. Lab fee: $2.00.

**303. Fitting and Showing Livestock. (A H 303 Lvstck 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.

**313. Feeds and Feeding. (A H 313 Feeding) (2-2) Credit 3. I.** Composition and digestibility of feedstuffs; physiology, preparation, feeding standards and calculation of rations for farm animals. Lab fee: $3.00.

**343. Farm Meats. (A H 343 Farm Meats) (2-2) Credit 3. I.** Methods of killing, cutting, grading and preserving farm animals. Lab fee: $4.00.

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

**413. Livestock Management. (A H 413 Stock Mgt) (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.

**412. Meat Selection and Cutting. (A H 412 Meat Selec) (1-2) Credit 2. I.** Classification and grading farm meats; nutritive values; factors influencing quality and dressing percentages of meats from different animals. Lab fee: $3.00.

**422. Special Problems. (A H 422 Problems) (2-0) Credit 2. II.** Research problems in animal husbandry; planning, execution, compiling and summarizing the data in publication form.

**423. Animal Nutrition. (A H 423 Anml Nutr) (3-0) Credit 3. II.** Principles of animal nutrition and feeding practices; recent findings and experimental procedures.

**433. Beef Cattle and Horse Management. (A H 433 Cattle) (2-2) Credit 3. I.** Systematic studies of methods of breeding, feeding and management practices used in beef cattle and horse production. Lab fee: $2.00.

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

**453. Animal Physiology. (A H 453 Anml Phys) (2-2) Credit 3. II.** Physiology of the domestic animals; digestion, absorption, metabolism, excretion and reproduction. Lab fee: $2.00.

## AGRICULTURAL ECONOMICS

**213. Fundamentals of Economics. (AgEc 213 Fundmntls) (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 Coopratvs) (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 Farm 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 governmental policies are related to agriculture.

**343. Records and Accounts. (AgEc 343 Accounts) (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 Legl Rltn) (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 Ag 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 Products. (AgEc 373 Mktg Lvstk) (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.

**403. International Agricultural Economics. (AgEc 403 Internatl) (3-0) Credit 3. I.** Principal agricultural areas, population, livestock, crop production belts, international trade, tariff and reciprocal trade agreements.

**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 Mgt) (3-0) Credit 3. II.** Practical farm management problems; farm records; choosing a farm; farm labor and equipment; cropping; feeding, and production costs.

## AGRICULTURAL ENGINEERING

**123. Farm Shop. (Engr 123 Farm Shop) (1-4) Credit 3. II.** Farm workshop methods; tool identification, care, and use; skills in fitting farm tools and making simple working drawings. Course includes some woodwork, foraging, soldering, welding and general repairs. Lab fee: $2.00.

**212. Farm Machinery. (Engr 212 Farm Mach) (1-2) Credit 2. I.** Identification, care, use, repair and maintenance of farm machinery. Lab fee: $2.00.

**313. Farm Drainage. (Engr 313 Drainage) (1-4) Credit 3. I.** Land drainage; terracing, gully control, irrigation and land reclamation. Lab fee: $3.00.

**343. Farm Buildings and Construction. (Engr 343 Farm Bldg) (1-4) Credit 3. II.** Planning, construction and repair of farm buildings and structures. Lab fee: $2.00.

**413. Farm and Home Utilities. (Engr 413 Utilities) (1-4) 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.

**423. Farm Engines and Tractors. (Engr 423 Engines) (1-4) Credit 3. II.** Operation, care and repair of tractors, trucks, and automobiles; tractor types and sizes and their economic adaptability and utilization. Lab fee: $2.00.

## DAIRYING

**213. Elements of Dairying. (Dair 213 Elements) (2-2) Credit 3. I.** An introduction to dairying; branches of the dairy industry; judging, breeding and management of dairy cattle. Lab fee: $2.00.

**223. Dairy Production. (Dair 223 Productn) (2-2) Credit 3. II.** The dairy industry; major factors in management of dairy cattle for milk production; production and processing of milk and milk products. Lab fee: $2.00.

**313. Dairy Cattle Feeding and Management. (Dair 313 Feeding) (2-2) Credit 3. I.** The physiology and chemistry of digestion; the nutrients as applied to economic feeding. Lab fee: $2.00.

**323. Dairy Cattle Production. (Dair 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. (Dair 403 Plant Mgt) (2-2) Credit 3. I.** Production, transportation, processing, plant management and distribution of milk and related products. Lab fee: $3.00.

**453. Dairy Herd Operation and Management. (Dair 453 Herd Mgt) (2-2) Credit 3. II.** Adjusting the herd and available facilities to market demands; management of the dairy farm. Lab fee: $3.00.

## ENTOMOLOGY

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

## HORTICULTURE

**233. Vegetable Gardening. (Hort 233 Veg Gard) (2-2) Credit 3. II.** Principles of successful home and commercial vegetable gardening in the South. Lab fee: $2.00.

**313. Fruit Growing. (Hort 313 Fruit) (2-2) Credit 3. I.** Principles of fruit growing, with special reference to the conditions of Texas, including location, varieties, soil, fertilizers, planting and cultural methods; pruning, spraying, harvesting, and sorting also discussed and demonstrated. Lab fee: $2.00.

**343. Food Preservation. (Hort 343 Food Pres) (1-4) Credit 3. I.** Equipment, recipes and directions for home food preservation. Lab fee: $2.00.

**423. Landscape Gardening. (Hort 423 Landscape) (2-2) Credit 3. II.** Ornamental use and adaptation of plants, methods of propagation, lawn maintenance and upkeep with practical application to simple designs of small properties. Lab fee: $2.00.

**433. Advanced Vegetable Gardening. (Hort 433 Adv Veg Gard) (2-2) Credit 3.** A study of experimental results with vegetable crops of commercial importance. Particular emphasis will be placed on study of vegetables of importance in Texas, such as tomatoes, cabbage, onions, sweet potatoes, lettuce, watermelons, cantaloupes and Irish potatoes. Lab fee: $2.00.

**443. Floriculture. (Hort 443 Florcultr) (2-2) Credit 3. I.** Principles of production flowers for sale; growing of house plants; and arrangement of cut flowers. Lab fee: $2.00.

**453. Plant Propagation. (Hort 453 Plnt Propgtn) (2-2) Credit 3.** Propagation of plants; nursery development. Lab fee: $2.00.

## POULTRY

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

**312. Poultry Judging. (Poul 312 Judging) (1-2) Credit 2. I.** Production characteristics and evaluation of present breeds and types; production judging methods; standard judging methods; growing and fitting for the showroom. Lab fee: $2.00.

**323. Commercial Poultry Plant Management. (Poul 323 Plant Mgt) (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. (Poul 403 Poul 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.

**433. Incubation and Brooding. (Poul 433 Incubatn) (2-2) Credit 3. II.** Development of the chick; survey of literature on incubation and brooding; incubation and brooding chicks; hatchery problems and diets. Lab fee: $3.00.

**443. Poultry Breeding. (Poul 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. (Poul 453 Nutr Fundmtl) (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

**313. Anatomy and Physiology. (Vtsc 313 Anat Phys) (2-2) Credit 3. I.** Anatomical and physiological structure; digestive, respiratory and genito-urinary organs of horse, ox, pig, sheep, and chicken; common diseases of farm animals and their prevention. Lab fee: $3.00.

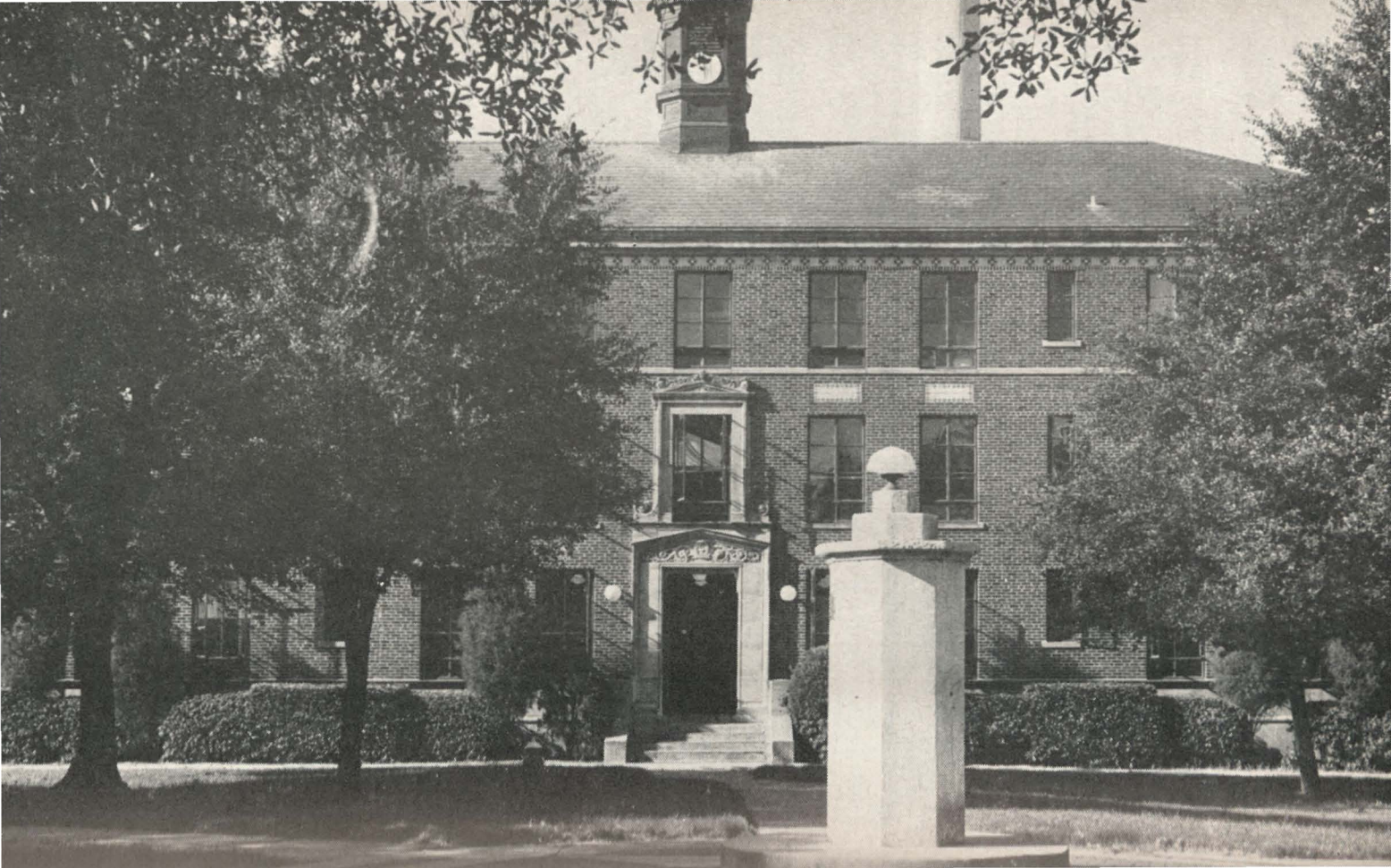
**323. Livestock Diseases and Sanitation. (Vtsc 323 Diseases) (2-2) Credit 3. II.** A continuation of Veterinary Science 313 with special emphasis on animal diseases and their control and treatment. Lab fee: $3.00.

## PLANT SCIENCE

**403. Plant Breeding and Improvement. (PlSc 403 Breeding) (3-0) Credit 3. II.** Principles involved in breeding economic important crop plants with emphasis on improvement in resistance to disease, drought, insects and extreme temperatures, and for machine harvesting and cultivation.

**464. Plant Physiology. (PlSc 464 Physiology) (2-4) Credit 4. I.** Structure, physiology of plant organ systems and related principles. Lab fee: $3.00.

**423. Plant Pathology, (PlSc 423 Pathology) (2-2) Credit 3. II.** A study of diseases in plants; diseases found in the economically important crop plants. Lab fee: $3.00.



# School of Arts and Sciences—
# College of Liberal Arts

The School of Arts and Sciences offers courses in Biology, Business Education, Business Administration, Mathematics, Economics, Education, English, History, Music, Health and Physical Education, Physics, Chemistry, Philosophy, Political Science, Sociology, Social Science, Modern Foreign Language, and Library Science.

Students may major in any of the above courses with the exception of Philosophy, Social Science and Modern Foreign Languages; one may, however, minor in Social Science or one of the Foreign Languages.

The first two years' work is designed (1) to give the student a general educational background, regardless of his 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 given an English placement test. Those freshmen whose percentiles on the English placement test are unsatisfactory are placed in English 103. This is a remedial English course which they must pass before being permitted to enroll in other English courses.

Students whose course of study requires College Algebra and higher mathematics are required to take a mathematics placement test. If the rating made is unsatisfactory, the student is required to take a remedial course in mathematics. This course must be satisfactorily passed before they are permitted to take advance work in mathematics.

Every student in the School of Arts and Sciences is required to spend 6 supervised clock hours per week, throughout one year of residence in long session, or the equivalent thereof in some form of vocational training. This requirement is referred to as "Industry" and its fulfillment grants two semester hours credit per semester. The grade points earned, however, are not applicable to the minimum grade points required.

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

Unless specifically excused by the President, each student is expected to satisfy the requirement for a teacher's certificate. Authorization to be excused from this requirement must be requested in writing by the student's guardian.

All freshman and sophomore students of the School of Arts and Sciences, unless specifically excused by the Registrar before registration or the Dean of the School of Arts and Sciences, 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

The following general requirements must be met by all persons desiring degrees of any type from the School of Arts and Sciences. Minimum Semester Hours Required for Graduation, 120.

| | |
|---|---|
| ENGLISH (113, 123, 213, 223) | 12 |
| FOREIGN LANGUAGE (In one language) | 12 |
| SOCIAL SCIENCE ELECTIVE (See General Education Listing) | 3 |
| NATURAL SCIENCE (Any Natural Science) | 6 |
| MATHEMATICS (Any Mathematics) | 6 |
| AMERICAN GOVERNMENT (National and State) | 6 |
| AMERICAN HISTORY | 6 |

**EDUCATION BUILDING . . . The liberal arts classrooms and office building. It houses the offices of the Dean of the School of Arts and Sciences, several Department Heads, and instructors.**

| | |
|---|---|
| INDUSTRY | 4* |
| MILITARY SCIENCE (Men) | 4 |
| EDUCATION | 18–24 hrs. |
| PHYSICAL EDUCATION PRACTICE (Women) | 4 |

## MAJOR AND MINOR REQUIREMENTS

After the completion of the sophomore year every student in the School who has not already done so must select, with the advice and consent of the Department Head concerned, a department as a major field or a major. In addition to selecting a major field or a major every student must also select another department or other departments for minor fields of concentration and specialization. This is commonly referred to as choosing a minor or minors.

At least six hours of the last 12 required for the completion of major and minor must be done in residence. The courses may be specified by the department concerned. The acceptance of transferred credits toward the major or minor is to be approved by the Department Head.

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 the general requirements for graduation and satisfactorily complete their work in English, the Social Sciences, or Music.

**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 Mathematics, Natural Science, or 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.

Note.—Students are advised not to select Secondary Education as a major or minor field of concentration. Those who do will be required to complete a second major or minor in some field other than Education. The type of degree to be awarded any person presenting two majors (of which one is Education) will be determined from his second major.

## GENERAL CURRICULUM IN THE SCHOOL OF ARTS AND SCIENCES

(The general curriculum is presented merely to show the general college requirements. The student is still expected to have a major and a minor.)

FRESHMAN YEAR

| First Semester | Hrs. |
|---|---|
| Electives | 3 |
| English 113 | 3 |
| Grammar and Composition | |
| Mathematics 173 (or 113) | 3 |
| Elements of Applied Mathematics (or College Algebra) | |
| Social Science (See Gen. Educ.) | 3 |
| College Science 113 or | 3 or 4 |
| (Chem. 114 or Biol. 114 General Organic Chemistry with Introductory Qualitative Analysis or General Zoology) | |
| Military Science 111 (Men)—Elem. | 1 |
| Physical Education 111 (Women) | 1 |
| Freshman Practice | |
| Industry | 2 |
| | 18 or 19 |

| Second Semester | Hrs. |
|---|---|
| Electives | 3 |
| English 123 | 3 |
| Reading and Composition | |
| Mathematics 183 (or 123) | 3 |
| Elements of Applied Mathematics or Plane Trigonometry | |
| College Science 123 or | 3 or 4 |
| (Chem. 124 or Biol. 134 or General Inorganic Chemistry or General Botany) | |
| Electives | 3 |
| Military Science 121 (Men)—Elem. | 1 |
| Physical Education 121 (Women) | 1 |
| Freshman Practice | |
| Industry | 2 |
| | 18 or 19 |

*These courses are listed as 112 and 122 when not carried in the Departmental sections.

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| Foreign Language 113 (German, French or Spanish) Elementary French, Elementary Spanish or German | 3 |
| Electives | 3 |
| Political Science 113 American National Government | 3 |
| English 213 Public Speaking | 3 |
| Physical Education 211 (Women) Sophomore Practice | 1 |
| Military Science 211 (Men)—Elem. | 1 |
| Electives (or Education 273) | 3 |
| | 16 |

| Second Semester | Hrs. |
|---|---|
| Foreign Language 123 (French, Spanish or German) French, Elementary Spanish or German | 3 |
| Electives (or Education 283) | 3 |
| Political Science 123 American State Government | 3 |
| Electives | 3 |
| English 223 Introduction to Literature | 3 |
| Military Science 211 (Men)—Elem. | 1 |
| Physical Education 221 (Women) Sophomore Practice | 1 |
| | 16 |

JUNIOR YEAR

| | |
|---|---|
| Foreign Language 213 (French, German or Spanish) Reading and Grammar | 3 |
| Elective | 3 |
| Military Science 313 (or Electives) Advanced (Men) | 3 |
| Electives (or Education 293) | 3 |
| Electives | 3 |
| | 15 |

| | |
|---|---|
| Foreign Language 223 (French, German or Spanish) Reading and Grammar | 3 |
| Elective (or Education 323) | 3 |
| Electives (or Major) | 3 |
| Military Science 323 (or Elective) Advanced (Men) | 3 |
| Electives (or Education) | 3 |
| | 15 |

SENIOR YEAR

| First and/or Second Semesters | Hrs. | |
|---|---|---|
| American History | 6 | (May be taken at any time) |
| Education 423, 406 or 306 (or Electives) | 9 | |
| Electives (or Major and Minor Work) | 9 | |
| Military Science 413 and 423 (Men) (or Electives) | 6 | |
| | 30 | |

# Biology

See Department of Natural Sciences.

# Department of Business Administration

The purpose of the Department of Business Administration is to provide specialized training for those who are seeking positions of responsibility in business enterprise or education. The department offers two distinct undergraduate programs leading to the Bachelor's degree.

A four-year program 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 go into business for themselves. The factual content of the courses will prepare the student for accounting, selling insurance, marketing and management positions.

A four-year program in Business Education is offered for students who wish to prepare themselves for commercial teaching positions in secondary education, professional education and business education.

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.

For a major in Business Administration, thirty-three hours are required, 12 of which must be in courses numbered above the Freshman level. For a major in Business Education, thirty hours are required, twelve of which must be in courses numbered above the Sophomore level. Minors in the department

must present eighteen hours in selected course offerings in consultation with the Head of the Department.

In the interest of maintaining high academic standards, all majors and minors must maintain an average of "C" in the Freshman and Sophomore courses, and an average of "B" or above in the Junior and Senior courses.

Each student who selects a major in Business Education is required to show a proficiency in skills by acquiring a minimum speed of 60 words per minute in typewriting and 100 words per minute in shorthand. In addition to this requirement, all majors will be expected to spend a period of internship in some business or office, or, when the teaching certificate is desired, the practice teaching course in education is required.

## SUGGESTED PROGRAM FOR BUSINESS EDUCATION MAJORS

### FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Natural Science 113 College Science | 3 | Natural Science 123 College Science | 3 |
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Mathematics 173 or 113 Applied Math. or College Algebra | 3 | Mathematics 183 or 123 Applied Math. or Trigonometry | 3 |
| Business Administration 143 Introduction to Business | 3 | Social Science 113 Introduction to Social Science | 3 |
| Business Education 132 Elementary Typewriting | 2 | Business Education 142 Elementary Typewriting | 2 |
| Business Education 153 Beginning Shorthand | 3 | Business Education 163 Beginning Shorthand | 3 |
| Military Science 111 Elementary or | | Military Science 121 Elementary or | |
| Physical Education 111 Freshman Practice | 1 | Physical Education 121 Freshman Practice | 1 |
| | 18 | | 18 |

### SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Foreign Language 113 Elementary French or Spanish | 3 | Foreign Language 123 Elementary French or Spanish | 3 |
| Business Administration 253 Elementary Accounting | 3 | Business Administration 263 Elementary Accounting | 3 |
| English 213 Public Speaking | 3 | English 223 Introduction to Literature | 3 |
| Education 273 Pupil Growth and Development | 3 | Education 283 Pupil Growth and Development | 3 |
| Business Education 272 Advanced Typewriting | 2 | Business Education 282 Advanced Typewriting | 2 |
| Business Education 253 Advanced Shorthand | 3 | Business Education 263 Advanced Shorthand | 3 |
| Military Science 211 Elementary or | | Military Science 221 Elementary or | |
| Physical Education 211 Practice | 1 | Physical Education 221 Practice | 1 |
| | 18 | | 18 |

### JUNIOR YEAR

| | | | |
|---|---|---|---|
| Foreign Language 213 Advanced Grammar and Reading | 3 | Foreign Language 223 Advanced Grammar and Reading | 3 |
| Economics 213 Principles of Economics | 3 | Political Science 113 National Government | 3 |
| Education 293 Foundations | 3 | Economics 223 Principles of Economics | 3 |
| Education 323 High School Curriculum | 3 | History 173 American History | 3 |
| Business Education 372 Secretarial Practice | 2 | Business Education 423 Teaching of Business Subjects | 3 |
| Business Education 312 Office Machines | 2 | Electives | 2 |
| | 16 | | 17 |

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| History 183 American History | 3 |
| Political Science 123 State Government | 3 |
| Electives (Minor) | 11 |
| | 17 |

| Second Semester | Hrs. |
|---|---|
| Education 423 School and Community Relations | 3 |
| Education 406 Student Teaching | 6 |
| Electives (Minor) | 4 |
| Industry 304 Office Practice | 4 |
| | 17 |

## SUGGESTED PROGRAM FOR BUSINESS ADMINISTRATION MAJORS

FRESHMAN YEAR

Students who elect Business Administration as a major will follow the same program as outlined for majors in Business Education during the freshman year, excluding shorthand.

SOPHOMORE YEAR

| | |
|---|---|
| Foreign Language 113 Elementary French or Spanish | 3 |
| Economics 213 Principles of Economics | 3 |
| English 213 Public Speaking | 3 |
| Business Administration 253 Elementary Accounting | 3 |
| Political Science 113 National Government | 3 |
| Military Science 211 Elementary or | |
| Physical Education 211 Practice | 1 |
| | 16 |

| | |
|---|---|
| Foreign Language 123 Elementary French or Spanish | 3 |
| Economics 223 Principles of Economics | 3 |
| English 223 Introduction to Literature | 3 |
| Business Administration 263 Elementary Accounting | 3 |
| Political Science 123 State Government | 3 |
| Military Science 221 Elementary or | |
| Physical Education 221 Practice | 1 |
| | 16 |

JUNIOR YEAR

| | |
|---|---|
| Foreign Language 213 Advanced Grammar and Reading | 3 |
| Business Administration 373 Business Law | 3 |
| Business Administration 393 Corporation Finance | 3 |
| Business Administration 353 Intermediate Accounting | 3 |
| Electives (Minor) | 3 |
| Business Education 312 Office Machines | 2 |
| | 17 |

| | |
|---|---|
| Foreign Language 223 Advanced Grammar and Reading | 3 |
| Business Administration 383 Business Law | 3 |
| Business Administration 363 Intermediate Accounting | 3 |
| Electives (Minor) | 6 |
| | 15 |

SENIOR YEAR

| | |
|---|---|
| Business Administration 453 Life Insurance | 3 |
| Business Administration 313 Marketing | 3 |
| Business Administration 323 Statistics | 3 |
| Electives (Minor) | 3 |
| History 173 American History | 3 |
| | 15 |

| | |
|---|---|
| Business Administration 343 Salesmanship | 3 |
| Electives (Minor) | 7 |
| History 183 American History | 3 |
| Industry 304 Office Practice | 4 |
| | 17 |

## TWO-YEAR COURSE IN SECRETARIAL SCIENCE

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Business Administration 143 Introduction to Business | 3 | Social Science 113 Introduction to Social Science | 3 |
| Business Education 132 Elementary Typewriting | 2 | Business Education 142 Elementary Typewriting | 2 |
| Mathematics 173 | 3 | Mathematics 183 | 3 |
| Business Education 153 Beginning Shorthand | 3 | Business Education 163 Beginning Shorthand | 3 |
| Physical Education 111 Freshman Practice or | | Physical Education 121 Freshman Practice or | |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| Sociology 213 Introduction to Sociology | 3 | Economics 213 Principles of Economics | 3 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Business Administration 253 Principles of Accounting | 3 | Business Administration 263 Principles of Accounting | 3 |
| Business Education 253 Advanced Shorthand | 3 | Business Education 263 Advanced Shorthand | 3 |
| Business Education 272 Advanced Typewriting | 2 | Business Education 382 Secretarial Practice | 2 |
| Business Education 372 Secretarial Practice | 2 | Business Education 282 Advanced Typewriting | 2 |
| Business Education 312 Office Machines | 2 | Political Science 123 State Government | 3 |
| Economics 223 Problems | 3 | Industry (Office Practice) | 4 |
| | 15 | | 17 |

## DESCRIPTION OF COURSES

### BUSINESS EDUCATION

**132-142. Elementary Typewriting. (BE 132 142 Elem Typ) (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. (Formerly 232-242). Prerequisite for 142-30 wpm. Lab fee: $4.50.

**153-163. Beginning of Shorthand. (BE 153 163 Shorthand) (3-0) Credit 3. I and II.** Thorough knowledge of the fundamental principles of Gregg Shorthand; emphasis on dictation and transcription. (Formerly 253-263.) Prerequisite for 163-40 wpm.

**272-282. Advanced Typewriting. (BE 272 282 Adv Typ) (0-5) Credit 2. I and II.** Development of skill in typewriting. (Formerly 372-382.) Prerequisite for 163-40 wpm and for 282-50 wpm. Lab fee: $4.50.

**302-304. Office Practice (BE 302-304 Offc Prac). Credit 2-4. I or II.** Active program which provides opportunity for practical experience under actual office conditions. Prerequisites: BE 282 and BE 263.

**372-382. Secretarial Practice. (BE 372-382 Sec Pract) (2-1) Credit 2. I and II.** Correlation of business skills with other duties of a secretary. Prerequisites: BE 263 and 282 or consent of the instructor. (Formerly 272-282.)

**312-322. Office Machines. (BE 312 322 Offc Mach) (0-4) Credit 2. I and II.** An opportunity to attain proficiency in the operation of office machines. Prerequisites: BE 142 and 163.

**253-263. Advanced Shorthand. (BE 253 263 Shorthand) (3-0) Credit 3. I and II.** Dictation and typed transcription. Prerequisite for 253-60 wpm and for 263-80 wpm.

**423. Teaching of Business Subjects. (BE 423 HS Meth) (3-0) Credit 3. I.** Recent trends in teaching commercial subjects on the high school level.

**433. Problems in Business Education. (BE 433 Problems) (3-0) Credit 3. II.** A survey of the problems in 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.

## BUSINESS ADMINISTRATION

**143. Introduction to Business. (BA 143 Introduct) (3-0) Credit 3.** The nature of business and its relationship to society. A survey of the various fields and functions of business. A prerequisite to all courses in business administration.

**253-263. Elementary Accounting. (BA 253 263 Elem Acct) (3-1) Credit 3. I and II.** The fundamental principles of double-entry bookkeeping and the analysis of financial statements. (Formerly 254-264.)

**313. Marketing. (BA 313 Marketing) (3-0) Credit 3. I.** An introduction to the fundamentals of marketing. Problems involving marketing procedures, policies and techniques are considered.

**323. Elementary Business Statistics. (BA 323 Statistics) (3-0) Credit 3.** Basic methods of collecting and presenting numerical data, together with analysis of frequency distributions, time series, reliability, index numbers and simple correlation.

**343. Salesmanship. (BA 343 Salesmanship) (3-0) Credit 3. II.** The approach to selling, how to meet objections, arouse desires and close a sale. (Formerly 363.)

**353-363. Intermediate Accounting. (BA 353 363 Accounting) (3-0) I. Credit 3. I. and II.** Theory and problems of valuation of assets; application of funds; corporation accounts and statements and their interpretation. Prerequisite: BA 253-263.

**373-383. Business Law. (BA 373 383 Bus Law) (3-0) Credit 3. I and II.** Fundamental principles of law most frequently involved in business transactions, including contracts, sales, partnerships, corporations, agency, negotiable instruments, property, bailments and insurance.

**393. Corporation Finance. (BA 393 Corp Finc) (3-0) Credit 3. I.** Corporate organization and control; securities; the management of fixed capital and working capital; reserve, surplus and dividend policies; investment banking and the securities market. Prerequisite: BA 263.

**423. Income Tax Accounting. (BA 423 Tax Acct) (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.** A survey of the real estate field with emphasis upon deeds, leases, zoning, brokerage, selling, advertising, property management and real estate law.

**453. Life Insurance. (BA 453 Life Ins) (3-0) Credit 3. I.** A study of the life insurance industry, companies, contracts and markets.

**463. Fire and Casualty Insurance (BA 463 Fire Ins) (3-0) Credit 3. II.** Economic services, contracts, benefits, and premiums in the field of fire and casualty insurance.

# Department of Economics and Geography

The Department of Economics and Geography offers (1) a major or minor in Economics, (2) a teaching major in Economics, (3) a minor in Geography and Social Science. Those persons selecting a teaching major in the Department are expected to select a teaching minor outside the Department.

For a major in the department, thirty semester hours are required, of which 12 must be in courses numbered above the Sophomore level. For a minor, students are required to present eighteen semester hours, of which 6 must be in courses numbered above the Sophomore level. The selection of courses must be made in consultation with the Head of the Department.

**Departmental Ruling on Academic Status:** In the interest of maintaining well-balanced academic standards, all majors and minors in the Department must maintain an average of "C" in the Freshman and Sophomore courses and an average of "B" in the Junior and Senior courses.

All students selecting a teaching major will be expected to do the usual off-campus practice teaching in education.

## INTEGRATED MINOR IN THE SOCIAL SCIENCES

Students may elect an integrated minor in the Social Sciences. The minor in the Social Sciences is planned primarily for the training of teachers, but may be chosen by other students who do not intend to teach when such a program meets their particular needs for professional training in other fields.

Students who elect such a program must complete twenty-one semester hours of course work in the social sciences exclusive of the general college requirement of six hours in American Government and the methods course in the teaching of Social Science Studies. Courses comprising this program must be drawn from the Department of History, Economics, Political Science, and Sociology. Elements of the integrated Social Science minor shall consist of a minimum of six semester hours each of American History and Economics, three semester hours each of Geography, Political Science and Sociology. Any exceptions from and additions to the integrated minor prescribed above are to be arranged in consultation with the Head of the Department of History.

For further information see the various offerings in the Departments of Social Science (History, Economics, Political Science and Sociology).

## SUGGESTED PROGRAM—(TEACHING) MAJOR IN ECONOMICS

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Social Science 113 | 3 | Political Science 113 | 3 |
| Introduction to Social Science | | National Government | |
| English 113 | 3 | English 123 | 3 |
| Grammar and Composition | | Reading and Composition | |
| Natural Science 113 | 3 | Natural Science 123 | 3 |
| College Science | | College Science | |
| Geography 163 | 3 | Geography 173 | 3 |
| Introduction to Geography | | Introduction to Geography | |
| Business Math. 113 or Math. 173 | 3 | Mathematics 123 or Mathematics 183 | 3 |
| Physical Education 111 | | Trigonometry or Applied Math. | |
| Freshman Practice or | | Physical Education 121 | |
| Military Science 111 | 1 | Freshman Practice or | |
| Elementary | | Military Science 121 | 1 |
| Industry | 2 | Elementary | |
| | — | Industry | 2 |
| | 18 | | — |
| | | | 18 |

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| English 213 Public Speaking | 3 |
| Economics 213 Principles of Economics | 3 |
| Foreign Language 113 Elementary French or Elementary Spanish or German | 3 |
| Political Science 123 State Government | 3 |
| Education 273 Pupil Growth and Development | 3 |
| Military Science 211 Elementary or | |
| Physical Education 211 Sophomore Practice | 1 |
| | 17 |

| Second Semester | Hrs. |
|---|---|
| English 223 Introduction to Literature | 3 |
| Economics 223 Economics Problems | 3 |
| Foreign Language 123 Elementary French or Elementary Spanish or German | 3 |
| Economics Economic History | 3 |
| Education 283 Pupil Growth and Development | 3 |
| Military Science 221 Elementary or | |
| Physical Education 221 Sophomore Practice | 1 |
| | 17 |

JUNIOR YEAR

| | |
|---|---|
| Education 293 Foundations | 3 |
| Foreign Language 213 Advanced Grammar and Reading (French, Spanish or German) | 3 |
| Economics 363 Economics of Consumption | 3 |
| Economics 353 Economic Statistics | 3 |
| History 173 United States 1492-1876 | 3 |
| | 15 |

| | |
|---|---|
| Education 323 High School Curriculum | 3 |
| Foreign Language 223 Reading and Grammar Review (French) or Advanced Grammar and Reading (Spanish or German) | 3 |
| Social Science 383 Teaching Social Studies in the High School | 3 |
| Electives | 3 |
| History 183 United States 1876 to Present | 3 |
| | 15 |

SENIOR YEAR

| | |
|---|---|
| Economics 443 Capitalism and Socialism | 3 |
| Economics 453 Labor Problems | 3 |
| Economics 403 Money and Banking | 3 |
| Economics 313 Public Finance and Taxation | 3 |
| Electives | 3 |
| | 15 |

| | |
|---|---|
| Education 423 School and Community Relations | 3 |
| Education 406 Student Teaching | 6 |
| Economics 423 Economic Theory | 3 |
| Economics 481 Seminar in Economics | 1 |
| Electives | 3 |
| | 15 |

## SUGGESTED PROGRAM—(GENERAL) MAJOR IN ECONOMICS

FRESHMAN YEAR

**(Same as that listed for the Teaching Program)**

SOPHOMORE YEAR

| | |
|---|---|
| English 213 Public Speaking | 3 |
| Economics 213 Principles of Economics | 3 |
| Foreign Language 113 Elementary French or Elementary Spanish or German | 3 |
| Natural Science 113 College Science | 3 |
| Bus. Adm. 253 Accounting | 3 |
| Military Science 211 Elementary or | |
| Physical Education 211 Sophomore Practice | 1 |
| | 16 |

| | |
|---|---|
| English 223 World Literature | 3 |
| Economics 223 Economic Problems | 3 |
| Foreign Language 123 Elementary French or Elementary Spanish or German | 3 |
| Natural Science 123 College Science | 3 |
| Bus. Adm. 263 Accounting | 3 |
| Military Science 221 Elementary or | |
| Physical Education 221 Sophomore Practice | 1 |
| | 16 |

JUNIOR YEAR

| First Semester | Hrs. |
|---|---|
| Foreign Language 213 | 3 |
| Advanced Grammar and Reading (French, German or Spanish) | |
| Economics 303 | 3 |
| Public Finance and Taxation | |
| Economics 423 | 3 |
| Economic Theory | |
| Political Science 113 | 3 |
| National Government | |
| History 173 | 3 |
| United States 1492 to 1876 | |
| | 15 |

| Second Semester | Hrs. |
|---|---|
| Foreign Language 223 | 3 |
| Reading and Grammar Review (French) or Advanced Grammar and Reading (Spanish or German) | |
| Economics 333 | 3 |
| Economic History | |
| Political Science 123 | 3 |
| American State Government | |
| Electives | 3 |
| History 183 | 3 |
| United States 1876 to Present | |
| | 15 |

SENIOR YEAR

| | |
|---|---|
| Economics 353 | 3 |
| Economic Statistics | |
| Economics 481 | 1 |
| Economics Seminar | |
| Economics 403 | 3 |
| Money and Banking | |
| Economics 453 | 3 |
| Labor Problems | |
| Electives | 6 |
| | 16 |

| | |
|---|---|
| Economics 463 | 3 |
| Modern Economic Thought | |
| Economics 323 | 3 |
| Public Finance and Taxation | |
| Economics 473 | 3 |
| International Trade | |
| Electives | 6 |
| Economics 443 | 3 |
| Capitalism and Socialism | |
| | 15 |

# DESCRIPTION OF COURSES

## ECONOMICS

**203. Survey of Economics. (Econ 203 Survey) (3-0) Credit 3. I or II.** Study of production, consumption and other economic institutions.

**213. Principles of Economics. (Econ 213 Principles) (3-0) Credit 3. I.** Basic economic principles as applied to contemporary economic institutions, determination of business and industrial organization; pricing, value, money and banking; and international trade and exchange.

**223. Economic Problems (Econ 223 Problems) (3-0) Credit 3. II.** An application of economic principles to current economic problems and institutions, monopoly, business cycles, labor problems, public expenditures and revenue, public utilities, and comparative economics. Prerequisite: Economics 213. (This course is a prerequisite to all courses in economics numbered 300 and above.)

**313-323. Public Finance and Taxation. (Econ 313-323 Publ Finc) (3-0) Credit 3. I and II.** Introduction to the field of government finance; character and growth of public expenditures; public debt creation and fiscal policy; theories, principles and problems of taxation. Prerequisite: Economics 223.

**332 or 333. Economic History. (Econ 332-333 Econ Hist) (2 or 3-0) Credit 2 or 3. I.** The development of agriculture, commerce, industry and transportation from colonial times to the present. Prerequisite: Economics 223.

**342-343. Personnel Management. (Econ 342 or 343 Prsnl Mgt) (2 or 3-0) Credit 2 or 3. II.** The development and importance of employee-employer relationships. Prerequisite: Economics 223.

**353. Economic Statistics. (Econ 353 Statistics) (3-3) Credit 3. I.** Techniques of gathering, presenting, analyzing and interpreting numerical data. Prerequisite: Economics 223.

**362 or 363. Economics of Consumption. (Econ 362-363 Consumptn) (2 or 3-0) Credit 2 or 3. II.** Relations between consumption, saving, social income and its fluctuations. Prerequisite: Economics 223.

**403. Money and Banking (Econ 403 Banking) (3-0) Credit 3. I or II.** A study of the theory of money and banking with emphasis upon monetary policy. Special consideration is given to the implication of methods, monetary and banking control. Prerequisite: Economics 223.

**413. Labor Legislation. (Econ 413 Labor Legsln) (3-0) Credit 3. II.** Protective, legislation dealing with wages, hours, child labor, old age benefits, and unemployment compensation. Prerequisites: Economics 223 and 343.

**423. History of Economic Theory and Policies (Econ 423 Econ Thry) (3-0) Credit 3. I or II.** Analysis and appraisal of early economic theories and their contributions to civilization. Prerequisite: Economics 333.

**443. Capitalism and Socialism. (Econ 443 Capitalism) (3-0) Credit 3. II.** Capitalism, Unionism, Socialism, Fascism, and individualistic, anticipatalism, each viewed under the headings of conditions, theories and movements. Prerequisites: Economics 413 and 343.

**453. Labor Problems. (Econ 453 Labr Prob) (3-0) Credit 3. II.** The evolution of management union agreements since the turn of the twentieth century. Prerequisites: Economics 223 and 413.

**462 or 463. Modern Economic Thought. (Econ 462 or 463 Econ Thought) (2 or 3-0) Credit 2 or 3. II.** Analysis and appraisal of recent and contemporary economics and their contribution to public policy. Prerequisites: Economics 323 and 413.

**481. Seminar in Economics. (Econ 481 Seminar) (1-0) Credit 1. I or II.** Informal seminar meeting once per week to allow staff members and economics majors and minors to develop **esprit de corps** and to discuss contemporary economic developments. (May be repeated.)

**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, foreign independence. Prerequisites: Economics 223 and 333.

## GEOGRAPHY

**163-173. Introduction to Geography. (Geog 163-173 Intr Geog) (3-0) Credit 3. I.** General introduction to field of geography; a study of man in his geographical environment.

**183. Economic Geography. (Geog 183 Econ Geog) (3-0) Credit 3. II.** Geographic conditions affecting industries throughout the world; natural resources, raw materials, and production and distribution of goods in relation to industries.

**273. Principles of Human Geography. (Geog 273 Human Geog) (3-0) Credit 3.** Economic, social and political adjustments which man makes to various habitats natural environmental factors as are related to human life.

**313. World Regional Geography. (Geog 313 Regional) (3-0) Credit 3.** World regions as the home of man; practical logical and systematic approach to field of geography; a survey of the world in terms of outlook; regional types.

**423. Industrial and Commercial Geography. (Geog 423 Industrial) (3-0) Credit 3.** Fundamental geographic factors which enter into production, distribution and consumption of raw materials of food, clothing, shelter, metals, minerals and fuels; fundamentals of manufacturing and principles of commerce.

**473. The Teaching of Geography. (Geog 473 HS Methods) (3-0) Credit 3.** Foundation course for teachers and supervisors of Geography; organization of courses of study; how and where to obtain materials; place and use of textbooks; and methods of presentation suitable for grades on Junior and Senior high school level.

### SOCIAL SCIENCE

**103. Survey of Social Science (SoSc 103 Survey) (3-0) Credit 3.** Man and the human social order. Lectures, special reports, discussions and selected readings.

**113-123. Introduction to Social Science (SoSc 113-123 Introduction) (3-0) Credit 3. I and II.** Historical background of social, economic and political problems of modern society.

**383. Methods of Teaching Social Studies in Secondary Schools. (SoSc 383 HS Methods) (3-0) Credit 3.** Methods and devices for teaching History, Economics, Sociology and Political Science, as well as various social studies on the Secondary level. Selection and use of appropriate instructional materials.

**483. Social Studies in Elementary School. (SoSc 483 Elem 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.

## Department of Education

### MAJOR REQUIREMENTS

Students wishing to prepare themselves for teaching in the elementary school should follow the suggested program for a major in Elementary Education. This program includes the necessary work in General Education, Professional Education (including student teaching), endorsements and electives to meet the Texas Education Agency's requirements for a Provisional Elementary Certificate. Elementary Education majors should carefully select their minor from an area related to their teaching field in order to supplement or strengthen them in the area of the major specialization. Elementary Education majors will find it valuable to have competencies in public school music appropriate for the elementary school.

In an effort to upgrade academic standards, all majors and minors must maintain an average of "C" or above in Freshman and Sophomore courses. An average of "B" or above must be maintained in the major sequence of professional and content courses offered during the Sophomore, Junior and Senior Years.

Each prospective teacher is required to have student teaching experiences which include at least sixteen weeks, one-half day in the campus training school and/or a minimum of eight weeks in one of the college approved off-campus schools.

1. Students taking Education 306 or Education 406 will be required to do only eight weeks off-campus teaching, a full day, for six hours credit.
2. Students interested in qualifying for a Kindergarten-Primary teaching assignment will be required to take Education 309, eight weeks off-campus teaching, full day, in a state approved kindergarten, and one-half day on-campus for eight weeks, for nine hours credit or an on-campus assignment of at least eight weeks, full-day, in the College Kindergarten and one-half day on campus for eight weeks as a student teacher with the primary grades.
3. R. O. T. C. students taking Education 306 or Education 406 may spend sixteen weeks, one-half day, in the campus training school.
4. All students who plan to take on-campus student teaching—Education 306, Education 309 and Education 406 are requested to obtain a written permit from the Dean of Instruction before registering for the course.

5. All off-campus student teachers will assume financial responsibilities for student teaching transportation to and from training centers.

6. All students who wish to do student teaching should file their application forms for student teaching in the Office of Education by May 1, prior to the regular session in which student teaching is to be taken.

7. All students approved for student teaching (Education 306, Education 309 and Education 406) should report to the Director of Student Teaching for assignments.

8. The student is advised to plan his budget so that he will be able to meet his personal financial obligations incurred while student teaching.

ALL STUDENTS interested in making declaration of minors offered by the Department of Education should secure advisement and approval through the Department of Education.

## A MINOR IN ELEMENTARY EDUCATION

A Minor in Elementary Education has the prerequisite of a major in some content field or at least the professional core (Education 273-283, Education 293, Education 423 and Methods).

The required eighteen semester hours for a minor in Elementary Education are as follows:

| | Hrs. |
|---|---|
| Art Education 253-263 Elementary School Art | 6 |
| Education 473 Elementary School Science | 3 |
| Music 253-263 Elementary School Music | 6 |
| Education 463 Elementary School Reading and Literature | 3 |
| | 18 |

## A MINOR IN KINDERGARTEN EDUCATION

Students who desire to minor in Kindergarten Education should secure advisement and approval from the Department of Education. All persons enrolled in the field should take Education 353. Kindergarten-Primary Curriculum, instead of Education 363—Elementary School Curriculum and Education 309—Student Teaching (Kindergarten-Primary) instead of Education 306—Student Teaching (Elementary School) or Education 406—Student Teaching (Secondary School). A major in Elementary Education and a minor in Kindergarten Education will permit students to teach either Kindergarten or Primary grade levels.

| | | | |
|---|---|---|---|
| Foods | 113 | Elementary Nutrition | 3 |
| Child Dev. | 413 | Child Guidance | 3 |
| Soc. | 493 | Problems of Child Welfare | 3 |
| Ed. | 432 | Children's Literature | 3 |
| Ed. | 413 | Kindergarten Methods and Materials | 3 |
| Ed. | 353 | Kindergarten-Primary Curriculum | 3 |
| Ed. | 309 | Student Teaching (Kindergarten-Primary) | 9 |
| | | | 26 |

## A MINOR IN ART EDUCATION

Students who wish to minor in Art Education should secure advisement and approval by the Department of Education.

| | Hrs. |
|---|---|
| Art Education 253-263 Elementary School Art | 6 |
| Art Education 353 Drawing and Composition | 3 |
| Art Education 373 History of Art | 3 |
| Art Education 383 Special Projects | 3 |
| Art Education 453 Organization of Instrument in Elementary School Art | 3 |
| | 18 |

## A MINOR IN PSYCHOLOGY

| | | |
|---|---|---|
| Psy. 113 | General Psychology | 3 |
| Psy. 123 | Advanced General Psychology | 3 |
| Psy. 233 | Fundamentals of Statistics | 3 |
| Psy. 333 | Social Psychology | 3 |
| Psy. 343 | Abnormal Psychology | 3 |
| Psy. 443 | Psychology of Personality | 3 |
| | | 18 |

## A SUGGESTED PROGRAM FOR A MAJOR IN ELEMENTARY EDUCATION

### FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 113 | 3 | English 123 | 3 |
| Grammar and Composition | | Reading and Composition | |
| Foreign Language 113 | 3 | Foreign Language 123 | 3 |
| Elementary French or | | Elementary French or | |
| Elementary Spanish | | Elementary Spanish | |
| History 173 | 3 | History 183 | 3 |
| American History | | American History | |
| Mathematics 173 | 3 | Mathematics 183 | 3 |
| Applied Mathematics | | Applied Mathematics | |
| Natural Science 113 | 3 | Natural Science 123 | 3 |
| College Science | | College Science | |
| Physical Education 111 (Women) | | Physical Education 121 (Women) | |
| Freshman Practice or | | Freshman Practice or | |
| Military Science 111 (Men) | 1 | Military Science 121 (Men) | 1 |
| Elementary | | Elementary | |
| Industry | 2 | Industry | 2 |
| | 15 | | 15 |

### SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Political Science 113 | 3 | Political Science 123 | 3 |
| American National Government | | American State Government | |
| English 213 | 3 | English 223 | 3 |
| Public Speaking | | Introduction to Literature | |
| Music 253 | 3 | Music 263 | 3 |
| Elementary School Music | | Elementary School Music | |
| Geography 163 | 3 | Education 293 | 3 |
| Introduction to Geography | | Foundations of American Education | |
| Education 273 | 3 | Education 283 | 3 |
| Pupil Growth and Development | | Pupil Growth and Development | |
| Physical Education 211 | | Physical Education 221 | |
| Sophomore Practice (Women) or | | Sophomore Practice (Women) or | |
| Military Science 211 (Men) | 1 | Military Science 221 (Men) | 1 |
| Elementary | | Elementary | |
| | 15 | | 15 |

### JUNIOR YEAR

| | | | |
|---|---|---|---|
| Education 473 | 3 | Education 483 | 3 |
| Elementary School Science | | Elementary School Social Studies | |
| Education 363 | 3 | Education 463 | 3 |
| Elementary School Curriculum | | Foundation of Reading Instruction | |
| Sociology 103 | | Education 492 | 2 |
| Family Life or | | Arithmetic for Elem. Teachers | |
| Social Science 103 | 3 | Education 433 | 3 |
| Survey | | Language Arts in Elementary School | |
| Education 432 | 2 | Art Education 263 | 3 |
| Children's Literature | | Elementary School Art | |
| Art Education 253 | 3 | Minor | 3 |
| Elementary School Art | | | 17 |
| Minor | 3 | | |
| | 17 | | |

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| Education 423 | 3 |
| School and Community Relations | |
| Education 306 | 6 |
| Student Teaching in Elementary School | |
| Minor | 3 |
| Physical Education 203 | 3 |
| Personal Hygiene | |
| | 15 |

| Second Semester | Hrs. |
|---|---|
| Minor | 9 |
| Electives | 6 |
| | 15 |

## SUGGESTED ELECTIVES

| | |
|---|---|
| Education 413 | 3 |
| Kindergarten Methods and Materials | |
| Education 443 | 3 |
| Tests and Measurements | |
| English 373 | 3 |
| Journalism | |
| Sociology 213-223 | 6 |
| Introductory | |
| Biology 134 | 4 |
| General Botany | |
| History 453 | 3 |
| Contemporary U. S. History | |
| Sociology 303 | 3 |
| The Family | |
| Physical Education 262 | 2 |
| Folk Dancing | |
| Physical Education 333 | 3 |
| Methods and Materials for Teaching Health and Physical Education in the Elementary School | |
| Audio-Visual Education 303 | 3 |
| Audio-Visual Education | |

# DESCRIPTION OF COURSES

## ART EDUCATION

**253-263. Elementary School Art. (ArEd 253-263 Elem. Art) (6-0) Credit 6. I and II.** Elements and Principles of art as forms of creative expression in relation to the child, to the classroom, and in connection with the entire school curriculum; techniques in developing creative ability. Lab fee: $2.00.

**353. Drawing and Composition. (ArEd. 353 Draw Comp) (6-0) Credit 3. I.** A course in basic principles and elements of drawing, compositions, and painting; exploration of various media and subject matter. Lab fee: $2.00.

**373. History of Art. (ArEd 373 History) (3-0) Credit 3. I.** A study of art from prehistoric period to the contemporary period. The course develops an appreciation of art.

**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. Lab fee: $2.00.

**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. Lab fee: $2.00.

## EDUCATION

**Music 253-263. Elementary School Music Methods. (Musc 253-263 Elem Meth) (6-0) Credit 6. I and II.** School music methods and materials; care and development of child voice.

**273-283. Pupil Growth and Development. (Educ 273-283 Pupl Dvlp) (6-0) Credit 6. I and II.** Comprehensive study of pupil growth and development from conception through maturity; scientific understandings about physical, motor, language, emotional, social and intellectual development as they affect the learning process.

**293. Foundations of American Education. (Educ 293 Foundations) (3-0) Credit 3. I or II.** Scope and general character of the United States public school system with emphasis on its organization, administration, and duties and responsibilities of the school personnel.

**303-306. Student Teaching. (Education 303-306 Elem Pr Tchg). Credit 3-6. I and II.** Prerequisites: a "B" average in Education 273-283, Art Education, Education 293, 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.

**309. Kindergarten-Primary Student Teaching. (Education 309 Kindergarten Teaching) Credit 9. I or II.** Prerequisites: A "B" average in Education 273-283, and in all required methods courses for a major in Kindergarten Education. Supervised on-campus and off-campus student teaching. One-half of time must be spent in a Kindergarten school situation, or its equivalent.

**323. High School Curriculum. (Educ 323 HS Curr) (3-0). Credit 3. I and II.** Prerequisites: Education 273-283. Principles of the organization, and construction of the high school curriculum and methods of its implementation.

**333. Teaching High School Subjects. (Ed 333 HS Methods) (3-0) Credit 3. I and II.** Prerequisite: Education 273-283.

A. Teaching Business Subjects in the High School (See Business Education 423—Teaching Business Subjects).

B. Teaching English in the High School (See English 463—Teaching of English).

C. Teaching Mathematics in the High School (See Mathematics 353—Methods of Teaching Mathematics in the High School).

D. Teaching Music in the High School (See Music 383—High School Methods).

E. Teaching Science in the High School (See Science 333—Materials and Methods for Science Students).

F. Teaching Physical Education in the High School (See Physical Education 343—Methods and Materials in Physical Education).

G. Teaching Social Studies in the High School (See: Sociology 383 — Methods of Teaching Social Studies in Secondary Schools).

H. Teaching Geography (See Geography 473—Methods of Teaching Geography).

**353. Kindergarten-Primary Curriculum (Educ 353 Kndrgn Curr) (3-0) Credit 3. I.** Prerequisites: Education 273-283. Encompasses the all-round growth of kindergarten-primary children; the acquisition of skills, attitudes, ideals, interests, concepts, and information that will help children to improve their adjustment.

**363. Elementary School Curriculum. (Educ 363 Elem Curr) (3-0) Credit 3. I.** Prerequisite: Education 273-283. Encompasses the all-round growth of children; the acquisition of skills, attitudes, ideals, interest, concepts, information that will help children to improve their adjustment.

**383. Educational Psychology. (Educ 383 Educ Psyc) (3-0) Credit 3. I or II.** Educationally significant factors involved in the interaction of pupils, teachers, administrators, and community.

**403-406. Student Teaching. (Secondary School) (Educ 403-406 HS Prac Tch) Credit 3-6. I and II.** Supervised on-campus and off-campus student teaching. Students should make application for approval to student teach by May 1 prior to the school year in which student teaching is desired. Prerequisites: Education 323, 273-283, Education 293, High School Methods courses and recommendation of major advisors.

**413. Kindergarten Methods and Materials. (Educ 413 Kndrgn Meth) (3-0) Credit 3. I.** A study of selection and use of materials for program organization, creative sex-expression, physical and mental activities, directing work habits and informal experiences in language arts and number work.

**423. School and Community Relations. (Educ 423 Sch Rltns) (3-0) Credit 3. I and II.** Restricted to student teachers. Problems of daily program making that grow out of the interaction between the community (rural and urban) and the school.

**433. Language Arts in the Elementary School. (Educ 433 El 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 Tch Reading) (3-0) Credit 3. I or II.** The various stages in the development of reading. Special emphasis on reading readiness developing experience backgrounds, diagnostic approaches, meeting individual needs and interests, and enriching the individual reading program.

**473. Elementary School Science. (Educ 473 Elem Science) (3-0) Credit 3. I and II.** Prerequisites: Education 273-283, Education 363, and Education 293. Actual experiences in making science more meaningful through the use of community resources and understanding basic science concepts; methods of teaching, selecting and organizing subject matter, laboratory experiences and individual projects.

**483. Elementary School Social Studies. (Educ 483 Elem So Stud) (3-0) Credit 3. II.** Prerequisites: Education 273-283, Education 363, and Education 293. 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.

**492. Arithmetic for Elementary Teachers. (Educ 492 El Arith) (2-0) Credit 2. II.** Designed to develop methods and materials for teaching the fundamental concepts and meanings in quantitative thinking in elementary grades.

**493. Educational Philosophy (Ed 493 Educ Phil) (3-0) Credit 3.** Philosophies of education and their implications for curriculum development, community well-being, and individual human adjustments.

## PSYCHOLOGY

**113. General Psychology. (Psy 113 Gen Psych) (3-0) Credit 3. I.** 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 Psych Adv) (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.

**333. Social Psychology. (Psy 333 Soc Psych) (3-0) Credit 3. I.** Personality development through personal-social and cultural-social conditioning; larger group relationships. Prerequisite: Psychology 123, General Psychology.

**343. Abnormal Psychology. (Psy 343 Abnormal) (3-0) Credit 3. 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 covergence of constitutional, psychological, social and cultural factors in the development of the normal individual and his adjustment.

**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 covergence 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 Introduct) (3-0) Credit 3. I.** For beginning philosophy students; methods and theories of the field. Prerequisites: Sophomore standing.

**323. Ethics. (Phil 323 Ethics) (3-0) Credit 3. II.** Development of morals, standards of values, conscience and methods of social control. Prerequisite: Sophomore standing.

**413. History of Ancient, Medieval and Modern Philosophy. (Phil 413 History) (3-0) Credit 3. I.** Philosophical development from Ancient Greece to Present. Prerequisite: Philosophy 303.

## Department of English

### MAJOR REQUIREMENTS

For the degree of Bachelor of Arts with a major in English, twenty-seven hours are required excluding English 113, 123, 213 and 223, which are general college requirements, and English 463 The Teaching of English, which is counted as education. The following courses are required:

| | | |
|---|---|---|
| English 333 | American Literature (1619-1860) | 3 |
| English 343 | American Literature (1861 to Present) | 3 |
| English 353 | English Language | 3 |
| English 363 | Advanced Grammar | 3 |
| English 373 | Journalism | 3 |
| English 383 | Romantic Movement | 3 |
| English 393 | Victorian Literature | 3 |
| English 453 | Medieval Literature | 3 |
| English 423 | Shakespeare | 3 |

### MINOR REQUIREMENTS

For a minor in English, the following courses are required in addition to the 12 hours required by the General Education Program.

| | | |
|---|---|---|
| English 343 | American Literature | 3 |
| English 353 | English Language | 3 |
| English 363 | Advanced Grammar | 3 |
| English 373 | Journalism | 3 |
| English 463 | Methods of Teaching English | 3 |

**Departmental Ruling on Academic Status:** In the interest of maintaining acceptable academic standards, all majors and minors in the Department must maintain an average of "B" in the Junior and Senior Courses.

# SUGGESTED FOUR-YEAR PROGRAM IN ENGLISH

## FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Natural Science 113 College Science | 3 | Natural Science 123 College Science | 3 |
| Mathematics 113 College Algebra | 3 | Mathematics 123 Trigonometry | 3 |
| Foreign Language 113 Elementary Spanish, French, or German | 3 | Foreign Language 123 Elementary Spanish, French, or German | 3 |
| Social Science 113 Introduction | 3 | History 173 American History | 3 |
| Military Science 111 (Men) Elementary or | | Military Science 121 (Men) Elementary or | |
| Physical Education 111 (Women) Freshman Practice | 1 | Physical Education 121 (Women) Freshman Practice | 1 |
| Industry | 2 | Industry | 2 |
| | 18 | | 18 |

## SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| English 213 Fundamentals of Speech | 3 | English 233 English Literature | 3 |
| Foreign Language 213 Advanced Grammar and Reading (French, Spanish or German) | 3 | Foreign Language 223 Reading and Grammar Review (French) or (Advanced Grammar and Reading (Spanish or German) | 3 |
| History 183 American History | 3 | History 303 England 1485 to the Present | 3 |
| Education 273 Pupil Growth and Development | 3 | Education 283 Pupil Growth and Development | 3 |
| Political Science 113 American National Government | 3 | Political Science 123 State Government | 3 |
| Physical Education 211 (Women) Sophomore Practice or | | Physical Education 221 (Women) Sophomore Practice or | |
| Military Science 211 (Men) | 1 | Military Science 221 (Men) | 1 |
| | 16 | | 16 |

## JUNIOR YEAR

| | | | |
|---|---|---|---|
| English 333 American Literature | 3 | English 343 American Literature | 3 |
| English 353 English Language | 3 | English 363 Advanced Grammar | 3 |
| English 373 Journalism | 3 | English 383 Romantic Movement | 3 |
| Education 293 Foundations | 3 | Electives (Minor) | 6 |
| Elective (Minor) | 3 | | 15 |
| | 15 | | |

## SENIOR YEAR

| | | | |
|---|---|---|---|
| Education 323 High School Curriculum | 3 | Education 423 School and Community Relations | 3 |
| English 393 Victorian Literature | 3 | Education 406 Practice Teaching | 6 |
| English 423 Shakespeare | 3 | Electives | 6 |
| Elective | 3 | | |
| English 463 Teaching of English | 3 | | |
| | 15 | | 15 |

## DESCRIPTION OF COURSES

**103. Communication Skills. (Eng 103 Skills) (3-0) Credit 3.** Required of all students whose score on the English Placement Test indicates deficiency in preparation. Thorough review of basic composition fundamentals; development of reading techniques; remedial exercises, diagnostic tests. Students are required to spend a minimum of two hours per week, in addition to that required for class, in clinic-conference at the Communications Center where individual instruction is given in both reading and composition. Upon successful completion of English 103, students are required to take English 113 and 123.

**113. Grammar And Composition. (Eng 113 Gram Comp) (3-0) Credit 3.** Review of functional grammar; practice in composition. N. B.—English 113, 123, 213 and 223 must be taken in proper sequence.

**123. Reading And Composition. (Eng 123 Read Comp) (3-0) Credit 3.** Continued review of composition techniques; written work based on provocative readings; introduction to elementary methods of research. Prerequisite: English 113.

**133, 143. Trade English. (Eng 133 143 Trade Eng) (3-0) Credit 3. I, II.** Principles of effective composition with emphasis on business correspondence.

**213. Fundamentals of Speech. (Eng 213 Speech Fund) (3-0) Credit 3. I and II.** Emphasis upon remedial and corrective elements in training for effective oral and communication under realistic conditions. Prerequisite: English 123.

**223. Introduction to Literature. (Eng 223 Intr Litr) (3-0) Credit 3. I, II.** Reading for understanding and enjoyment; emphasis upon development of effective reading habits; introduction to basic literary masterpieces and representative modern and contemporary works. Prerequisite: English 213.

**233. English Literature. (Eng 233 Eng Litr) (3-0) Credit 3. I.** 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 223).

**333. American Literature (Eng 333 Amer Litr) (3-0) Credit 3. II.** Survey of literature with representative selections from chief writers from 1619 to 1860. Prerequisite: English 223.

**343. American Literature (Eng 343 Amer Litr) (3-0) Credit 3. II.** Survey of literature with representative selections from chief writers from 1861 to present. Prerequisite: English 223.

**353. English Language. (Eng 353 Eng Lang) (3-0) Credit 3. I.** Sounds, grammar, vocabulary of the language. Must be taken while in residence for credit towards major or minor. (For majors and minors only.) Prerequisite: English 233.

**363. Advanced Grammar (Eng 363 Adv Gram) (3-0) Credit 3. I.** Review of functional grammar; further practice in composition and research methods. Prerequisite: English 223 or 233.

**373. Journalism. (Eng 373 Journalism) (3-0) Credit 3. I and II.** Theory and practice in different forms of modern journalism; practical work.

**383. The Romantic Movement. (Eng 383 Romantic Mvmt) (3-0) Credit 3. I.** Chief literary works of the period with emphasis upon Wordsworth, Coleridge, Byron, Shelley, and Keats. Prerequisite: English 233.

**393. Victorian Literature. (Eng 393 Vict Litr) (3-0) Credit 3. I and II.** Representative selections from leading poets and prose writers of the period. Prerequisite: English 233.

**413. Eighteenth Century Literature. (Eng 413 18th Cent) (3-0) Credit 3. I.** Poetry and prose of the "Neo-Classical" movement and the "Pre-Romantic" period. Prerequisite: English 333.

**423. Shakespeare. (Eng 423 Shakespre) (3-0) Credit 3. I.** 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.** Major writings and writers of the Medieval Period. Prerequisite: English 233 and 243.

**463. Teaching of English (Equivalent of Ed 333) (Eng 463 HS Meth) (3-0) Credit 3. II.** Methods and materials in teaching of English in junior and senior high schools. Prerequisite: Fulfillment of all English requirements.

**473. Writing Clinic (Eng 473 Wrtng Clinic) (3-0) Credit 3.** English fundamentals: aims to increase oral and written English proficiency.

## Department of History

History majors are required to present thirty-three semester hours, fifteen of which either are required by the department, or are implicit in the departmental requirement by virtue of institutional regulation.

The following courses are required of all majors:

143 Survey of Civilization to 1500
153 Survey of Civilization, 1500 to Present
213 The United States, 1492-1837
223 The United States, 1837-1898
363 Historical Methods (Optional 383)
402 Historical Investigative Paper (credit optional)

The remaining eighteen hours may be distributed among the areas listed below in such a way as to provide for the following patterns of concentration:

**a. Contemporary World Interests**

353. Europe, 1914 to the Present
373. Problems of Latin America
433. American Foreign Relations, 1775 to the Present
453. Contemporary United States, 1898 to the Present
473. The Far East
523. Imperialism

**b. The American Interest**

323. The New South, 1865 to the Present
333. Economic History of the United States
413. Sectionalism and the Civil War
423. Seminar in American History with special reference to Texas and the Southwest
433. American Foreign Relations
453. Contemporary United States
463. History of the Negro

**c. European Interests**

103. Medieval Europe
113. Europe, 1500 to 1815
123. Europe, 1815 to 1914
303. England, 1485 to the Present
353. Europe, 1914 to the Present
513. The French Revolution and Napoleon
523. Imperialism

Minors in History must present eighteen hours, twelve of which (excluding History 363 and 402) must be taken from the departmental required courses. The remaining six hours may be selected after consultation with the assigned departmental advisor. Social Science minors are required to take History 213 and 223 in satisfaction of the American History requirement.

In the interest of the maintenance of proper academic standards, the Department has ruled that all students majoring or minoring in the Department must maintain in the lower college courses of the Department (Freshman and Sophomore) the average of "C" and in the upper college courses (Junior and Senior) the average of "B."

Students may elect an integrated minor in the Social Sciences. The minor in the Social Sciences is planned primarly for the training of teachers, but may be chosen by other students who do not inteend to teach when such a program meets their particular needs for professional training in other fields.

Students who elect such a program must complete twenty-one semester hours of course work in the social sciences exclusive of the general college requirement of six hours in American Government and the method course in the teaching of Social Studies. Courses comprising this program must be drawn from the Department of History, Economics, Political Science, and Sociology. Any exceptions from and additions to the integrated minor prescribed above are to be arranged in consultation with the Head of the Department of History.

For further information see the various offerings in the Department of Social Science (History, Economics, Political Science and Sociology.)

## SUGGESTED PROGRAM FOR HISTORY MAJORS

### FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| History 143<br>Civilization to 1500 | 3 | History 153<br>Civilization, 1500 to 1914 | 3 |
| English 113<br>Grammar and Composition | 3 | English 123<br>Reading and Composition | 3 |
| Mathematics 173 or 113<br>Elements of Applied Math or College Algebra | 3 | Mathematics 183 or 123<br>Elements of Applied Math or Trigonometry | 3 |
| Natural Science 113<br>College Science | 3 | Natural Science 123<br>College Science | 3 |
| Political Science 113<br>National Government | 3 | Geography 173<br>Introduction to Geography | 3 |
| Military Science 111<br>Elementary or<br>Physical Education Practice 111<br>(Women) Freshman Practice | 1 | Physical Education 121<br>Freshman Practice (Women) or<br>Military Science 121<br>Elementary (Men) | 1 |
| Industry<br>Library Science | 2 | Industry<br>Library Science | 2 |
| | 18 | | 18 |

### SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| History 213<br>The United States, 1492-1837 | 3 | History 223<br>The United States, 1837-1898 | 3 |
| Foreign Language 113<br>Elementary French or German | 3 | Foreign Language 123<br>Elementary German or French | 3 |
| Education 273<br>Pupil Growth and Development | 3 | Sociology 343<br>Social Problems | 3 |
| Political Science 123<br>American State Government | 3 | Economics 223<br>Economic Problems | 3 |
| Economics 213<br>Principles of Economics | 3 | Education 283<br>Pupil Growth and Development | 3 |
| Military Science 211<br>Elementary (Men) or<br>Physical Education 211<br>Sophomore Practice (Women) | 1 | Military Science 221<br>Elementary (Men) or<br>Physical Education 221<br>Sophomore Practice (Women) | 1 |
| | 16 | | 16 |

JUNIOR YEAR

| First Semester | Hrs. |
|---|---|
| History | 6-9 |
| English 213 | 3 |
| Public Speaking | |
| Foreign Language 213 | 3 |
| French or German | |
| Grammar and Reading | |
| Education 323 | 3 |
| High School Curriculum | |
| Military Science 313 | 3 |
| Advanced—Optional | |
| | 15 or 18 |

| Second Semester | Hrs. |
|---|---|
| History | 6-9 |
| (Begin Investigative Paper) | |
| History 383 | 3 |
| High School Methods and | |
| Materials—Social Studies | |
| English 223 | 3 |
| Introduction to Literature | |
| Foreign Language 223 | 3 |
| French or German | |
| Grammar and Reading | |
| Military Science 323 | 3 |
| Advanced—Optional | |
| | 15 or 18 |

SENIOR YEAR

| | |
|---|---|
| History | 3-6 |
| Education 293 | 3 |
| Foundations of American Education | |
| Education 423 | 3 |
| School and Community Relations | |
| Military Science 413 | 3 |
| Advanced—Optional | |
| | 12 or 15 |

| | |
|---|---|
| History | 3-6 |
| Education 406 | 6 |
| Student Teaching | |
| Military Science 423 | 3 |
| Advanced—Optional | |
| | 12 or 15 |

# DESCRIPTION OF COURSES

## EUROPEAN HISTORY

**103. Medieval Europe. (Hist 103 Medieval) (3-0) Credit 3.** Europe from the fall of Rome to 1500; lectures, special reports, selected readings; open on demand; consent of instructor.

**113. Europe 1500-1815. (Hist 113 Europe 1500) (3-0) Credit 3. I.** Europe from the Protestant Reformation to the Congress of Vienna. (Lectures, notebooks, quiz section; open on demand.)

**123. Europe, 1815-1914. (Hist 123 Europe 1815) (3-0) Credit 3. II.** Europe from the fall of Napoleon to World War I. (Lectures, notebooks, quiz sections. Open on demand.)

**143. Survey of Civilization, to 1500. (Hist 143 Civilzatn) (3-0) Credit 3.** Ideals and institutions connected with the political, social and economic life during periods of Greece, Rome, Feudalism, Renaissance, Reformation. Lectures, reading, test, special reports, and clinics.

**153. Survey of Civilization, 1500 to Present. (Hist 153 Civilzatn) (3-0) Credit 3.** Ideals and institutions with political, social and economic life in the period of rational liberalism and nationalism, the French Revolution, Nineteenth Century English Liberalism, nationalistic unification, socialism, imperialism, and Twentieth Century Fascism and Democracy. Lectures, readings, test and special reports, clinics.

**303. England, 1485 to the Present. (Hist 303 England) (3-0) Credit 3. II.** Modern Britain from the Tudors to the Present. (Lectures, discussions, special reports.) Offered in odd years. Junior standing or consent of the instructor.

**353. Europe, 1914 to the Present. (Hist 353 Europe 1914) (3-0) Credit 3. I.** Twentieth Century Europe in its world revolutionary setting. (Five lectures: the Heritage, Religion, Education, Big Government, Economic Nationalism.) Discussions, special reports. Offered in odd years. Junior standing or consent of the instructor.

## AMERICAN HISTORY

**213. The United States, 1492-1837. (Hist 213 the U. S.) (3-0) Credit 3. I.** American Development from the period of discovery to the close of the Jackson Presidency. Lectures, discussions, special maps and written reports; offered first semester yearly. Sophomore standing. Required of all majors and minors, or the other Social Sciences.

**223. The United States, 1837-1898. (Hist 223 the U. S.) (3-0) Credit 3. II.** Prerequisite: History 213. Surveys period of Bourgeoisie revolution and rise of group democracy in American. (Lectures, discussions, special map and written reports; offered second semester yearly.) Sophomore standing. Required of all majors and minors, or the other Social Sciences.

**323. The New South, 1865. (Hist 323 New South) (3-0) Credit 3. II.** Relation of the South to national development since 1860. (Lectures, discussions, special reports. Junior standing. Offered in even years.) (May be taken in lieu of 183.)

**333. Economic History of the United States, 1492 to Present. (Hist 333 U.S. Eco Hist) (3-0) Credit 3. I.** Surveys agriculture, commerce, industry, banking, business organization and labor. Prerequisites: Six hours of Economics or History 213 and 223. (Lectures, discussions, special reports. Offered on demand).

**413. Sectionalism and the Civil War, 1700-1865. (Hist 413 Civil War) (3-0) Credit 3. I.** Taught from regional hypothesis as applied to American development 1700-1865. (Lectures, discussions, special reports, Junior standing. Offered even years.)

**433. American Foreign Relations, 1775 to Present (Hist 433 Frgn Rltns) (3-0) Credit 3.** Diplomatic aspects of the United States with reference to political background, emergence as a world power, neutrality, isolation, expansion, adjustment, Caribbean and Pacific interest, world leadership. Lectures, forums, special reports and discussions. (May be taken in lieu of 183).

**453. Contemporary United States, 1898 to Present. (Hist 453 Contemp U. S.) (3-0) Credit 3. II.** Survey of 20th century American development. Lectures, discussions, special reports. Offered in odd years. Prerequisite: 12 hours of history or consent of instructor. (May be taken in lieeu of 183).

### Required Courses in American History

**History 173. The United States, 1492-1876. (Hist 173 U. S. 1492) Credit 3. I.** American development from the period of discovery to thec lose of the Civil War; The Colonial Era; Birth of a Nation; The Young Republic; Westward Expansion; Sectional and Civil War. Lectures, special readings, discussions, supervised study, and text. Degree requirement.

**History 183. The United States, 1876 to the Present. (Hist 183 U. S. 1876) (3-0) Credit 3. II.** Prerequisite, History 173 or consent of Department. Surveys modern American Development; Reconstruction: The Industrial Nation and its Problems; Expansionist and Muckraker; The First Crusade; Normalcy and Reaction; Depression and the New Deal; The Second World War and After. Lectures, special readings, discussions, supervised study and text. Degree requirement. (Either 323, 433 or 453 may be substituted for this course.)

## SPECIAL AND MISCELLANEOUS

**363. Historical Methods. (Hist 363 Histl Meth) (3-0) Credit 3. II.** Historical Techniques and the relation of History to allied Social Sciences. (Lectures, laboratory exercises, special reports. Required of all majors. Prerequisite: Junior standing).

**373. Problems in Latin American History. (Hist 373 Latn Amer) (3-0) Credit 3. I. Seminar.** Special problems in specific time areas. Advanced Junior or Senior status. Special research reports.

**383. (Educ 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, test and laboratory experiences; offered both semesters yearly; junior standing or above; required of all major and minors seeking teachers classification.

**402. Historical Investigative Paper. (Hist 402 Inv 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.

**423. Seminar in American History, With Special Reference to Texas and the Southwest. (Hist 423 Amer Semr) (3-0) Credit 3. I.** Regional problems in specific time areas. Senior status. Special research reports.

**463. History of the Negro in America. (Hist 463 Negro) (3-0) Credit 3. I or II.** African background. Slavery, Freedom and Freeman; minority techniques in the contribution to American Life. Prerequisite: Upper College status.

**473. History of the Far East. (Hist 473 Far East) (3-0) Credit 3.** Political institutions of China, Japan and other Far Eastern countries.

## Department of Library Service-Education

The courses in this department are designed to achieve five general objectives: 1) prepare school librarians and teacher-librarians for the public schools of Texas in accordance with the accrediting standards of the State; 2) provide non-professional personnel for college, university, and public library service; 3) acquaint future teachers and future school administrative officials with the need for and the function of school libraries in modern education; 4) lay the foundation for graduate work in library service; and, 5) inspire students to develop an appreciation for the value of books and non-book materials as sources of information, reliable knowledge, inspiration, culture and recreation.

The course requirements to be met by those enrolling in the department are outlined below. Majors must complete, satisfactorily, 24 semester hours in library science and a minor of 18 semester hours, outside the department, in a subject represented in the secondary curriculum of the State. The minor will serve as a second teaching field and should be elected in consultation with th proper advisor of the major and minor departments.

Those wishing to do a minor in library-service education are required to complete, satisfactorily, 18 semester hours from among the courses named in the "Description of Courses" below. Courses 313, 232, 333, 343, and 363 are required in any combination of courses for a minor.

Students planning to qualify for a teaching position in Texas are expected to do student teaching as required by the Texas Education Agency.

Those interested in this program of study may commence their work at the sophomore level.

Students are advised to become thoroughly acquainted with the graduation requirements in their major and minor fields. They should check with their advisors early about any deficiencies they may have in their programs and take steps to correct them at the earliest possible time.

Courses 213, 223, 313, 333, and 363 are suggested as electives to other majors who wish to receive some understanding of and proficiency in library methods.

Proficiency in typing is required of those who undertake the major or minor programs.

To maintain the proper academic standards it has been decided by the department that all students undertaking a major or minor in library service-education must maintain an average grade of "C" in the Freshman and Sophomore years and an average grade of "B" during the Junior and Senior years.

## SUGGESTED PROGRAM FOR A MAJOR IN LIBRARY SERVICE-EDUCATION

### FRESHMAN YEAR

| First Semester | Hrs. |
|---|---|
| English 113 Grammar and Composition | 3 |
| Political Science 113 National Government | 3 |
| Mathematics 173 or 113 Elements of Applied Mathematics or College Algebra | 3 |
| Natural Science 113 College Science | 3 |
| Foreign Language 113 Elementary French, German or Spanish | 3 |
| Physical Education 111 (Women) Freshman Practice or | |
| Military Science 111 (Men) Elementary | 1 |
| Industry 112 Library Science | 2 |
| | 18 |

| Second Semester | Hrs. |
|---|---|
| English 123 Reading and Composition | 3 |
| Political Science 123 State Government | 3 |
| Mathematics 183 or 123 Elements of Applied Mathematics or Trigonometry | 3 |
| Natural Science 123 College Science | 3 |
| Foreign Language 123 Elementary French, German or Spanish | 3 |
| Physical Education 121 (Women) Freshman Practice or | |
| Military Science 121 (Men) Elementary | 1 |
| Industry 122 Library Science | 2 |
| | 18 |

### SOPHOMORE YEAR

| | |
|---|---|
| Social Science 103 Survey of the Social Sciences | 3 |
| Education 273 Pupil Growth and Development | 3 |
| English 213 Public Speaking | 3 |
| Library Service Education 213 The Library in the School | 3 |
| Minor | 3 |
| Business Administration 132 Typing | 2 |
| Physical Education 211 (Women) Sophomore Practice or | |
| Military Science 211 (Men) Elementary | 1 |
| | 18 |

| | |
|---|---|
| Foreign Language 213 Elementary French, German or Spanish | 3 |
| Education 283 Pupil Growth and Development | 3 |
| English 223 Introduction to Literature | 3 |
| Library Service Education 223 Children's Literature and Non-Book Materials | 3 |
| Home Economics 123 Family Life Education | 3 |
| Physical Education 221 (Women) Sophomore Practice or | |
| Military Science 221 (Men) Elementary | 1 |
| | 16 |

### JUNIOR YEAR

| | |
|---|---|
| Library Service Education 313 Administration of School Libraries | 3 |
| History 173 American History | 3 |
| Library Service Education 363 Young People's Literature and Non-Book Materials | 3 |
| Minor | 6 |
| | — |

| | |
|---|---|
| Foreign Language 223 Reading and Grammar Review | 3 |
| Library Service Education 333 School Library Reference Materials and Tools | 3 |
| History 183 American History | 3 |
| Library Service Education 323 Cataloging and Classification | 3 |
| Minor | 3 |
| | 15 |

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| Library Service Education 383 Selection of Library Materials | 3 |
| Minor | 6 |
| Education 363 Elementary School Curriculum | 3 |
| Education 323 High School Curriculum | 3 |
| | 15 |

| Second Semester | Hrs. |
|---|---|
| Library Service Education 343 Experience Work | 3 |
| Education 406 Practice Teaching | 6 |
| Education 463 Foundations in Reading Instruction | 3 |
| Education 293 Foundations of American Education | 3 |
| | 15 |

## DESCRIPTION OF COURSES

### LIBRARY SERVICE EDUCATION

**112-122. Library Science Orientation. (LbSc 112-122 Orientation) Credit 2. I and II.** Practical experience in reference methods and services, circulation methods and services, and acquisition methods and services.

**213. The Library in the School. (LbSc 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 (Formerly Children's and Young People's Literature and Other Media and Materials of Culture.) (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 Libra Adm) (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; profesional aspects of librarianship.

**323. Cataloging and Classification. (Formerly "The Administration of School Libraries.") (LbSc 323 Cataloging) (3-0) Credit 3. II.** Cataloging and classification of school library materials; accounting procedures. Prerequisite; L. S. Ed. 313.

**333. School Library Reference Materials and Tools. (LbSc 33 Ref Meth) (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 Meth) (3-0) Credit 3. I, II.** Prerequisite: All theory courses.

**363. Young People's Literature and Non-Book Materials. (Formerly included in Library Service Education 223.) (LbSc 363 Adol Litr) (3-0) Credit 3. I.** A study of current adolescent literature and non-book materials, reading interests and habits of youth, reading guidance, and methods of promoting library use among high school students.

**383. Selection of Library Materials. (3-0) Credit 3. I. (LbSc 383 Selection.)** 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

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 services.

A major in mathematics consists of 28 semester hours of mathematics which include the following required courses: Mathematics 113, 123, 213, 223, 313, 323, 401, 423. In addition 6 semester hours must be selected from the following: Mathematics 343, 403, 433, 413, and 443.

Other requirements for a major in mathematics include 6 semester hours of physics and 6 hours of chemistry. Six hours of college science may be substituted for either physics or chemistry.

A minor in mathematics consists of 18 semester hours of mathematics which include the following courses: Mathematics 113, 123, 213, 223, 313. In addition, 3 semester hours must be selected from one of the following courses: Mathematics 323, 413, 443, or 433.

A student must maintain a C average in his major and miner fields. 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. Those students whose percentiles on the mathematics placement test are unsatisfactory are placed in Mathematics 103. This is a remedial mathematics course which they must pass before being permitted to enroll in Mathematics 113. If, however, persons enrolled in Mathematics 103 show sufficient ability and progress in the course before or by the end of the first nine weeks they may be transferred to Mathematics 113 class and will be permitted to change their programs from Mathematics 103 to 113. Students who have failed Mathematics 103 will be required to repeat the course and will not be permitted to change their programs from Mathematics 103 to 113.

## SUGGESTED PROGRAM FOR A MAJOR IN MATHEMATICS

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| History 173 | 3 | History 183 | 3 |
| American History | | American History | |
| English 113 | 3 | English 123 | 3 |
| Grammar and Composition | | Grammar and Composition | |
| Music 013 | 3 | Sociology 103 | 3 |
| Music History | | Social Legislation | |
| Natural Science 113 | | Natural Science 123 | |
| College Science or | | College Science or | |
| Physics 214 | | Physics 224 | |
| General Physics or | | General Physics or | |
| Chemistry 114 | 3-4 | Chemistry 124 | 3-4 |
| Inorganic Chemistry | | Inorganic Chemistry | |
| Mathematics 113 | 3 | Mathematics 123 | 3 |
| College Algebra | | Trigonometry | |
| Physical Education 111 | | Physical Education 121 | |
| Physical Education Practice (Women) | | Physical Education Practice (Women) | |
| Military Science 111 | 1 | Military Science 121 | 1 |
| Elementary (Men) | | Elementary (Men) | |
| Industry | 2 | Industry | 2 |
| | 18 or 19 | | 18 or 19 |

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| Mathematics 213 | 3 |
| Analytic Geometry | |
| Political Science 113 | 3 |
| National Government | |
| Foreign Language 113 | 3 |
| Elementary French or German | |
| English 213 | 3 |
| Public Speaking | |
| Education 273 | 3 |
| Pupil Growth and Development | |
| Physical Education 211 | |
| Practice (Women) | |
| Military Science 211 | 1 |
| Elementary (Men) | |
| | 16 |

| Second Semester | Hrs. |
|---|---|
| Mathematics 223 | 3 |
| Differential Calculus | |
| Political Science 123 | 3 |
| State Government | |
| Foreign Language 123 | 3 |
| Elementary French or German | |
| English 223 | 3 |
| Introduction to Literature | |
| Education 283 | 3 |
| Pupil Growth and Development | |
| Physical Education 221 | |
| Practice (Women) | |
| Military Science 221 | 1 |
| Elementary (Men) | |
| | 16 |

JUNIOR YEAR

| | |
|---|---|
| Mathematics 313 | 3 |
| Integral Calculus | |
| Mathematics 401 | 1 |
| Mathematics Colloquium | |
| Foreign Language 213 | 3 |
| Reading and Grammar Review | |
| Elective (Mathematics) | 3 |
| Education 323 | 3 |
| High School Curriculum | |
| Natural Science 113 | |
| College Science or | |
| Physics 214 | |
| General Physics or | |
| Chemistry 114 | 3-4 |
| Inorganic Chemistry | |
| Military Science 313 | 3 |
| Advanced (Men) | |
| | 16-20 |

| | |
|---|---|
| Mathematics 323 | 3 |
| Intermediate Calculus | |
| Mathematics 401 | 1 |
| Mathematics Colloquium | |
| Foreign Language 213 | 3 |
| Reading and Grammar Review | |
| Health Education 203 | 3 |
| Personal Hygiene | |
| Mathematics 353 | 3 |
| Teaching of Mathematics in High School | |
| Natural Science 123 | |
| College Science or | |
| Physics 224 | |
| General Physics or | |
| Chemistry 124 | 3-4 |
| Inorganic Chemistry | |
| Military Science 323 | 3 |
| | 16-20 |

SENIOR YEAR

| | |
|---|---|
| Education 406 | 6 |
| Practice Teaching | |
| Education Electives | 6 |
| Mathematics 423 | 3 |
| Differential Equations | |
| Military Science 413 | 3 |
| Advanced (Elective) (Men) | |
| | 15 or 18 |

| | |
|---|---|
| Mathematics Elective | 3 |
| Philosophy 323 | 3 |
| Ethics | |
| Electives | 9 |
| Military Science 423 | 3 |
| Advanced (Elective) (Men) | |
| | 15 or 18 |

## DESCRIPTION OF COURSES

**103. Basic Mathematics. (Math 103 Basic) (3-0) Credit 3. I.** The fundamental operations, special products, factoring, fractions, radicals, the linear equations in one variable, and the simultaneous linear equations.

**113. College Algebra. (Math 113 Coll Algb) (3-0) Credit 3. I or II.** The theory of quadratic equations, system of equations, logarithms, exponential and logarithmic equations, binomial therorem, 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.

**132. Solid Geometry. (Math 132 Solid Geom) (2-0) Credit 2. I.** Lines and planes in space, loci, polyhedral angles, surfaces and volumes of geometric solids.

**173-183. Elements of Applied Mathematics. (Math 173-183 Applied) (3-0) Credit 3. I and II.** Basic concepts in elementary mathematics, including numbers and operations with numbers. Designed especially for those students majoring in fields other than mathematics, the physical sciences, the natural sciences, and engineering.

**213. Analytical Geometry. (Math 213 Analyt Geom) (3-0) Credit 3. I.** The straight line and conic sections; tranformation of coordinates; polar coordinates; parametric equations; introduction to solid analytic geometry. Prerequisite: Mathematics 123.

**223. Differential Calculus. (Math 223 Diff Calc) (3-0) Credit 3. I.** Differentiation of algebraic and transcendental functions with applications to physics and geometry. Parametric equations, differentials, curvature. Prerequisite: Mathematics 213.

**313. Integral Calculus. (Math 313 Intg Calc) (3-0) Credit 3. I.** General methods of integration, and applications of the indefinite integrals to problems in physics and geometry. Prerequisite: Mathematics 223.

**323. Intermediate Calculus. (Math 323 Calculus) (3-0) Credit 3.** A continuation of Mathematics 313. Further applications of the definite integral, power series with applications; definition and meaning of partial derivatives; hyperbolic functions, multiple integrals; and introduction to differential equations. Prerequisite: Mathematics 313.

**343. Solid Analytical Geometry. (Math 343 Anal Geom) (3-0) Credit 3.** Analytic Geometry of three dimensional space. Lines, planes, and quadric surface. Prerequisite: Mathematics 213.

**353. Methods of Teaching Mathematics in High School. (Math 353 HS Meth) (3-0) Credit 3. II.** See Department of Education (Education 333C).

**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 department 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.

**413. Theory of Equations. (Math 413 Equations) (3-0) Credit 3.** Complex numbers; rational integral equations; symmetric functions; determinants and matrices; systems of equations. Prerequisite: Mathematics 223.

**423. Differential Equations. (Math 423 Diff Equatns) (3-0) Credit 3. I and II.** General methods for solving ordinary differential equations to include the general linear differential equation with constant coefficients, solution in series and applications. Prerequisite: Mathematics 323.

**433. Elementary Statistics. (Math 433 Elem Stat) (3-0) Credit 3.** Collection and tabulation of data; bar charts; graphs; sampling, averages; dispersions; correlation; index numbers; normal curve; probability; applications to various fields. Prerequisite: one semester of college mathematics.

**443. Introduction to Probability. (Math 443 Intr Problty) (3-0) Credit 3.** Permutations and combinations, discrete sample spaces, combinatorial analysis, distributions, random variables, recurrent events and random walks. Prerequisite: Mathematics 313.

**453. Foundations of Mathematics. (Math 453 Foundations). (3-0) Credit 3.** The axiomatic method and its place in the foundations; elements of the theory of sets; the linear continum and the real number system; groups and their significance for the foundations.

**492-493. Arithmetic for Elementary Teachers. (Math 492-493 Elem Tchr) (2-0) (3-0) Credit 2. I or II.** See Department of Education. Fundamental concepts of mathematics in the elementary grades.

**115. Engineering Mathematics—College Algebra and Trigonometry. (Math 115 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 equation; determinants and simultaneous linear equations; premutations, combinations, and probability, trigonometric functions, identities, related angles, radian measure, and graphs.

**124. Engineering Mathematics — Trigonometry and Analytical Geometry. (Math 124 Trig Geom) (4-0) Credit 4. II.** Continuation of course 115 including the following topics in trigonometry and analytical geometry: logarithms, solution of plane triangular coordinates, lines, circles, conic sections, symmetry, translation of axes, general equation of the second degree curves of higher degree, rotation of axes, parametric equations, and polar coordinates. Prerequisite: Engineering Mathematics 115.

**133. Engineering Mathematics—Solid Geometry. (Math 133 Solid Geom) (3-0) Credit 3.** Study of point, line, plane, and curved surfaces in Euclidean Spaces.

**214. Engineering Mathematics—Differential Calculus. (Math 214 Diff Calc) (4-0) Credit 4. I.** Differentiation and graphical representation of algebraic, trigonometric, and exponential functions, with application. Parametric equations, curvature, time rates, maxima and minima, hyperbolic functions, partial derivatives, and infinite series. Prerequisite: Engineering Mathematics 124.

**224. Engineering Mathematics—Integral Calculus. (Math 224 Intg Calc) (4-0) Credit 4. II.** Integration of algebraic and trigonometric functions with various, applications including: plant areas, arc length, volumes, areas of surfaces of revolution, center of gravity, moments of inertia, polar coordinates, multiple integrals, and elementary vector analysis. Prerequisite: Engineering Mathematics 214.

## Department of Modern Foreign Languages

No major is offered.

The general requirement in modern foreign languages is the equivalent of two years of study in college of one modern foreign language.

This department offers courses in three languages: French, German and Spanish. A student may obtain a minor in French or Spanish. For a minor in language, eighteen semester hours in one language is required, six hours of which must be in courses numbered 300 or above, or 303 and 313. All students minoring in the department must make at least a grade of "C" in each course presented for a minor.

The German courses are designed to meet the needs of students desiring to fulfill the language requirement for the Bachelor's degree and beyond. The Modern Foreign Language Department also aims to provide adequate training for those students who desire to acquire proficiency in the use of the language as a tool subject for the professional courses in science, pharmacy, engineering, music, and other fields.

### DESCRIPTION OF COURSES

#### FRENCH

**113, 123. Elementary French. (Fren 113 123 Elem Fren) (3-0) Credit 3. I. and II.** The linguistic foundation of the French language; mastery of phonetics; verbs, grammar, and idomatic usage.

**213, 223. Intermediate French, Reading and Grammar Review. (Fren 213 223 Read Gram) (3-0) Credit 3. I and II.** French conversation, idioms, and verb drill; reading material; principles of French grammar and syntex. Prerequisite: French 123.

**303. Composition and Conversation. (Fren 303 Comp Conv) (3-0) Credit 3.** Concentrated application of the principles of grammar in oral and written French; conducted in French. Primarily for French minors and students interested in the practical use of French. Prerequisite: French 223 and approval of instructor.

**313. Survey of French Literature. (Fren 313 Surv Lit) (3-0) Credit 3.** Outline of the history of French literature; literary epoch. Reading materials will be chosen from various periods. Prerequisite: French 303. Required for minors.

**323. Introduction to Classic Literature. (Fren 323 Classics) (3-0).** Representative selections from the classic period of French literature; readings and reports on Racine, Corneille, etc. Prerequisite: French 313.

**383. The Teaching of Modern Foreign Languages in Secondary Schools. (Fren 383 Tch HS Lang) Credit 3.** Methods, devices and procedures for teaching foreign languages on the secondary level.

**403. Moliere. (Fren 403 Moliere) (3-0) Credit 3.** Representative works of Moliere including his life and period are studied. Prerequisite: French 313.

**413. Introduction to Romanticism. (Fren 413 Romanticism) (3-0) Credit 3.** Representative works of Hugo, Lamartine, Musset, etc., are read. Prerequisite: French 313.

## SPANISH

**113, 123. Elementary Spanish. (Span 113 123 Elem Span) (3-0) Credit 3. I and II.** Principles of pronunciation and grammatical construction; easy readings and daily oral practice. Reproduction of materials from diction.

**213, 223. Intermediate Spanish. Reading and Grammar. (Span 213 223 Read Gram) Credit 3. I and II.** Grammar review; idioms and idiomatic usage; conversation, practice in reading and translation. Prerequisite: Spanish 123.

**303. Composition and Conversation. (Span 303 Comp Conv) (3-0) Credit 3.** Salient principles of grammar in written work and in daily conservations. Prerequisite: Spanish 223. For minors and those students who want to acquire functional use of the language. Approval of instructor.

**313. Survey of Spanish Literature. (Span 313 Surv Lit) (3-0) Credit 3.** Spanish literature from the beginning through the eighteenth century. Lectures, assigned readings, and reports. Prerequisite: Spanish 303. Required for minor.

**323. Spanish Prose and Free Composition. (Span 323 Free Comp) (3-0) Credit 3.** A representative novel is used as the basis for classroom reading, translation, discussion, and composition. Prerequisite: Spanish 303.

**383. The Teaching of Modern Foreign Languages in Secondary Schools. (Span 383 Tch HS Lang) Credit 3.** Methods, devices and procedure for teaching foreign languages on the secondary level.

## GERMAN

**113, 123. Elementary German. (Germ 113, 123 Elem Germ) 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 Intermedt) Credit 3. I and II.** Reading, grammar review; idiomatic German, vocabulary development; selected readings from German newspaper. Prerequisite: German 123.

**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.

## Department of Music

The Department of Music has planned a program that will provide opportunities for a more thorough recognition of the student's needs and interests, with special efforts to help him discover and develop his potentialities and function as a contributing citizen in his community through the following aims:

The Program—

1. To be a vital one functioning in keeping with the present trends of philosophy and practice in music education; providing the educational preparation and technical skill required of those who are planning to become teachers, performers or composers; and having meaning for those who are nonprofessional devotees of music.
2. To develop in the student those musical potentialities which may be latent and not as yet recognized.
3. To provide a more complete integration of music subject matter and other phases of the college curricula, with special emphasis on the inclusion of musical performance in the actual teaching situation.

### MAJOR REQUIREMENTS

The degree of Bachelor of Arts with a major in music is offered for the completion of 130 semester hours in the prescribed curriculum of music education with emphasis upon one of the applied fields. The minimum music requirement for the degree is 49 hours.

Students must maintain an average of "B" or above in 50 per cent of the music subjects in the freshman and sophomore year, and "B" or above in the entire major field in each of the remaining years.

### MINOR REQUIREMENTS

For a minor in music 24 hours are required, 8 of which must be applied music. The minor is offered with emphasis upon methods and materials, and theory.

### OTHER REQUIREMENTS

All students majoring in music are required to participate in vocal and instrumental organizations. All are required to play the piano of beginning sophomore level, regardless of the number of accumulated clock hours.

### MUSIC ORGANIZATIONS

The College Chorus, Mixed Glee Club, Men's Glee Club. Women's Glee Club, Concert Choir, Quartets, Band and Orchestras offer excellent opportunities for music participation and expression, and are under direct supervision of teachers of the department. The band is divided into three parts—Concert, Marching, and Military. The Military Band works in conjunction with the Department of Military Science.

## HONORARY SOCIETY

The Mu Alpha Sigma Honorary Society, organized in 1935-1936, gives recognition for achievement in meritorious performance, scholarship, research and creative efforts in music. Students are elected solely upon the foregoing qualifications, and not upon application for membership.

## COURSE SUMMARY OF MUSIC MAJOR REQUIREMENTS

| Course | Hrs. |
|---|---|
| Applied (Piano, Voice, Instrument) | 12 |
| Voice (Methods) | 2 |
| Instruments (Orchestra) | 8 |
| Methods (Elem., High School and Instr., History, Conducting) | 14 |
| Theory | 19 |
| Education | 24 |
| English | 12 |
| Foreign Language | 12 |
| Mathematics | 6 |
| Natural Science | 6 |
| Government | 6 |
| Social Science | 3 |
| Music Electives | 6 |
| History | 6 |
| | 133 |

## COURSE SUMMARY OF MUSIC MINOR REQUIREMENTS

| | |
|---|---|
| Fundamentals | 3 |
| Piano | 4 |
| Voice Class | 2 |
| Instruments (Orchestra) | 2 |
| Theory | 8 |
| Methods | 3 |
| Conducting | 2 |
| | 24 |

## YEARLY DISTRIBUTION OF MINOR REQUIREMENTS

| | | |
|---|---|---|
| **I** | | |
| Fundamentals | 3 | |
| Piano | 4 | 7 |
| **II** | | |
| Theory (Aural) | 4 | |
| (Written) | 4 | 8 |
| **III** | | |
| Voice Class | 2 | |
| Methods | 3 | 5 |
| **IV** | | |
| Instruments (Orchestra) | 2 | |
| Conducting | 2 | 4 |
| | | 24 |

# SUGGESTED PROGRAM FOR A MAJOR IN MUSIC

## FRESHMAN YEAR

| First Semester | Hrs. |
|---|---|
| English 113 | 3 |
| Grammar and Composition | |
| History 173 | 3 |
| U. S. 1492-1876 | |
| Mathematics 173 | 3 |
| Applied Mathematics | |
| Science 113 | 3 |
| College Science | |
| Piano 112 (other instruments or voice) | 2 |
| Elementary Piano | |
| Music 153 | 3 |
| Music Fundamentals | |
| Military Science (Men) 111 | |
| Elementary or | |
| Physical Education (Women) 111 | (1) |
| Freshman Practice | |
| Choir 112 | (2) |
| Choral Practice | |
| Music 411 | (1) |
| Perspectives in Music | |
| | 17 |

| Second Semester | Hrs. |
|---|---|
| English 123 | 3 |
| Reading and Composition | |
| History 183 | 3 |
| 1876 to Present | |
| Mathematics 183 | 3 |
| Applied Mathematics | |
| Science 123 | 3 |
| College Science | |
| Piano 122 (other instruments or voice) | 2 |
| Elementary Piano | |
| Music 142 | 2 |
| Voice Methods Class | |
| Military Science (Men) 121 | |
| Elementary or | |
| Physical Education (Women) 121 | (1) |
| Freshman Practice | |
| Choir 122 | (2) |
| Choral Practice | |
| Music 421 | (1) |
| Perspectives in Music | |
| Woodwinds or Brasses 132 | 2 |
| | 18 |

## SOPHOMORE YEAR

| | |
|---|---|
| Foreign Language 113 | 3 |
| Elementary French or | |
| Elementary Spanish | |
| Political Science 113 | 3 |
| National Government | |
| Piano 212 | 2 |
| Intermediate Piano | |
| Music 152 | 2 |
| Aural Theory—Elementary | |
| Sight Singing | |
| Music 152 | 2 |
| Written Theory—Elementary Harmony | |
| Education 273 | 3 |
| Pupil Growth and Development | |
| Strings 132 | 2 |
| String Class | |
| Military Science (Men) 211 | |
| Elementary or | |
| Physical Education (Women) 211 | (1) |
| Choir 212 | (2) |
| Choral Practice | |
| Music 431 | (1) |
| Perspectives in Music | |
| | 17 |

| | |
|---|---|
| Foreign Language 123 | 3 |
| Elementary French or | |
| Elementary Spanish | |
| Political Science 123 | 3 |
| State Government | |
| Piano 222 (other instruments or voice) | 2 |
| Intermediate Piano | |
| Music 162 | 2 |
| Aural Theory—Elementary | |
| Sight Singing | |
| Music 162 | 2 |
| Written Theory—Elementary Harmony | |
| Education 283 | 3 |
| Pupil Growth and Development | |
| Woodwinds 132 or Brasses 132 | 2 |
| Military Science (Men) 221 | |
| Elementary or | |
| Physical Education (Women) 221 | (1) |
| Sophomore Practice | |
| Choir 222 | (1) |
| Choral Practice | |
| Music 441 | (1) |
| Perspectives in Music | |
| | 17 |

## JUNIOR YEAR

| | |
|---|---|
| English 213 | 3 |
| Public Speaking | |
| Foreign Language 213 | 3 |
| Reading and Composition | |
| Music 252 | 2 |
| Aural Theory—Intermediate | |
| Sight Singing | |
| Music 252 | 2 |
| Written Theory—Intermediate | |
| Harmony | |
| Music 373 | 3 |
| Elementary School Methods | |
| Choir 312 | (2) |
| Choral Practice | |
| Music 451 | (1) |
| Perspectives in Music | |
| Military Science 313 | (3) |
| Advanced | |
| Education 323 or 293 | 3 |
| High School Curriculum | |
| or Foundations | |
| | 16 |

| | |
|---|---|
| English 223 | 3 |
| Introduction to Literature | |
| Foreign Language 223 | 3 |
| Reading and Composition | |
| Music 262 | 2 |
| Aural Theory—Intermediate | |
| Sight Singing | |
| Music 262 | 2 |
| Music 393 | 3 |
| Instrumental Music Education | |
| Music 383 | 3 |
| High School Methods | |
| Choir 322 | (2) |
| Choral Practice | |
| Music 461 | (1) |
| Perspectives in Music | |
| Military Science 323 | (3) |
| Advanced | |
| Music 332 | 2 |
| Conducting | |
| | 18 |

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| Education 323 or 293 | 3 |
| Percussion 132 | 2 |
| Percussion Class | |
| Physical Education Theory 203 | 3 |
| Music 013 | 3 |
| Music History | |
| Social Science 103 | 3 |
| Survey | |
| Choir 412 | (2) |
| Choral Practice | |
| Music 471 | (1) |
| Perspectives | |
| | 14 |

| Second Semester | Hrs. |
|---|---|
| Education 406 or 306 | 6 |
| Practice Teaching | |
| Education 423 | 3 |
| School and Community Relations | |
| Choir 422 | (2) |
| Choral Practice | |
| Music 481 | (1) |
| Perspectives in Music | |
| | 9 |

# DESCRIPTION OF COURSES

## BASIC MUSIC

**012-022. (032, 042, 052, 062, 072, 082). Basic Music for the Classroom Teacher Through Keyboard Experience. (Music 012 022 Basic) (2-6) Credit 2. I and II.** Basic musicianship needed to teach music in the public school through singing and playing in a very simple way, easy songs and games.

## MUSIC LITERATURE, HISTORY AND APPRECIATION

**013. History of Music. (Musc 013 History) (3-0) Credit 3. I and II.** The great movements in the art of music from the Greek period to the present day.

**400. (411, 421, 431, 441, 451, 461, 471, 481) Perspectives in Music. (Musc 400, 411, 421, 431, 441, 451, 461, 471, 481 Perspectv) (0-0 Credit 1. I and II.** All four years. For music majors. Extensive individual and group study of problems in music for the development of musicality. Individual and ensemble performances before entire group.

## MISIC THEORY

**Fundamentals 153. (Musc 153 Fundamntls) Credit 3.** The study of notes, note values, rhythm, scale construction, chord construction, transportation, composers, style, instruments and simple forms, and easy sight singing exercises.

**Aural Theory 152. (Musc 152 Sght 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.

**Written Theory 152. Elementary Harmony. (Musc 152 Elem Harm) (2-0) Credit 2.** Harmonic phenomena of tones through scales, intervals and chords, and chordal progression; general harmonizations through the secondary triads; keyboard harmony.

**Aural Theory 162. (Musc 162 Sight Sing) Intermediate Sight Singing and Ear Training (2-0) 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 162. Intermediate Harmony. (Musc 162 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 chorals of Bach and simple hymn tunes; keyboard harmony.

**Aural Theory 252. (Musc 252 Sght Sing) Intermediate Sight Singing and Ear Training (2-0) Credit 2.** Vocal execution of intervals and embellishments, and melodic harmonic dictation in the soprano, mezzo-soprano, alto and tenor clefs.

**Written Theory 262. Advanced Harmony. (Musc 262 Adv Harm) (2-0) Credit 2.** Augmented sixty chords through chromatic alterations in general; and some modern harmony; analysis of works from the nineteenth and twentieth centuries; harmonic dictation continued; keyboard harmony.

**332. Conducting. (Musc 332 Conducting) (2-0) Credit 2. I or II.** Baton technique, choral and instrumental conducting in the elementary and high school.

**353. Counterpoint. (Musc 353 Counterpt) (3-0) Credit 3.** Two, three, and four-part counterpoint in all species; invertible counterpoint; canonic imitation and writing in the contrapuntal forms.

## APPLIED MUSIC—ELEMENTARY COURSES

**Clarinet 112-122. (Musc 112 122 Clarinet) (or Other Woodwind Instrument) (2-6) Credit 2. I and II.** Tone production, embouchure, breathing, scales and articulation; methods of Rubank and Stubbons for clarinet; Weissenborn for bassoon; Rubank and Wagner for flute, and Barret and Gekeler for oboe. Music fee: $12.00.

**Cornet 112-122. (or Other Brass Instrument.) (Music 112 122 Cornet) (2-6) Credit 2. I and II.** Fundamentals of attack; breath control; formation of embrouchure; scale, methods of Arban and Goldman for cornet; Anton Horner and Oscar Franz for French horn; Simera-Hovey for trombone, and Rubank for saxaphone. Music fee: $12.00.

**Violin 112-122. (Musc 112 122 Violin) (or Other String Instrument) (2-6) Credit 2. I and II.** Major and minor scales and arpeggios, first position methods of Gruenberg and Wohlfahrt for violin; Kummer for violoncello; Primrose for viola, and Butler and Simandl for bass. Music fee: $12.00.

**Organ 112-122. (Musc 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 chorals 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. (Musc 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.

**Voice 112-122. (Musc 112 122 Voice) (2-6) Credit 2. I and II.** Study of tone production, breathing flexibility and phrasing. Simple classics in English and from the Italian Anthology. Music fee: $12.00.

## INTERMEDIATE COURSES

**Clarinet 212-222. (Musc 212 222 Clarinet) (or Other Woodwind Instrument.) (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. Oubrodous and Weissenborn for basseen; marquarre and Popp-Sousman for flute and Barret and Ferling for oboe. Music fee: $12.00.

**Cornet 212-222. (Musc 212 222 Cornet) (or Other Brass Instrument) (2-6) Credit 2. I and II.** Double and triple articulations; legato technique; transposition; methods and studies of Arban, Williams and Clarke for cornet; Kopprasch, 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. (Musc 212 222 Violin) (or Other Stringed Instrument) (2-0) Credit 2. I and II.** Exercises in charge of position; Rode and Dancla, Op. 72 Etudes for violin, Spohr 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 in D Minor for 'cello; positions as far as the seventh for the double bass Watson method and Edmon Nanny, exercises for double bass; double bass method by Simandl, Part II, etc. Music fee: $12.00.

**Organ 212-222. (Musc 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 Guilmant, Carl, Mendelssohn, etc.; use of organ for church and concert purposes. Music fee: $5.00 per month.

**Piano 212-222. (Musc 212 222 Piano) (2-6) Credit 2. I and II.** Hanon, The Virtuoso Pianist completed; Czery, The School of Velocity completed; Bach, Three-Part Invention; early keyboard music; Chopin, Waltzes; Haydn, Sonatas. Music fee: $12.00.

**Voice 212-222. (Music 212-222 Voice) (2-6) Credit 2. I and II.** Diatonic and chromatic scales; tone production, vocal embellishments, legato and staccato style; the simple trill; additional songs from a selected list of English songs; selections in Italian and French; an Italian aria from a Mozart opera or another composer of Italian opera; recitatives and arias from such works as "St. Paul," "Elijah," and "Messiah." Music fee: $12.00.

## ADVANCED COURSES

**Clarinet 312-322; 412-422; 512-522. (Musc 312 322 412 422 512 522 Clarinet) (or Other Woodwind Instrument) (2-12) Credit 2. I and II.** Advanced technical studies; repertory, including sonatas and concertos; classical, romantic and modern literature. Music fee: $12.00.

**Cornet 312-322; 412-422; 512-522. (Musc 312 322 412 422 512 522 Cornet) (or Other Brass Instrument) (2-12) Credit 2. I and II.** Advanced technical studies; repertory, including sonatas and concertos; classical, romantic and modern literature. Music fee: $12.00.

**Violin 312-322; 412-422; 512-522. (Musc 312 322 412 422 512 522 Violin) (or Other Stringed Instrument) (2-12) Credit 2. I and II.** Advanced technical studies; repertory including sonatas and concertos; classical, romantic and modern literature. Music fee: $12.00.

**Organ 312-322; 412-422; 512-522. (Musc 312 322 412 422 512 522 (Organ) (2-12) Credit 2. I and II.** Advanced technical studies; service playing, extemporization; repertory, including chorals, sonatas, selected symphonic movements and concertos; classical, romantic and modern literature. Music fee: $5.00 per month.

**Piano 312-322; 412-422; 512-522. (Musc 312 322 412 422 512 522 Piano) (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.

**Voice 312-322; 412-422; 512-522. (Music 312 322 412 422 512 522 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.

## METHODS AND MATERIALS

**Brasses 132. (Group Instruction) (Musc 132 Brasses) (2-6) Credit 2. I or II.** Fundamental technique for playing the brass instruments as an aid in understanding how to organize bands and orchestras in the elementary and high school.

**Percussion 132. (Group Instruction) (Musc 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) (Musc 132 Strings) (2-6) Credit 2. I or II.** Fundamental technique for playing the stringed instruments as an aid to understanding how to organize orchestras in the elementary and high school.

**Woodwinds 132. (Group Instruction) (Musc 132 Woodwinds) (2-6) Credit 2. I or II.** Fundamental technique for playing the woodwind instruments as an aid in understanding how to organize bands and orchestra in the elementary and high school.

**142. (Voice Class Methods) (Musc 142 Voice Meth) (2-6) Credit 2. I or II.** Basic principles and problems in voice instruction as related to groups as well as the individual with emphasis on the participation approach.

**253-263. Elementary School Methods. (Musc 253 263 Elem Meth) (Elementary Education Majors) (6-0) Credit 6.** (Both semesters) Grade school music methods and materials, care and development of the child voice.

**373. (Supervision and Administration of Grade School Music) (Musc 373 Grade Sch) (3-0) Credit 3. I or II.** Evaluative criteria of music teaching and supervision in junior and senior high school.

**383. Teaching Music in High School.** See Education 333, Teaching High School subjects.

**393. Instrumental Music Education. (Musc 393 Instrmntl) (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.

**403. Observation and Practice Teaching of Applied Music. (Musc 403 Obsv Tchg) (3-0) Credit 3. I or II.** Teaching of applied music in groups and to individuals through apprenticeship and upon one's own under the guidance of a critic teacher.

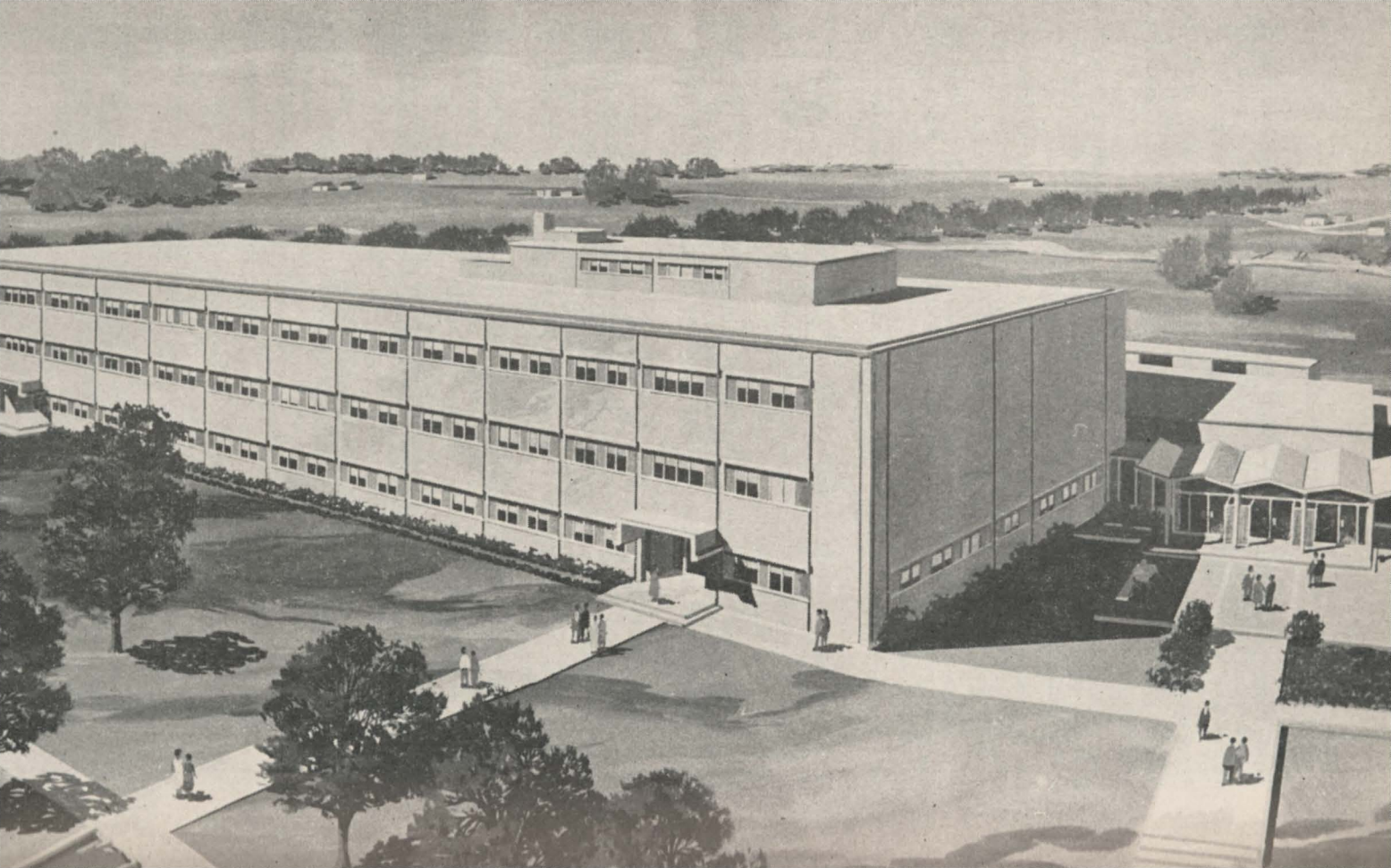
MUSIC ENSEMBLES

**112, 122, 212, 222, 312, 322, 412, 422. (Musc 112 122 212 222 312 322 412 422 Choir) (Choral Practice) (College Choir) (½-4) Credit 2. I and I.** All four years. Sacred and secular choral music, cantatas and oratorios—offering excellent practical opportunities fo rexpression in part singing. A cappella and accompanying singing.

**111, 121, 211, 221. (Military-Concert Band) (Musc 111 121 211 221 Conc Band) (1-4) Credit 1. I and II.** All four years. A military concert organization for concert and military music. Experience in advanced band literature.

**410. (Two-Piano Playing.) (Musc 410 Two Piano) (0-6) No Credit. I or II.** Excellent opportunity for obtaining poise in piano playing, and for developing an accurate rhythmic sense.

**420. (String Ensemble) (Musc 420 Ensemble) (0-6) No Credit. I or II.** A small ensemble serving as the nucleus for the symphony orchestra.



# Department of Natural Science

The Department of Natural Science includes Biology, Chemistry, Physics and Science. Each section has a chairman and its respective requirements for major and minor students.

The department offers courses designed to prepare students for industry, the teaching profession, preprofessional studies in the medical sciences and other sciences which require a scientific background. Credits earned here are accepted by all class A medical schools.

## PRE-PROFESSIONAL STUDIES IN THE MEDICAL SCIENCES

Students who plan careers in Medicine, Dentistry, Veterinary Medicine or any of the Medical sciences are advised to take the course of study outlined for a major in Biology or Chemistry.

Such students will be advised by the Premedical Advisory Committee. Announcements of The Medical Admission Tests and the Dental Aptitude Tests will be made prior to the dates they will be given.

Listed below are the minimum requirements of the State colleges and the American Society of Clinical Pathologists. Students who contemplate study in these fields are advised that the requirements listed are the minimum requirements and that good grades (an average of "B" or better) and a college degree should enhance one's possibilities of acceptance. Those who plan to attend professional schools should consult the catalog of the specific school they plan to attend before beginning their preparatory work.

## PRE-DENTISTRY

1. A minimum of 60 semester hours which must be approved by the Dean of Admission of respective school.
2. The grade average must be a "C" or better in each course.
3. Courses required:
   - A. 12 semester hours of General Biology or General Zoology, including Comparative Anatomy.
   - B. 8 semester hours of General Physics which includes laboratory credit.
   - C. 8 semester hours in General Chemistry with laboratory.
   - D. 6 semester hours in Organic Chemistry with laboratory.
   - E. 6 semester hours in English Composition and Rhetoric (Freshman).
   - F. 6 semester hours of American Government.
   - G. 6 semester hours of History of the United States.
4. It is suggested that candidates should complete 12 hours of English of which 6 semester hours must be in Composition and Rhetoric; also 4 hours in Quantitative (volumetric) Analysis.
5. Courses recommended as electives:
   - A. Mathematics.
   - B. Psychology.
   - C. Psychology.
   - D. Economics.
   - E. Genetics (Hereditary).
   - F. Embryology.
   - G. A Foreign Language.

**NEW SCIENCE BUILDING . . . With the latest equipment in science, laboratories and classrooms. Houses the Head of the Department of Natural Science and the Science teaching Staff.**

## PRE-MEDICINE

Ninety semester hours. Prescribed courses must include:

12 semester hours in English (does not include public speaking);

12 semester hours in Biology or Zoology. Must include Comparative Anatomy (with laboratory);

8 semester hours Physics (with laboratory);

8 semester hours General Inorganic Chemistry (with laboratory);

6 semester hours Organic Chemistry (with laboratory);

4 semester hours in Quantitative Analysis (volumetric);

3 semester hours of Algebra;

3 semester hours of Trigonometry or Analytical Geometry.

Courses in foreign languages, mathematics, physical chemistry, general history, and philosophy are strongly recommended.

## PRE-VETERINARY MEDICINE

A minimum of sixty semester hours are required. These must include:

6 to 8 hours inorganic chemistry;

6 to 8 hours of organic chemistry;

6 hours of Zoology;

6 hours of Mathematics (Algebra and Trigonometry);

6 to 8 hours of Physics;

8 hours English (6 in Rhetoric and Composition);

3 hours American Government;

6 hours Animal Husbandry.

## PRE-MEDICAL TECHNOLOGY

The minimum requirement is 60 semester hours, however, students who have more academic training are likely to receive more consideration. Upon the completion of the minimum requirements a student must complete 12 consecutive months in training in an approved school of Medical Technology.

The 60 semester hours should include:

8 semester hours of Chemistry;

4 semester hours of Organic Chemistry;

4 semester hours of Zoology;

8 semester hours of other Biology.

## PRE-PHARMACY

Most pharmacy schools recommend a year or two of preparatory work in the sciences.

## PRE-NURSING

Students who plan to study nursing may follow the suggested curriculum below for Pre-Nursing:

| First Semester | Hrs. |
|---|---|
| English 113 | 3 |
| Mathematics 173 | 3 |
| Physical Education 111 | 3 |
| Sociology 213 | 3 |
| Zoology 115 | 5 |
| | 15 |

| Second Semester | Hrs. |
|---|---|
| English 123 | 3 |
| History 173 | 3 |
| Physical Education 121 | 1 |
| Psychology 113 | 3 |
| Chemistry 104 | 4 |
| | 14 |

## BIOLOGY

The courses in Biology fall primarily into three groups: those satisfying the basic requirements of general education, those intended to give sufficient knowledge to support majors in other fields (Agriculture, Chemistry, Education, Home Economics, Nursing Education, Physical Education), and those designed primarily to furnish a foundation for professional work in Biology and Medicine.

### MAJOR REQUIREMENTS

For the degree of Bachelor of Science with a major in biology, a minimum of 34 semester hours is required. Courses are prescribed as follows:

| | |
|---|---|
| Biology 115, 125—General Zoology | 10 hours |
| Biology 134—General Botany | 4 hours |
| Biology 314, 324—Human Physiology | 8 hours |
| Biology 414—Vertebrate Embryology | 4 hours |
| Biology 424—Comparative Vertebrate Anatomy | 4 hours |
| Elective in Biology (Advanced level) | 4 hours |

In addition to the above requirements for major the following courses must be presented: Chemistry 115, 125, Physics 214, 224 and Mathematics 113 and 123. Each must present in thesis form the result of a scientific investigation.

### MINOR REQUIREMENTS

For a minor in biology, twenty-two semester hours in addition to Science 333—Teaching of High School Science (for those who plan to teach), which counts as Education are necessary. The courses are prescribed as follows:

| | |
|---|---|
| Biology 115, 125—General Zoology | 10 hours |
| Biology 134—General Botany | 4 hours |
| Biology 314, 324—Human Physiology | 8 hours |

In addition to the twenty-two semester hours each minor of Biology must present the following courses:

| | |
|---|---|
| Chemistry 114, 124—General Chemistry | 8 hours |
| Biology 102—Laboratory Technique | 2 hours |

All major or minor students must attain an average of 'C" or above in all science courses; if a student's average drops below "C" at the end of the sophomore year, he will be asked to change to another major or minor field. He is expected to maintain a "C" average throughout his junior and senior years.

## SUGGESTED OUTLINE FOR A MAJOR IN BIOLOGY FOR PRE-MEDICAL STUDENTS*

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Biology 115 General Zoology | 5 | Biology 125 General Zoology | 5 |
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Mathematics 113 College Algebra | 3 | Mathematics 123 Trigonometry | 3 |
| Social Science 103 Survey of Social Science | 3 | History 173 United States to 1876 | 3 |
| German 113 Elementary German or French 113 Elementary French | 3 | German 123 Elementary German or French 123 Elementary French | 3 |
| Physical Education 111 (Women) Freshman Practice or Military Science 111 (Men) Elementary | 1 | Physical Education 121 (Women) Freshman Practice or Military Science 121 (Men) Elementary | 1 |
| | 18 | | 18 |

*Students choosing this Curriculum in Biology are required to obtain a statement from the parent that the student does not expect to teach.

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| Biology 314 Human Anatomy and Physiology | 4 |
| Chemistry 114 General Inorganic Chemistry | 4 |
| English 213 Public Speaking | 3 |
| German 213 Intermediate German or | |
| French 213 Reading and Grammar Review | 3 |
| Biology 102 Laboratory Technique | 2 |
| History 183 United States 1877 to Present | 3 |
| Physical Education 211 (Women) Sophomore Practice or | |
| Military Science 211 (Men) Elementary | 1 |
| | 20 |

| Second Semester | Hrs. |
|---|---|
| Biology 324 Human Anatomy and Physiology | 4 |
| Chemistry 124 General Inorganic Chemistry | 4 |
| English 223 Introduction to Literature | 3 |
| German 223 Intermediate German or | |
| French 223 Reading and Grammar Review | 3 |
| Biology 202 Laboratory Technique | 2 |
| Electives | 3 |
| Physical Education 221 (Women) Sophomore Practice or | |
| Military Science 221 (Men) Elementary | 1 |
| | 20 |

JUNIOR YEAR

| | |
|---|---|
| Biology 414 Vertebrate Embryology | 4 |
| Chemistry 204 Qualitative Analysis | 4 |
| Physics 214 General Physics | 4 |
| Electives | 3 |
| | 15 |

| | |
|---|---|
| Biology 424 Comparative Anatomy | 4 |
| Chemistry 214 Quantitative Analysis | 4 |
| Physics 224 General Physics | 4 |
| English 343 American Literature | 3 |
| | 15 |

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| Biology 134 Botany | 4 |
| Chemistry 315 Organic Chemistry | 5 |
| Political Science 113 National Government | 3 |
| Elective | 3 |
| Biology 451 Research | 1 |
| | 16 |

| Second Semester | Hrs. |
|---|---|
| Elective in Major Field | 4 |
| Chemistry 325 Organic Chemistry | 5 |
| Political Science 123 State Government | 3 |
| Electives | 4 |
| Biology 461 Research | 1 |
| | 17 |

## SUGGESTED FOUR-YEAR PROGRAM FOR A TEACHING MAJOR IN BIOLOGY

FRESHMAN YEAR

| | |
|---|---|
| Biology 115 General Zoology | 5 |
| English 113 Grammar and Composition | 3 |
| Social Science 103 Survey of Social Science | 3 |
| Mathematics 113 College Algebra | 3 |
| French 113 Elementary French or | |
| German 113 Elementary German | 3 |
| Physical Education 111 (Women) | 1 |
| Military Science 111 (Men) Elementary | 1 |
| | 18 |

| | |
|---|---|
| Biology 125 General Zoology | 5 |
| English 123 Reading and Composition | 3 |
| College Science 113 Survey of College Science | 3 |
| Mathematics 123 Trigonometry | 3 |
| French 123 Elementary French or | |
| German 123 Elementary German | 3 |
| Physical Education 121 (Women) Freshman Practice or | 1 |
| Military Science 121 (Men) Elementary | 1 |
| | 18 |

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Biology 314 Human Physiology | 4 | Biology 324 Human Physiology | 4 |
| Chemistry 114 General Inorganic Chemistry | 4 | Chemistry 124 General Inorganic Chemistry | 4 |
| Education 273 Pupil Growth and Development | 3 | Education 283 Pupil Growth and Development | 3 |
| English 213 Public Speaking | 3 | English 223 Introduction to Literature | 3 |
| French 213 Reading and Grammar Review or German 213 Intermediate German | 3 | French 223 Reading and Grammar Review or German 223 Intermediate German | 3 |
| Physical Education 211 (Women) Sophomore Practice or Military Science 211 (Men) Elementary | 1 | Physical Education 221 (Women) Sophomore Practice or Military Science 221 (Men) Elementary | 1 |
| Biology 102 Laboratory Technique | 2 | Biology 202 Laboratory Technique | 2 |
| | 20 | | 20 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Biology 414 Vertebrate Embryology | 4 | Biology 424 Comparative Anatomy | 4 |
| History 173 United States to 1876 | 3 | History 183 United States, 1877 to Present | 3 |
| Minor (Elective) | 3 | Education 333 Teaching of High School Science | 3 |
| Education 323 High School Curriculum | 3 | Physics 224 General Physics | 4 |
| Military Science 313 (Men) Advanced | 3 | Military Science 323 (Men) Advanced | 3 |
| Physics 214 General Physics | 4 | Minor (Elective) | 3 |
| | 20 | | 20 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Biology 134 General Botany | 4 | Education 423 School and Community Relations | 3 |
| Political Science 113 National Government | 3 | Political Science 123 State Government | 3 |
| Education 293 Foundations | 3 | Education 406 Student Teaching | 6 |
| Biology 451 Research | 1 | Electives | 4 |
| Elective in Major Field Minor (Elective) | 4 | Biology 461 Research | 1 |
| Military Science 413 (Men) Advanced | 3 | Military Science 423 (Men) Advanced | 3 |
| Elective | 3 | | 17 or 20 |
| | 18 or 21 | | |

# DESCRIPTION OF COURSES

## BIOLOGY

**114. General Zoology. (Biol 114 Gen Zool) (2-4) Credit 4.** Fundamental principles of Biology from the study of embryology, structure and physiology of the frog. (For non-majors and minors.) Lab fee $2.00.

**115. General Zoology. (Biol 115 Gen Zool) (3-4) Credit 5.** For majors and minors in Biology; a detailed study of morphology, physiology, ecology, and taxonomy of the vertebrates. Lab fee $2.00.

**124. General Zoology. (Biol 124 Gen Zool) (2-4) Credit 4.** Morphology, physiology and relationship in invertebrate groups. Prerequisite: Biology 114. (For non-majors and minors.) Lab fee $2.00.

**125. General Zoology. (Biol 125 Gen Zool) (3-4) Credit 5.** For major and minors in Biology; a detailed study of morphology, physiology, ecology, and taxonomy of the invertebrates. Lab fee $2.00.

**134. General Botany. (Biol 134 Botany) (2-4) Credit 4.** Morphology, physiology of flowering plants; structure, method of reproduction and biotic relationships of types representative of lower plants. Lab fee $2.00.

**135-163. Human Anatomy and Physiology for Student Nurses. (Biol 153 163 Anat Phys) (2-4) Credit 3.** The structure and function of the human body; the structure of each of the systems demonstrated by models, charts and animal dissections; their function studied by experiments. Lab fee: $2.00.

**173. (Equivalent to NE 173) General Microbiology and Pathology. (Biol 173 Bact and Path) (2-2) Credit 3.** Morphology and physiology and micro-organisms related to health and sanitation; asepsis, disinfection, and the growth and control of those organisms causing common infestious diseases. Lab 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. Lab fee: $2.00.

**304. Physiology for Students of Home Economics. (Biol 304 Physiology) (2-4) Credit 4.** Structure of function of human organs and systems as related to Home Economics and good health. Lab fee: $2.00.

**314-324. Human Physiology and Anatomy. (Biol 314 324 Phy Anat) (Majors and Physical Education Majors.) (2-4) Credit 4.** Structure; physiology and human organ system and related principles. Prerequisite: Biology 114, 124. Lab fee: $2.00.

**334. General Microbiology. (Bacteriology) (Biol 334 Microbiol) (2-4) Credit 4.** Morphology, physiology, classification, cultivation of microorganisms, relation to agriculture, premedics, and industry. Prerequisite: General Chemistry, Biology 314 and 114. Lab fee: $2.00.

**364. Animal Histology. (Biol 364 Histology) (2-4) Credit 4.** Microscopic study of tissues and organs of vertebrates; relation of structure to function. Lab fee: $2.00.

**414. Vertebrate Embryology. (Biol 414 Vert Embr) (3-5) Credit 4.** Structure, principles and progress in vertebrate development; chicken and pig as principal laboratory material. Prerequisite: Biology 115-125. Lab fee. $3.00.

**424. Comparative Anatomy. (Biol 424 Comp Anat) (3-5) Credit 4.** Anatomy of organs and organ systems, their function and evolution in major vertebrate types. Prerequisites: Biology 114, 124, 414. Lab fee: $3.00.

**464. Plant Physiology. (Biol 464 Plants) (2-4) Credit 4. I.** Structure, Physiology of plant organ systems and related principles. Lab fee: $3.00.

**451-461. Research. (Biol 451 Research) (0-2) Credit 1. I or II.** Library and laboratory work on specific problems studied for investigative paper (required of all majors).

**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. Required of students electing Biology as a major field. Lab fee: $2.00.

## CHEMISTRY

### MAJOR AND MINOR REQUIREMENTS

For a B. S. Degree, 38 semester hours are required of which 16 hours must be courses numbered 300 or above.

Twenty-four semester hours are required for a minor in Chemistry, of which five hours must be in courses numbered 300.

All students who major or minor in Chemistry must include the following courses: Chemistry 115, 125, 204, 214, and 315. Pre-medical students are advised to take Chemistry 325. In addition to the above courses, all persons majoring in Chemistry must take the following courses: Mathematics 113, 123, 213, and 224, and Physics 224. Math. 313 is recommended.

Students who plan to major or minor in chemistry will be expected to maintain an average of "C" which is the minimum requirement and must take courses 115 and 125 which are designed for students who plan to major and minor in chemistry. This is effective for students who matriculate for the first time September, 1951.

## SUGGESTED OUTLINE FOR A MAJOR IN CHEMISTRY WITH MINOR IN MATHEMATICS

### FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Chemistry 115 General Inorganic Chemistry | 5 | Chemistry 125 General Inorganic Chemistry | 5 |
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Mathematics 113 College Algebra | 3 | Mathematics 123 Trigonometry | 3 |
| Social Science 113 Introduction to Social Science | 3 | History 173 American History | 3 |
| Physical Education 111 (Women) Freshman Practice or | | Physical Education (Women) 121 Freshman Practice, or | |
| Military Science (Men) 111 Elementary | 1 | Military Science 121 (Men) Elementary | 1 |
| Industry (Chemistry 102—Lab. Tech.) | 2 | Political Science 113 American National Government | 3 |
| | 17 | | 18 |

### SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Chemistry 204 Qualitative Analysis | 4 | Chemistry 214 Quantitative Analysis | 4 |
| Education 273 Pupil Growth and Development | 3 | Education 283 Pupil Growth and Development | 3 |
| Physics 214 General Physics | 4 | Mathematics 213 Analytical Geometry | 3 |
| French 113 or German 113 Elementary French or German | 3 | French 123 or German 213 Elementary French or German | 3 |
| Physical Education 211 (Women) Sophomore Practice, or | | Physical Education 221 (Women) Sophomore Practice, or | |
| Military Science 211 (Men) Elementary | 1 | Military Science 221 (Men) Elementary | 1 |
| Government 123 American State Government | 3 | Physics 224 General Physics | 4 |
| | 18 | | 17 |

### JUNIOR YEAR

| | | | |
|---|---|---|---|
| Chemistry 315 General Organic Chemistry | 5 | Chemistry 325 General Organic Chemistry | 5 |
| Mathematics 223 Differential Calculus | 3 | Mathematics 313 Integral Calculus | 3 |
| English 213 Public Speaking | 3 | English 223 Introduction to Literature | 3 |
| Military Science 313 Advanced | 3 | Military Science 323 Advanced | 3 |
| Physical Education Theory* Women | 3 | Education 333 Methods of Teaching Science | 3 |
| Education 293 Foundations | 3 | French 213 or German 283 Reading and Grammar Review | 3 |
| French 213 or German 213 Reading and Grammar Review | 3 | | |
| | 17 or 20 | | 17 or 20 |

### SENIOR YEAR

| | | | |
|---|---|---|---|
| Chemistry 414 Physical Chemistry | 4 | Chemistry 424 Physical Chemistry | 4 |
| Education 406 Practice Teaching | 6 | Mathematics Elective | 3 |
| Education 423 School and Community | 3 | Military Science 423 Advanced | 3 |
| History 183 American History | 3 | Electives | 3 |
| Chemistry 451 Research | 1 | Economics 213 Principles | 3 |
| | | Chemistry 461 Research | 1 |
| | 17 | | 17 |

# DESCRIPTION OF COURSES

## CHEMISTRY

**102-202. Laboratory Techniques. (Chem 102-202 Lab Tech) (1-5) Credit 2.** Training course in Laboratory Methods for prospective Teachers of Chemistry. Lab fee: $2.00.

**104. Introduction to General Chemistry. (2-4) Credit 4.** Introductory course in General Chemistry, designed for Pre-Nursing Students. Credit for this course is not accepted in place of course 113 or 114. Lab fee: $2.00.

**113-123. Chemistry for Nurses. (Chem 113 123 Nurs Chem) (2-1) Credit 3. I and II.** For students of Nursing and Nursing Education; the essentials for inorganic biological chemistry requisite for nursing. Lab fee: $2.00.

**114-124. General Inorganic Chemistry. (Chem 114 124 Inorganic) (3-4) Credit 4.** 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. Lab fee: $2.00.

**These courses are for non-majors and non-minors—for students in Home Economics, Agriculture, and Engineering.**

**115-125. General Inorganic Chemistry. (Chem 115 125 Inorganic) (2-5) 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 of the elements and their inorganic compounds. Lab fee: $2.00.

**204. Qualitative Analysis. (Chem 204 Qual Anal) (2-4) Credit 4.** 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 nometal; micro-qualitative laboratory techniques; prerequisites: Chemistry 115 and 125. Lab 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. Lab 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. Lab fee: $3.00.

**314. Introductory Organic Chemistry. (Chem 314 Organic) (2-4) Credit 4. I.** For students majoring in Agriculture, and Home Economics. An introduction to aliphatic and aromatic compounds, fats, carbohydrates, and proteins. Prerequisite: Chemistry 114, 124. Lab fee: $3.00.

**315 and 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 education. Aliphatic and aromatic compounds; preparation and testing of representative compounds of the aliphatic and aromatic substances. Prerequisite: Chemistry 115, 125 and 204 and 214. Lab fee: $3.00.

**401. Journal Reading and Chemical Literature. (Chem 401 Journals) (1-0) I or II.** For Chemistry majors. Reports and discussion on current chemical literature and research. Prerequisite: Major in Chemistry or permission of Instructor.

**402. Organic Preparation. (Chem 402 Org 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. Lab fee: $3.00.

**414-424. Physical Chemistry. (Chem 414 424 Physical) (3-4) 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 heterogenous chemical equilibruim, chemical kinetics, electrochemistry, atomic and molecular structure, elements of the equantum theory, and photochemistry. Prerequisites: Quantitative Analysis, College Physics, and Integral Calculus with an average of "C" or better. Lab fee: $2.00.

**434. Biochemistry. (Chem 434 Biochem) (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. Lab fee: $3.00.

**451, 461. Research. (Chem 451 461 Research) (0-2) Credit 1. I or II.** Library and laboratory work on specific problems to be studied for investigative paper required of all majors.

## PHYSICS

### MAJOR AND MINOR REQUIREMENTS

The course offering in Physics is designed for the preparation of three classes of students: those who must present Physics as a prerequisite to the study of medicine, dentistry, engineering, and those to whom Physics will be an aid to a fuller and more precise interpretation of physical problems.

A major in Physics consists of Physics 214, 224, 403 and additional credits to make a total of 32 hours. A minor consists of Physics 214, 224 and additional credit to make a total of 22 hours.

In addition to the above requirements for a major or minor in Physics, the following courses must be presented. Chemistry 114, 124; and Mathematics 113, 123; and a course in differential and integral calculus.

A person majoring in Physics must maintain an average of "C" or above. If a student's average drops below "C" at the end of his sophomore year, he will be asked to change to another major field.

### SUGGESTED OUTLINE FOR MAJORS IN PHYSICS

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Chemistry 115 | 5 | Chemistry 125 | 5 |
| General Inorganic Chemistry with Introductory Qualitative Analysis | | General Inorganic Chemistry with Introductory Qualitative Analysis | |
| English 113 | 3 | English 123 | 3 |
| Grammar and Composition | | Reading and Composition | |
| Mathematics 113 | 3 | Mathematics 123 | 3 |
| College Algebra | | Trigonometry | |
| Social Science 113 | 3 | Social Science 123 | 3 |
| Introduction to Social Science | | Introduction to Social Science | |
| Physical Education Practice 111 | | Biology 114 | 4 |
| Freshman Practice (Women) or | | General Zoology | |
| Military Science 111 | 1 | Physical Education Practice 121 | |
| Elementary (Men) | | Freshman Practice (Women) or | |
| | | Military Science 121 | 1 |
| | | Elementary (Men) | |
| | 15 | | 19 |

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| Physics 214 General Physics | 4 |
| French 113 Elementary French | 3 |
| Political Science 113 American National Government | 3 |
| Education 273 Pupil Growth and Development | 3 |
| Mathematics 223 Differential Calculus | 3 |
| Physical Education 211 Sophomore Practice (Women) or Military Science 211 (Men) Elementary | 1 |
| | 17 |

| Second Semester | Hrs. |
|---|---|
| Physics 224 General Physics | 4 |
| French 123 Elementary French | 3 |
| Political Science 123 American State Government | 3 |
| Education 283 Pupil Growth and Development | 3 |
| Mathematics 313 Integral Calculus | 3 |
| Physical Education Practice 221 Sophomore Practice (Women) or Military Science 221 (Men) Elementary | 1 |
| | 17 |

JUNIOR YEAR

| | |
|---|---|
| Physics 312 Electrical Measurements | 2 |
| Physics 313 Electrical Measurements | 3 |
| Mathematics 213 Analytical Geometry | 3 |
| French 213 Reading and Grammar | 3 |
| Military Science 313 (Men) Advanced | 3 |
| Education 293 Foundations | 3 |
| English 213 Public Speaking | 3 |
| | 20 |

| | |
|---|---|
| Physics 322 Electrical Measurements | 2 |
| Physics 323 Electrical Measurements | 3 |
| Mathematics 343 Solid Analytical Geometry | 3 |
| Education 333 Methods of Teaching Science | 3 |
| History 173 American History | 3 |
| French 223 Reading and Grammar | 3 |
| Military Science 323 (Men) Advanced | 3 |
| English 223 Introduction to Literature | 3 |
| | 17 |

SENIOR YEAR

| | |
|---|---|
| Education 406 | 6 |
| Physics 433 Electronics | 3 |
| Physics 413 Advanced Heat and Sound | 3 |
| History 183 American History | 3 |
| Military Science 413 (Men) Advanced | 3 |
| Education 423 School and Community | 3 |
| | 21 |

| | |
|---|---|
| Physics 443 Electronics | 3 |
| Physics 423 Advanced Light | 3 |
| Electives | 6 |
| Military Science 423 (Men) Advanced | 3 |
| Economics 213 Principles | 3 |
| | 15 |

# DESCRIPTION OF COURSES

## PHYSICS

**214, 224. General Physics. (Phys 214 224 Gen Phys) (2-4) Credit 4. I and II.** Mechanics, heat, sound, electricity, and light. Prerequisite: Mathematics 113 and 123, which may be taken concurrently with course. Lab fee: $2.00.

**215-225. General Physics. (Phys 215 225 Gen Phys) (2-6) Credit 5. I and II.** Offered for majors in engineering, mechanics, heat, sound, electricity, and light. Prerequisite: Mathematics 113 and 123, which may be taken concurrently with course. Lab fee: $2.00.

**312-322. Electrical Measurements. (Phys 312 322 Elec Msrm) (0-4) Credit 2. I and II.** Offered for majors in Electrical Engineering. A laboratory course covering the theory and use of electrical apparatus. Methods of measuring current, power, electromotive force, ferro-magnetism, inductance of capacity. Prerequisite: Physics 214, 224 and Calculus; the Calculus may be taken concurrently with this course. Lab fee: $2.00.

**313-323. Electrical Measurements. (Phys 313 323 Elec Msrm) (3-0) Credit 3. I and II.** The theory of electricity and magnetism. Physics 312 and 322 must accompany this course.

**303. Elementary Photography. (Phys 303 Photography) (1-4) Credit 3. I and II.** The theory of the diode, triode, multi-element tubes; the cathode ray tubes, photo-bulbs and their application to engineering; considerable laboratory practice. Prerequisite: Physics 214, 224 and Calculus may be taken concurrently with this course. Lab fee: $2.00.

**402. Advanced Laboratory Technique. (Phys 402 Lab Tech) (0-6) Credit 2. I or II.** Required of all majors in Physics. An advanced experimental problem is given under direction. The problem may take the form of a former classical problem in Physics. The outcome of this investigation is recorded as a thesis. This course is open to only majors in Physics. Lab fee: $2.00.

**413. Advanced Heat and Sound. (Phys 413 Adv Sound) (1-4) Credit 3. I.** Properties of gases, elementary theory of thermodynamics and the kinetic theory; laboratory practice in modern methods of temperature measurements, expansion properties of matter, and colorimetry; the transmission and production of sound resonance and vibrational properties of matter. Prerequisite: Physics 214, 224 and Calculus. Lab fee: $2.00.

**423. Advanced Light. (Phys 423 Adv Light) (1-4) Credit 3. II.** The theory of lenses, interference diffraction, polarization; the importance and use of optical instruments; corresponding laboratory work required. Prerequisites: Physics 214, 224 and Calculus. Lab fee: $2.00.

**433-443. Electronics. (Phys 433 443 Electronics) (1-4) Credit 3. I and II.** The theory of the diode, triode, and multi-element tubes; the cathode ray tubes, photobulbs and their application to engineering; considerable laboratory practice. Prerequisite: Physics 214, 224 and Calculus may be taken concurrently with this course. Lab fee: $2.00.

**453. Modern Physics. (Phys 453 Modern Phys) (3-0) Credit 3.** Development of present theory of atomic structure, waves and particles relativity, quantum mechanical principles, natural radioactivity, nuclear reactions.

## COLLEGE SCIENCE AND SCIENCE EDUCATION

**113-123. Survey of College Science. (Sci 113 123 Survey) (3-0) Credit 3. I and II.** A course designed to give students an orientation in science; to cultivate scientific attitudes and methods of procedure; seeks to broaden concepts, generalizations and outlook; to open new avenues of interest and satisfaction; to enable the individual to meet the problems of existence with available knowledge and requisite skills and to develop scientific appreciation. In addition to the text, the course provides special lectures by the instructor and by other specialists in the various fields of science.

**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; trainig course 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.

**413. Elementary School Science. (Sci 413 Elem Sch Sci) (3-0) Credit 3.** Prerequisites: Ed. 273-283, Ed. 363, and Ed. 393, 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.

# Department of Physical Education

The Department of Physical Education offers a four-year plan of study leading to the Bachelor of Science degree with a major in Physical Education. A minor is also offered.

Each major must maintain a "C" average or above to continue in the program. If a student's average is below "C" at the end of his Sophomore year, he will be asked to change to another major field. In addition to maintaining the required scholastic average each major or minor must be able to pass departmental motor ability and physical fitness tests.

## HEALTH AND PHYSICAL EDUCATION

For a MAJOR in Physical Education 29 semester hours are required. Courses are prescribed as follows:

P.E. 111, 121, 211, 221 Physical Education Practice ..... 4 hrs.

P.E. 102 and 202, 312 and 322 Elementary and Intermediate Modern Dance or Gymnastics ..... 4 hrs.

P.E. 132 or 142 Individual Sports (Badminton, Archery, Golf, Tennis) ..... 2 hrs.

P.E. 172 History and Principles of Physical Education..... 2 hrs.

Hl. Ed. 203 Personal Hygiene ..... 3 hrs.

Hl. Ed. 333 Methods and Materials in Health Education..... 3 hrs.

P.E. 343 Physical Education Methods and Materials for Secondary schools ..... 3 hrs.

P.E. 363 or 383 Coaching and Officiating Team Sports ..... 3 hrs.

P.E. 462 Corrective Physical Education ..... 2 hrs.

P.E. 483 Organization and Administration of Physical Education.. 3 hrs.

In addition to the above requirements, each major in Physical Education is required to present the following courses:

Biology 115-125 Zoology .....10 hrs.

Biology 314-324 Anatomy and Physiology..... 8 hrs.

## MINOR REQUIREMENTS

For a Minor in Physical Education 19 semester hours are required. Courses prescribed as follows:

P.E. 111, 121, 211, 221 Physical Education Practice..... 4 hrs.

P.E. 102 and 202 Elementary Modern Dance or
312 and 322 Gymnastics ..... 4 hrs.

P.E. 172 History and Principles of Physical Education..... 2 hrs.

Hl. Ed. 203 Personal Hygiene ..... 3 hrs.

P.E. 343 Physical Education Methods and Materials for Secondary Schools ..... 3 hrs.

P.E. 483 Organization and Administration of Physical Education.. 3 hrs.

In addition to the above requirements, each minor in Physical Education is required to present the following courses:

Biology 115-125 Zoology .....10 hrs.

## HEALTH EDUCATION

A HEALTH EDUCATION minor is not open to students majoring in Physical Education.

For a minor in Health Education 18 semester hours are required. These eighteen semester hours may be elected from the following courses:

| | | |
|---|---|---|
| H.E. 123 | Elementary Nutrition | 3 hrs. |
| Hl. Ed. 203 | Personal Hygiene | 3 hrs. |
| Hl. Ed. 333 | Methods and Materials in Health Education | 3 hrs. |
| P.E. 303 | Driver Education and Safety | 2 hrs. |
| Hl. Ed. 353 | Public School and Community Hygiene | 3 hrs. |
| Hl. Ed. 392 | Principles of Health | 2 hrs. |
| P.E. 402 | First Aid | 2 hrs. |
| P.E. 403 | Playground and Community Recreation | 3 hrs. |
| P.E. 423 | Safety Education | 3 hrs. |

## ADDITIONAL REQUIREMENTS

In addition to basic requirements, each student in the junior year must pass a proficiency test in two of the following activities: golf, tennis, gymmastics, track, badminton or archery.

## UNIFORMS

One uniform is required of non-major students, and two uniforms for major female students; a blue one-piece suit for non-majors; and a white and gold two-piece suit for women majors. White regulation basketball shoes are also required. The approximate cost of each of these costumes is $6.50. Women should come either equipped with or prepared to purchase these uniforms for their work in Physical Education.

For men majoring in Physical Education regulation uniform and shoes prescribed by the department are required.

## INTRAMURAL ATHLETICS

This program, combining work in physical education, is designed primarily to give students an opportunity to learn and to practice in a variety of sports. A major must at all times be a candidate for one of the varsity or intramural teams.

## SUGGESTED FOUR-YEAR PROGRAM WITH A MAJOR IN PHYSICAL EDUCATION

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Mathematics 173 or 113 Applied Mathematics or College Algebra | 3 | Mathematics 183 or 123 Applied Mathematics or Trigonometry | 3 |
| Biology 115 General Zoology | 5 | Biology 125 General Zoology | 5 |
| History 173 The United States | 3 | History 183 The United States | 3 |
| Physical Education 172 History and Principles of Physical Education | 2 | Physical Education 102 Elementary Modern Dance or Physical Education 312 Gymnastics | 2 |
| Physical Education 111 Practice or Military Science 111 Elementary Military Science | 1 | Physical Education 121 Practice or Military Science 121 Elementary | 1 |
| | 17 | | 17 |

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| English 213 | 3 |
| Public Speaking | |
| Foreign Language 113 | 3 |
| Elementary French or Spanish | |
| Education 273 | 3 |
| Pupil Growth and Development | |
| Political Science 113 | 3 |
| National Government | |
| Physical Education 132 or 142 | 2 |
| Individual Sports | |
| Physical Education 202 | 2 |
| Intermediate Modern Dance or | |
| Physical Education 322 | |
| Gymnastics | |
| Physical Education 211 | |
| Physical Education Practice or | |
| Military Science 211 | 1 |
| Elementary Military Science | |
| Industry | 2 |
| | 19 |

| Second Semester | Hrs. |
|---|---|
| English 223 | 3 |
| Introduction to Literature | |
| Foreign Language 123 | 3 |
| Elementary French or Spanish | |
| Education 283 | 3 |
| Pupil Growth and Development | |
| Political Science 123 | 3 |
| State Government | |
| Health Education 203 | 3 |
| Personal Hygiene | |
| Physical Education 221 | |
| Physical Education Practice or | |
| Military Science 221 | 1 |
| Elementary Military Science | |
| Industry | 2 |
| | 18 |

JUNIOR YEAR

| | |
|---|---|
| Biology 314 | 4 |
| Anatomy and Physiology | |
| Foreign Language 213 | 3 |
| French or Spanish | |
| Education 293 | 3 |
| Foundation of American Education | |
| Social Science 103 | 3 |
| Survey | |
| Physical Education 383 | |
| Coaching and Officiating for Men or | |
| Physical Education 363 | 3 |
| Coaching and Officiating Team | |
| Sports For Women | |
| | 16 |

| | |
|---|---|
| Biology 324 | 4 |
| Anatomy and Physiology | |
| Foreign Language 223 | 3 |
| Intermediate French or Spanish | |
| Physical Education 343 | 3 |
| Physical Education Methods | |
| for Secondary Schools | |
| Physical Education 462 | 2 |
| Corrective Physical Education | |
| Health Education 333 | 3 |
| Methods and Materials in | |
| Health Education | |
| | 15 |

SENIOR YEAR

| | |
|---|---|
| Education 406 | 6 |
| Student Teaching | |
| Education 423 | 3 |
| School and Community Relations | |
| Minor Field and Electives | 8 |
| | 17 |

| | |
|---|---|
| Education 323 | 3 |
| High School Curriculum | |
| Physical Education 483 | 3 |
| Organization and Administration | |
| of Health and Physical Education | |
| Minor Field and Electives | 11 |
| | 17 |

# DESCRIPTION OF COURSES

## THEORY COURSES IN HEALTH AND PHYSICAL EDUCATION

**Zoology 115-125.** See Department of Biology for description. Required of all majors and minors.

**Human Physiology and Anatomy 314-324.** See Department of Biology for description. Required of all majors.

**172. History and Principles of Physical Education. (PE 172 Hist Prin) (1-0) Credit 2. I.** Historic development from ancient times to present. Required of all majors and minors.

**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.

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

**313. Methods and Materials for Teaching Health and Physical Education in Elementary Schools. (PE 313 Elem Meth) (3-0) Credit 3.** Organization and classification of activities. Each student will be expected to teach activity classes and to evaluate methods of teaching. For elementary teachers.

**343. Methods and Materials in Physical Education. (PE 343 HS Meth) (4-0) Credit 3. II.** Organization and classification of activities, play areas, equipment and supplies; each student will be expected to teach activity classes in physical education, and to evaluate methods of teaching physical education activities. Required of all majors and minors.

**363. Coaching and Officiating. (PE 363 Coaching) (3-0) Credit 3. I.** Theory and Strategy. For Women only.

**383. Coaching and Officiating. (PE 383 Coaching) (3-0) Credit 3. II.** Theory and Strategy. For men only.

**402. First Aid. (PE 402 First Aid) (1-0) 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.

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

**423. Safety Education. (PE 423 Safety) (2-2) 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.

**442. Care and Prevention of Athletic Injuries. (PE 442 Injuries) (1-2) Credit 2. II.** Theory and practice of prevention and treatment of athletic injuries; practice in techniques of massage and bandaging.

**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.

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

PRACTICE COURSES

Only one Freshman or Sophomore Practice course may be elected in a semester, except in case of a repeat due to failure. Each student must elect 111 and 121 Freshman Practice in the Freshman year 121 and 221 Sophomore Practice in the Sophomore year.

**111W. Freshman Practice. (PE 111 Practice) (0-2) Credit 1. I.** Low organization games and activities, softball, volleyball. For women only.

**111M. Freshman Practice. (PE 111 Practice) (0-2) Credit 1. I.** Low organization games and activities; touch football, volleyball. For men only.

**121W. Freshman Practice. PE( 121 Practice) (0-2) Credit 1. II.** Basketball and hockey. For women only.

**121M. Freshman Practice. (PE 121 Practice) (0-2) Credit 1. II.** Basketball and softball. For men only.

**102. Elementary Modery Dance. (PE 102 Mod Dance) (1-2) Credit 2. I and II.** Fundamental steps designed for beginners.

**132. Individual Sports. (PE 132 Sports) (2-0) Credit 2. I.** Designed to give understanding of skill and strategy of individual games and sports (badminton, archery, golf, tennis).

**142. Individual Sports. (PE 142 Sports) (2-0) Credit 2. II.** Continuation of PE 132.

**202. Intermediate Modern Dance. (PE 202 Mod Dance) (1-2) Credit 2. I and II.** Free and natural movements; self expression through original and creative dance patterns.

**211W. Sophomore Practice. (PE 211 Practice) (0-2) Credit 1. I.** Low organization games and activities, hockey, soccer, and speedball. For women only.

**211M. Sophomore Practice. (PE 211 Practice) (0-2) Credit 1. I.** Low organization games and activities, tennis, soccer, and speedball. For men only.

**221. Sophomore Practice. (PE 221 Practice) (0-2) Credit 1. II.** Badminton and archery. Women only.

**221M. Sophomore Practice. (PE 221 Practice) (0-2) Credit 1. II.** Badminton and archery. Men only.

**262. Folk Dancing. (PE 262 Folk Danc) (1-2) Credit 2. I, II.** History appreciation and interpretation o fthe folk songs, folk stories and folk customs; mastery of steps in folk dancing.

**312. Gymnastics. (1-2) Credit 2. I.** Theory and practice in gymnastics (tumbling, stunts, and self-testing). For majors and minors only.

**322. Gymnastics. (PE 322 Gymnastics) (1-2) Credit 2. II.** Continuation of Physical Education 312.

HEALTH EDUCATION COURSES

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

**203. Personal Hygiene. (Hl Ed 203 Pers Hyg) (3-0) Credit 3. I and II.** Personal health, problems; biological basis of life; attitudes toward health, fatigue, ventilation and habit forming drugs. Required of all majors and minors.

**333. Methods and Materials in Health Education. (Hl Ed 333 Hlth Mthds) (3-0) Credit 3. II.** The sources of materials and techniques in the field. Required of all major and minors.

**353. Public School and Community Hygiene. (Hl Ed 353 Comm Hyg) (3-0) Credit 3. I and II.** Health problems related to the school and community.

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

## Department of Political Science

Students who meet the entrance standards of the College are eligible to major in political science. Thirty semester hours of course work in political science are required for a major in the field, and eighteen semester hours must be completed for a minor. Students majoring in political science must take at least one semester course, in addition to Political Science 103, Political Science 113 or Political Science 123, in each of the following areas of the dis-

cipline: politics, public administration, public law, political theory and international relations. Bibliography and Methods in Political Science, Political Science 223, is required of all majors. Majors and Minors are required to earn two grade points for each semester hour of credit in political science. The Department of Political Science reserves the right to require that any course in the major field be repeated if the grade earned is less than "C."

## INTEGRATED MINOR IN THE SOCIAL SCIENCES

Students may elect an integrated minor in the Social Sciences. The minor in the Social Sciences is planned primarily for the training of teachers, but may be chosen by other students who do not intend to teach when such a program meets their particular needs for professional training in other fields.

Students who elect such a program must complete twenty-one semester hours of course work in social science exclusive of the general college requirement of six hours in American Government, and the methods course in the teaching of Social Science Studies. Courses comprising this program must be drawn from the Departments of History, Economics, Political Science, and Sociology. Elements of the integrated Social Science minor shall consist of a minimum of six semester hours each of American History and Economics, three semester hours each of Geography, Political Science and Sociology. Any exceptions from and additions to the integrated minor prescribed are to be arranged in consultation with the Head of the Department of History.

For further information see the various offerings in the Departments of Social Science (History, Economics, Political Science and Sociology).

## SUGGESTED FOUR-YEAR PROGRAM FOR POLITICAL SCIENCE MAJORS

### FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 113<br>Grammar and Composition | 3 | English 123<br>Reading and Composition | 3 |
| Natural Science 113<br>College Science | 3 | Natural Science 123<br>College Science | 3 |
| Mathematics 173 or 113<br>Elements of Applied Mathematics or College Algebra | 3 | Mathematics 183 or 123<br>Elements of Applied Mathematics or Trigonometry | 3 |
| Political Science 113<br>American National Government | 3 | Political Science 123<br>American State and Local Government | 3 |
| Social Science 113<br>Introduction to Social Science | 3 | History 143<br>Survey of Western Civilization to 1715 | 3 |
| Military Science 111 (Men)<br>Elementary or | | Military Science 121 (Men)<br>Elementary or | |
| Physical Education 111 (Women)<br>Freshman Practice | 1 | Physical Education 121 (Women)<br>Freshman Practice | 1 |
| Electives | 2 | Electives | 2 |
| | 18 | | 18 |

### SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| English 213<br>Public Speaking | 3 | English 223<br>Introduction to Literature | 3 |
| Foreign Language 113<br>Elementary French, Spanish, or German | 3 | Foreign Language 123<br>Elementary French, Spanish, or German | 3 |
| Political Science 223<br>Bibliography and Methods in Political Science | 3 | Political Science 273<br>Introduction to Public Administration | 3 |
| Political Science 213<br>Political Parties | 3 | Political Science 383<br>International Law and Relations | 3 |
| Education 273<br>Pupil Growth and Development | 3 | Education 283<br>Pupil Growth and Development | 3 |
| Military Science 211 (Men)<br>Elementary or | | Military Science 221 (Men)<br>Elementary or | |
| Physical Education 211 (Women)<br>Sophomore Practice | 1 | Physical Education 221 (Women)<br>Sophomore Practice | 1 |
| Electives | 2 | Industry | 2 |
| | 18 | | 18 |

JUNIOR YEAR

| First Semester | Hrs. |
|---|---|
| Foreign Language 213 Intermediate German, French, or Spanish | 3 |
| Political Science 313 Modern Political Theory | 3 |
| Economics 213 Principles of Economics | 3 |
| Education 293 Foundations | 3 |
| Geography 173 | 3 |
| Military Science 313 (Men) | 3 |
| Industry | 2 |
| | 17 or 20 |

| Second Semester | Hrs. |
|---|---|
| Foreign Language 223 Intermediate German, French, or Spanish | 3 |
| Political Science 413 American Constitutional Law | 3 |
| Economics 223 Economics Problems | 3 |
| History 213 United States, 1492-1837 | 3 |
| Education 323 High School Curriculum | 3 |
| Military Science 323 (Men) Advanced | 3 |
| Electives | 2 |
| | 17 or 20 |

SENIOR YEAR

| | |
|---|---|
| Political Science 423 The Constitution and Private Rights | 3 |
| Political Science 323 Comparative Government | 3 |
| Sociology 343 Modern Social Problems | 3 |
| History 223 United States, 1837 to Present | 3 |
| Social Science 383 Methods of Teaching Social Studies in Secondary Schools | 3 |
| Military Science 413 (Men) | 3 |
| Electives | 2 |
| | 17 or 20 |

| | |
|---|---|
| Education 423 School and Community Relations | 3 |
| Education 406 Student Teaching | 6 |
| Military Science 423 (Men) Advanced | 3 |
| Electives (Men) | 5 |
| Electives (Women) | 8 |
| | 17 or 20 |

## DESCRIPTION OF COURSES

**103. State and National Government. (PoSc 103 Fedrl Gov) (3-0) Credit 3.** Government of Texas and the United States (May be taken by advanced ROTC students and others working toward certificates in various technical schools in the College).

**113. American National Government. (PoSc 113 Natl Gov) (3-0) Credit 3.** Constitutional foundations and development, structure, private rights, political processes and functions of the national government (required of all students for graduation and a prerequisite for all political science courses except Political Science 123 and Political Science 103).

**123. American State and Local Government. (PoSc 123 State Gov) (3-0) Credit 3.** American state and local government; constitutional developments, political parties and elections, structure, functions and intergovernmental relations; special concern for Texas government. (Required of all students for graduation and a prerequisite for all political science courses except Political Science 103 and Political Science 113).

**213. Political Parties. (PoSc 213 Parties) (3-0) Credit 3.** Nature, functions, evolution and organization of the American party system.

**223. Bibliography and Methods in Political Science. (PoSc 223 Bibl Meth) (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).

**243. Municipal Administration and Politics. (PoSc 243 Municipal) (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.

**273. Introduction to Public Administration. (PoSc 273 Publ Adm) (3-0) Credit 3.** Organization, responsibility, personnel management, fiscal processes, functions, and problems of public administration.

**303. Ancient and Medieval Political Theory. (PoSc 303 Pol 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 Mod Thry) (3-0) Credit 3.** Political theories from the Reformation to the present; special attention to Machiavelli, Bodin, Hobbes, Montesquieu, Locke, Rousseau, Jefferson, the Mills, Hegel, Marx and socialist theories.

**323. Comparative Government. (PoSc 323 Comparatv) (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.

**343. Propaganda, Public Opinion and Pressure Groups. (PoSc 343 Propaganda) (3-0) Credit 3.** Functions and techniques of pressure groups; the nature, the role and identification of public opinion and propaganda.

**383. International Law and Relations. (PoSc 383 Intrnl Law) (3-0) Credit 3.** Nature, function and enforcement of international law; and historical and analytical study of the politics of international affairs.

**393. International Organization. (PoSc 393 Intrnl Orgn) (3-0) Credit 3.** Development of international organization; the organization, functions, structure, accomplishments, and major problems of the United Nations.

**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.

**453. Public Personnel Administration. (PoSc 453 Publ Pers) (3-0) Credit 3.** Development and problems of the public service; recruitment, examination, placement, remuneration, morale, retirement, loyalty, and responsibility.

**483. Seminar in American Foreign Policy. (PoSc 483 Frgn Policy) (3-0) Credit 3.** Analytical and historical study of the contest of American foreign policy; governmental machinery and political processes involved in its formulation.

**493. Seminar in Areal Politics. (PoSc 493 Areal Poltc) (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.

## Department of Sociology

This department provides a focus for either a liberal arts education or a pre-professional career in those areas concerned with human behavior. Thus students select a major in this department for one of two reasons: (1) to receive a broad general education with concentration in Sociology or (2) to build a strong foundation in preparation for vocational objectives.

The principal vocational goals toward which a major in Sociology or Social Service may lead are (1) teaching sociology and the social sciences at either the secondary or college level; (2) social welfare work as case workers, group workers, community organizers or public welfare administrators; (3) public relations work in either public or private agencies and institutions; and (4) social research positions with governmental agencies and private research foundations.

Students planning to teach in the secondary schools of the state must complete the requirements for a teacher certificate as set up by the Texas Education Agency. The major following the suggested curriculum will qualify for certification as a social studies teacher in the secondary schools in the state.

Students majoring in Social Service as pre-professional preparation for social work should plan on entering a graduate school of social work and obtaining the master's degree, although it is possible in many states, including Texas, to obtain positions in social work agencies without an advanced degree.

Thirty-two semester hours in Sociology or Social Service are required for a major in the field, and eighteen semester hours must be completed for a minor. Majors and minors are required to earn two grade points for each semester hour of credit in theory courses taken in the department; a grade of "C" or above must be earned in the following courses: Sociology 213, 223, 343, 346. Sociology 463 must be completed before the student begins writing the senior investigative paper.

In addition to the thirty-two semester hours in Sociology and Social Service, the student qualifying for a teaching certificate will complete twelve semester hours distributed as follows.

| | |
|---|---|
| Economics 213, 223 | 6 hours |
| History 143 | 3 hours |
| Geography (Elective) | 3 hours |

In addition to the thirty-two semester hours in Sociology and Social Service, the student not qualifying for a teaching certificate will complete twelve semester hours distributed as follows.

| | |
|---|---|
| Economics 213, 223 | 6 hours |
| Psychology 113, 343 | 6 hours |

Required courses for all majors in the department are:
- Soc. 213 and 223 Introductory I and II
- Soc. 303 The Family
- Soc. 313 Social Statistics
- Soc. 333 Social Psychology
- Soc. 373 Introduction to the Field of Social Work
- Soc. 402 Sociology Seminar

Additional required courses for students majoring in Sociology proper are:
- Soc. 343 Modern Social Problems
- Soc. 463 Methods of Research

Additional required courses for students majoring in Social Service are:
- Soc. 433 Introduction to Social Group Work
- Soc. 493 Problems of Child Welfare

Required courses for all minors in the department are:
- Soc. 213 and 223 Introductory I and II
- Soc. 303 The Family
- Soc. 333 Social Psychology
- Soc. 343 Modern Social Problems

## SUGGESTED PROGRAM FOR A MAJOR IN SOCIOLOGY

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 113 | 3 | English 123 | 3 |
| Grammar and Composition | | Reading and Composition | |
| Natural Science 113 | 3 | Natural Science 123 | 3 |
| College Science | | College Science | |
| Mathematics 173 | 3 | Mathematics 183 | 3 |
| Applied Mathematics | | Applied Mathematics | |
| Political Science 113 | 3 | Political Science 123 | 3 |
| American National Government | | State and Local Government | |
| European History 143 | 3 | Sociology 103 | 3 |
| Civilization to 1500 | | Social Legislation and the Family | |
| Industry | 2 | Industry | 2 |
| Elective | | Elective | |
| Military Science 111 (Men) | | Military Science 121 (Men) | |
| Elementary | | Elementary | |
| Physical Education 111 (Women) | 1 | Physical Education 121 (Women) | 1 |
| Freshman Practice | | Freshman Practice | |
| | 18 | | 18 |

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 213 | 3 | English 223 | 3 |
| Public Speaking | | Introduction to Literature | |
| Sociology 213 | 3 | Sociology 223 | 3 |
| Introductory Sociology | | Introductory Sociology | |
| Foreign Language 113 | 3 | Foreign Language 123 | 3 |
| Reading and Grammar | | Reading and Grammar | |
| History 213 | 3 | History 223 | 3 |
| The U. S. 1492-1837 | | The U. S. 1837-1898 | |
| Education 273 | 3 | Education 283 | 3 |
| Pupil Growth and Development | | Pupil Growth and Development | |
| Military Science 211 (Men) | | Military Science 221 (Men) | |
| Elementary | | Elementary | |
| Physical Education 211 (Women) | 1 | Physical Education 211 (Women) | 1 |
| Sophomore Practice | | Sophomore Practice | |
| | 16 | | 16 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Sociology 373 | 3 | Sociology 333 | 3 |
| Introduction to Social Work | | Social Psychology | |
| Sociology 303 | 3 | Sociology 313 | 3 |
| The Family | | Social Statistics | |
| Economics 213 | 3 | Economics 223 | 3 |
| Principles of Economics | | Principles of Economics | |
| Education 323 | 3 | Education 293 | 3 |
| High School Curriculum | | Foundations of American Education | |
| Methods (Elective) | 3 | Elective | 3 |
| | 15 | | 15 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Sociology 463 | 3 | Sociology 343 | 3 |
| Social Research | | Modern Social Problems | |
| Geography (Elective) | 3 | Education 406 | 6 |
| Education 423 | 3 | Student Teaching | |
| School and Community Relations | | Elective | 6 |
| Sociology (Elective) | 6 | | 15 |
| Sociology 402 | 2 | | |
| Sociology Seminar | | | |
| | 17 | | |

## SUGGESTED PROGRAM FOR A MAJOR IN SOCIAL SERVICE*

FRESHMAN YEAR

(See Sociology)

SOPHOMORE YEAR

(See Sociology)

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Sociology 373 | 3 | Sociology 433 | 3 |
| Introduction to Social Work | | Social Group Work | |
| Sociology 303 | 3 | Sociology 453 | 3 |
| The Family | | Supervised Field Work | |
| Economics 213 | 3 | Sociology 333 | 3 |
| Principles of Economics | | Social Psychology | |
| Education 323 | 3 | Economics 223 | 3 |
| High School Curriculum | | Principles of Economics | |
| Methods | 3 | Education 293 | 3 |
| Elective | | Foundations of American Education | |
| | 15 | | 15 |

*In May 1951 the Social Service program of Prairie View A. and M. College was approved by the National Association of Schools of Social Administration which at that time admitted Prairie View to membership.

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| Sociology 463 | 3 |
| Social Research | |
| Geography | 3 |
| Elective | |
| Education 423 | 3 |
| School and Community Relations | |
| Sociology 493 | 3 |
| Problems of Child Welfare | |
| Elective | 3 |
| Sociology 402 | 2 |
| Sociology Seminar | |
| | 17 |

| Second Semester | Hrs. |
|---|---|
| Sociology 343 | 3 |
| Modern Social Problems | |
| Education 406 | 6 |
| Student Teaching | |
| Elective | 3 |
| Elective | 3 |
| | 15 |

Note.—The suggested programs for Sociology and Social Service majors are designed for those persons qualifying for a teaching certificate. Those persons not qualifying for a teacher's certificate are asked to consult with the head of the department for assistance in formulating their program.

## DESCRIPTION OF COURSES

### SOCIOLOGY

**103. Social Legislation and the Family. (Soc 103 Soc Legsltn) (3-0) Credit 3.** An analysis of the extent to which the forms and functions of American families are shaped by legislation. Attention focused on state legislation and the programs under the Social Security Act. Note: This is not counted as a course toward the satisfaction of major and minor requirements without the approval of the head of the department.

**213. Introductory Sociology. (Soc 213 Introduct) (3-0) Credit 3. I.** General phenomena of human society emphasizing fundamental social processes and social problems.

**223. Introductory Sociology. (Soc 223 Introduct) (3-0) Credit 3. II.** Continuation of Sociology 213; institutional structure and function, fundamental social processes and social problems.

**233. Rural Sociology. (Soc 233 Rural Soc) (3-0) Credit 3. I.** Analysis of structure and function of rural society, its people, institutions, communities, and problems. Prerequisites: Sociology 213 or Introduction to Social Science.

**263. General Sociology. (Soc 263 General) (3-0) Credit 3. II.** Fundamental concepts of Sociology and Social Problems for non-majors.

**302. Sociology of Religion (Soc 302 Religion) (2-0) Credit 2.** General principles concerning the relationship of religion to society and morals. The role of religion as a unifying value scheme is emphasized.

**303. The Family. (Soc 303 Family) (3-0) Credit 3. I or II.** Nature and development of the family, marital choice and adjustments and crises in family life. Points of view in recent literature.

**313. (formerly 573) Social Statistics. (Soc 313 Statistics) (3-0) Credit 3. II.** Techniques of calculating values common to statistical analysis; simple measures of central tendencies through correlation and regression; use of calculating machines. Prerequisite: College Algebra.

**323. Race Relations. (Soc 323 Race Rltns) (3-0) Credit 3. II.** Analysis of nature of race and culture contacts; rise and course of American race problems, and methods of racial adjustment. Prerequisites: Soc. 213 and 223.

**333. Social Psychology. (Soc 333 Psych) (3-0) Credit 3. I.** Personality development through personal-social and cultural-social conditioning; larger group relationships. Prerequisites: Soc. 213 and 223. Open to graduate students by special permission.

**343. Modern Social Problems. (Soc 343 Mod Prob) (3-0) Credit 3. II.** Analysis of processes of personal, family and community disorganization; methods and measures of social reform.

**363. (formerly 583) Cultural Anthropology. (Soc 363 Anthropgy) (3-0) Credit 3. I or II.** A study of the origin and development of human culture. Special emphasis is upon schools of culture and contemporary culture. Prerequisite: Nine hours of Sociology. Open to graduate students.

**401. Readings in Sociology (Soc 401 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. Required for majors and minors.

**423. (formerly 513) Social Theory. (Soc 423 Soc Thry) (3-0) Credit 3. I.** Historical development of theories of social science; the process by which sociology and the various social sciences came into systematic bodies of knowledge. Prerequisite: Twelve hours of Sociology.

**463. (formerly 563) Social Research. (Soc 463 Research) (3-0) Credit 3. I.** Technique of social investigation; case study, historical statistics and ecological techniques; student required to do one piece of social investigation. Prerequisite: Twelve hours of Sociology.

**483. (formerly 523) Juvenile Delinquency. (Soc 483 Delinquency) (3-0) Credit 3. I or II.** Nature, extent, and conditions giving rise to juvenile delinquency; outstanding literature surveyed; programs treating delinquency discussed. Prerequisite: six hours of sociology.

## SOCIAL SERVICE

**373. (formerly 533) Introduction to the Field of Social Work. (Soc 373 Social Wrk) (3-0) Credit 3. I or II.** Orientation course in the history and field of Social Work; case work, group work, and social welfare planning as well as professional organization. Required for majors and minors in Social Service.

**403. Introduction to Social Case Work. (Soc 403 Case Work) (3-0) Credit 3. I or II.** The point of view of the social case worker regarding human relationships; appreciation of needs and problems causing individuals to seek help of social agencies; some understanding of the basic process of social case work practice; broad cultural as well as practical value to students going into social work, teaching (especially visiting teaching), Medicine, and related profession.

**433. Introduction to Social Group Work. (Soc 433 Group Work) (3-0) Credit 3. I or II.** Fundamentals of professional group work; group process and behavior; inter-personal relations; the contribution of allied fields, leadership, programs, and agencies as a background for employment, in-service training, or professional education.

**443. History, Philosophy and Organization of the YMCA (Soc 443 YMCA) (3-0) Credit 3. I or II.** The origin of the YMCA and its development; changing aims, program, organization and philosophy, and consideration of trends and issues in the movement.

**453. (formerly 503) Supervised Field Work. (Soc 453 Field Wrk) (0-3) Credit 3. I or II.** Limited individual experience and controlled observation with established social agencies where social work techniques previously learned can be applied.

**493. (formerly 603) Problems of Child Welfare. (Soc 493 Chld Welf) (3-0) Credit 3. I or II.** Child welfare movements and contemporary children's agencies and their services; programs for substitute care; safeguarding health; employment protection; delinquency prevention and other needs of children and youth.

## INTEGRATED MINOR IN THE SOCIAL SCIENCES

Students may elect an integrated minor in the Social Sciences. The minor in the Social Sciences is planned primarily for the training of teachers, but may be chosen by other students who do not intend to teach when such a program meets their particular needs for professional training in other fields.

Students who elect such a program must complete twenty-one semester hours of course work in social sciences exclusive of the general college requirement of six hours in American Government, and the methods course in the teaching of Social Science Studies. Courses comprising this program must be drawn from the Departments of History, Economics, Political Science, and Sociology. Elements of the integrated Social Science minor shall consist of a minimum of six semester hours each of American History and Economics, three semester hours each of Geography, Political Science and Sociology. Any exceptions from and additions to the integrated minor prescribed above are to be arranged in consultation with the Head of the Department of History.

For further information see the various offerings in the Departments of Social Science (History, Economics, Political Science and Sociology).

# School of Engineering

The School of Engineering offers Four-Year Curricula in Architectural Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, each leading to the degree of Bachelor of Science in the particular branch of the profession selected.

These programs of study provide an opportunity for broad scientific education with the proper amount of specialization in the respective fields of study. They are designed to train students thoroughly in mathematics, the physical sciences, and engineering principles, and to teach them to apply these fundamentals to the various types of problems that are encountered in engineering practice. Laboratory work and problem courses are provided so that the student may learn more readily the applications of these fundamentals to the solution of real engineering problems. The courses are professional engineering courses, and are planned to prepare for design, research, operation, management, testing, or maintenance of engineering projects. In addition to these technical objectives, there is the further objective that the training shall equip the graduates of the school for positions of responsibility in business and public affairs.

The first year's program is the same for all curricula. To a limited extent, substitutions may be made for courses listed as required where there appears to be a good reason for them. Each substitution must have the approval of the Dean of the School.

## OBJECTIVES

### Architectural Engineering

The curriculum in Architectural Engineering is designed to give the student practical and theoretical training in Architecture and Building Construction. Although it emphasizes the structural and mechanical phases of architecture, it includes architectural design, properties and uses of building materials, estimating construction costs, specification writing, and other phases important to the architectural profession. The aim is to prepare men for careers in the construction industry as: Draftsmen, Designers, Estimators, and Building Supervisors, and provide them with the necessary foundation for future independent architectural practice.

Students selecting this option should get practical experience during the summer, either on construction projects or in the office of an architect or engineer.

### Civil Engineering

The field covered by Civil Engineering is wide, embracing surveying, highway, hydraulic, structural, sanitary, and construction engineering. It is the aim of this curriculum to give broad general training, which will serve as a foundation for technical, administrative and commercial positions, both private and governmental. The training is largely fundamental in nature, but sufficiently-detailed practice is included to enable the graduate to occupy immediately a productive, remunerative position in the field of Civil Engineering.

### Mechanical Engineering

This curriculum offers training in the scientific principles underlying Mechanical Engineering, and correlates this by appreciation to specific fields of machine design, heat, power, heating, ventilating, and air conditioning, refrigeration, power plants, and industrial management.

Lectures and class instruction are supplemented by shop practice and laboratory investigations, designed to emphasize the engineering and economic principles involved. Students selecting this option should spend at least two summers in some shop or plant doing mechanical work.


ENGINEERING

### Graduation Requirements

The requirements for graduation from the School of Engineering are the satisfactory completion of all courses in one of the prescribed curricula, with a "C" average, and an average of "C" in all courses taken in the School of Engineering.

### Thesis Requirements

A comprehensive report on a special problem or engineering investigation will be required of all candidates for the Bachelor of Science degrees. The study must be done under the direction of a professor in the major department and may be from sources of engineering literature, experimental, or consist of a design project.

### Inspection Trip

A one or two day inspection trip to a selected number of engineering projects, industrial installations, and manufacturing plants which represent typical examples of the practice of the various branches of engineering will be required of all engineering students for graduation. The prerequisite for going on an inspection tour is junior classification and the deposit of the predetermined prorated cost of the trip. A written report will be required.

## OWNERSHIP OF STUDENT WORK

The School of Engineering reserves the right to retain, exhibit, and reproduce the work submitted by students for credit in any course.

## ENGINEERING COURSES

UNIFORM FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Mathematics 115<br>College Algebra and Trigonometry | 5 | Mathematics 124<br>Trigonometry and Analytical Geometry | 4 |
| Chemistry 114<br>Inorganic Chemistry | 4 | English 123<br>Reading and Composition | 3 |
| General Engineering 113<br>Engineering Graphics I | 3 | Chemistry 124<br>Inorganic Chemistry | 4 |
| General Engineering 111<br>Engineering Lectures | 1 | General Engineering 122<br>Engineering Graphics II | 2 |
| English 113<br>Grammar and Composition | 3 | General Engineering 162<br>Engineering Problems and Slide Rule | 2 |
| *Mechanical Engineering 111<br>Welding and Heat Treatment | 1 | **Civil Engineering 122<br>Elementary Surveying | 2 |
| Military Science 111<br>Elementary or | | ***Architecture 131<br>Shade, Shadows, and Perspective | 1 |
| Physical Education 111<br>Freshman Practice (Women) | 1 | Military Science 121<br>Elementary or | |
| | 17 or 18 | Physical Education 121<br>Freshman Practice (Women) | 1 |
| | | | 18 or 19 |

*Not required for Architectural Engineering students.

**Architectural Engineering students will take Architecture 212, Freehand Drawing. Mechanical Engineering students will take Mechanical Engineering 262, Foundry and Machine Tool.

***Required only of Architectural Engineering students.

**THE GIBB GILCHRIST ENGINEERING BUILDING . . . Named in honor of the former A. & M. System Chancellor; houses the offices of the Dean of the School of Engineering, the engineering staff, the classrooms and laboratories of Architectural, Civil, Mechanical and Electrical Engineering.**

SOPHOMORE YEAR

| First Semester | Hrs. |
|---|---|
| Mathematics 214<br>Differential Calculus | 4 |
| Physics 215<br>Engineering Physics I | 5 |
| Civil Engineering 122<br>Elementary Surveying | 2 |
| Architecture 213<br>Elements of Architecture I | 3 |
| Architecture 222<br>Freehand Drawing II | 2 |
| Architecture 362<br>Building Equipment I | 2 |
| Military Science 211<br>Elementary or | |
| Physical Education 211<br>Sophomore Practice (Women) | 1 |
| | 19 |

| Second Semester | Hrs. |
|---|---|
| Mathematics 224<br>Integral Calculus | 4 |
| Physics 225<br>Engineering Physics II | 5 |
| Civil Engineering 243<br>Statics | 3 |
| Architecture 223<br>Elements of Architecture II | 3 |
| English 213<br>Public Speaking | 3 |
| Military Science 221<br>Elementary or | |
| Physical Education 221<br>Sophomore Practice (Women) | 1 |
| | 19 |

SUMMER

| | |
|---|---|
| History 173<br>American History | 3 |
| Political Science 113<br>National Government | 3 |
| | 6 |

| | |
|---|---|
| History 183<br>American History | 3 |
| English 223<br>Introduction to Literature | 3 |
| | 6 |

JUNIOR YEAR

| | |
|---|---|
| Civil Engineering 333<br>Dynamics | 3 |
| Civil Engineering 314<br>Strength of Materials | 4 |
| Civil Engineering 321<br>Materials Testing Laboratory | 1 |
| Architecture 313<br>Architectural Design I | 3 |
| Architecture 353<br>Building Construction I | 3 |
| Architecture 333<br>History of Architecture | 3 |
| Military Science 313<br>Advanced | 3 |
| | 17 or 20 |

| | |
|---|---|
| Civil Engineering 343<br>Engineering Materials | 3 |
| Architecture 343<br>History of Architecture II | 3 |
| Architecture 383<br>Building Construction II | 3 |
| Architecture 323<br>Architectural Design II | 3 |
| Civil Engineering 354<br>Structural Analysis I | 4 |
| Architecture 372<br>Building Equipment | 2 |
| Military Science 323<br>Advanced | 3 |
| | 18 or 21 |

## ARCHITECTURAL ENGINEERING

SENIOR YEAR

| | |
|---|---|
| Economics 213<br>Principles of Economics | 3 |
| Political Science 123<br>State Government | 3 |
| Architecture 363<br>Working Drawings and Specifications I | 3 |
| Electrical Engineering 453<br>Wiring and Illumination | 3 |
| Civil Engineering 432<br>Structural Analysis II | 2 |
| Civil Engineering 414<br>Reinforced Concrete | 4 |
| Military Science 413<br>Advanced | 3 |
| | 18 or 21 |

| | |
|---|---|
| Architecture 452<br>Architectural Practice | 2 |
| Mechanical Engineering 433<br>Heating and Air Conditioning | 3 |
| Architecture 373<br>Working Drawing and Specifications II | 3 |
| Civil Engineering 434<br>Structural Design | 4 |
| Architecture 432<br>Architectural Design III | 2 |
| Civil Engineering 324<br>Soil Engineering and Foundations | 4 |
| Military Science 423<br>Advanced | 3 |
| | 18 or 21 |

Number of hours required for graduation—157

## CIVIL ENGINEERING

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Mathematics 214 Differential Calculus | 4 | Mathematics 224 Integral Calculus | 4 |
| Physics 215 Engineering Physics | 5 | Physics 225 Engineering Physics | 5 |
| English 213 Public Speaking | 3 | Civil Engineering 223 Advanced Surveying | 3 |
| General Engineering 212 Engineering Graphics III | 2 | Civil Engineering 243 Statics | 3 |
| Civil Engineering 213 Topographic Surveying | 3 | Political Science 113 National Government | 3 |
| Military Science 211 Elementary, or | | Military Science 221 Elementary, or | |
| Physical Education 211 Sophomore Practice (Women) | 1 | Physical Education 221 Sophomore Practice (Women) | 1 |
| | 18 | | 19 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Civil Engineering 314 Strength of Materials | 4 | Civil Engineering 354 Structural Analysis I | 4 |
| Civil Engineering 321 Materials Testing Laboratory | 1 | English 223 Introduction to Literature | 3 |
| Civil Engineering 333 Dynamics | 3 | Civil Engineering 343 Engineering Materials | 3 |
| History 173 American History | 3 | Civil Engineering 364 Fluid Mechanics | 4 |
| Civil Engineering 353 General Geology | 3 | Civil Engineering 324 Soil Engineering and Foundations | 4 |
| Economics 213 Principles of Economics | 3 | Military Science 323 Advanced | 3 |
| Military Science 313 Advanced | 3 | | |
| | 17 or 20 | | 18 or 21 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| History 183 American History | 3 | Electrical Engineering 304 Principles of Electrical Engineering | 4 |
| Mechanical Engineering 313 Thermodynamics I | 3 | Civil Engineering 423 Contracts, Specifications and Engineering Reports | 3 |
| Civil Engineering 453 Highway Engineering | 3 | Civil Engineering 424 Water Supply and Sewage Engineering | 4 |
| Political Science 123 State Government | 3 | Civil Engineering 434 Structural Design | 4 |
| Civil Engineering 432 Structural Analysis II | 2 | Civil Engineering 443 Engineering Construction | 3 |
| Civil Engineering 414 Reinforced Concrete | 4 | Military Science 423 Advanced | 3 |
| Military Science 413 Advanced | 3 | | |
| | 18 or 21 | | 18 or 21 |

Number of hours required for graduation—144

## ELECTRICAL ENGINEERING

SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Mathematics 214 Differential Calculus | 4 | Mathematics 224 Integral Calculus | 4 |
| Physics 215 Engineering Physics I | 5 | Physics 225 Engineering Physics II | 5 |
| English 213 Public Speaking | 3 | Civil Engineering 243 Statics | 3 |
| General Engineering 212 Engineering Graphics III | 2 | Mechanical Engineering 262 Foundry and Machine Tool | 2 |
| History 173 American History | 3 | Electrical Engineering 214 Basic Electrical Engineering | 4 |
| Military Science 211 Elementary, or | | Military Science 221 Elementary, or | |
| Physical Education 211 Sophomore Practice (Women) | 1 | Physical Education 221 Sophomore Practice (Women) | 1 |
| | 18 | | 19 |

JUNIOR YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Electrical Engineering 313 A. C. Circuits I | 3 | Electrical Engineering 323 A. C. Circuits II | 3 |
| Electrical Engineering 334 D. C. Machinery | 4 | Political Science 113 National Government | 3 |
| Mathematics 423 Differential Equations | 3 | English 223 Introduction to Literature | 3 |
| Civil Engineering 314 Strength of Materials | 4 | Electrical Engineering 374 Electrical Measurements | 4 |
| Electrical Engineering 344 Electronics I | 4 | Electrical Engineering 384 Electronics II | 4 |
| Military Science 313 Advanced | 3 | Civil Engineering 321 Materials Testing Lab. | 1 |
| | | Military Science 323 Advanced | 3 |
| | 18 or 21 | | 18 or 21 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Electrical Engineering 414 A. C. Machinery I | 4 | Electrical Engineering 424 A. C. Machinery II | 4 |
| Mechanical Engineering 212 Metallurgy | 2 | Mechanical Engineering 463 Industrial Management | 3 |
| Mechanical Engineering 313 Thermodynamics I | 3 | Mechanical Engineering 322 Heat Poweer Lab. | 2 |
| Economics 213 Principles of Economics | 3 | History 183 American History | 3 |
| Civil Engineering 333 Dynamics | 3 | Political Science 123 State Government | 3 |
| Electrical Engineering 453 Wiring and Illumination | 3 | Electrical Engineering 463 Electrical Design | 3 |
| Military Science 413 Advanced | 3 | Military Science 423 Advanced | 3 |
| | 18 or 21 | | 18 or 21 |

Number of hours required for graduation—145

## MECHANICAL ENGINEERING

SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Mathematics 214 Differential Calculus | 4 | History 173 American History | 3 |
| Physics 215 Engineering Physics I | 5 | Mathematics 224 Integral Calculus | 4 |
| English 213 Public Speaking | 3 | Physics 225 Engineering Physics II | 5 |
| General Engineering 212 Engineering Graphics III | 2 | English 223 Introduction to Literature | 3 |
| Mechanical Engineering 212 Metallurgy | 2 | Civil Engineering 243 Statics | 3 |
| Civil Engineering 122 Elementary Surveying | 2 | Military Science 221 Elementary or | |
| Military Science 211 Elementary or | | Physical Education 221 Sophomore Practice (Women) | 1 |
| Physical Education 211 Sophomore Practice (Women) | 1 | | 19 |
| | 19 | | |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Civil Engineering 314 Strength of Materials | 4 | History 183 American History | 3 |
| Mechanical Engineering 333 Mechanism | 3 | Economics 213 Principles of Economics | 3 |
| Mechanical Engineering 313 Thermodynamics I | 3 | Civil Engineering 364 Fluid Mechanics | 4 |
| Civil Engineering 321 Materials Testing Lab. | 1 | Political Science 113 National Government | 3 |
| Civil Engineering 333 Dynamics | 3 | Mechanical Engineering 323 Thermodynamics II | 3 |
| Mathematics 423 Differential Equations | 3 | Mechanical Engineering 322 Heat Power Lab. | 2 |
| Military Science 313 Advanced | 3 | Military Science 323 Advanced | 3 |
| | 17 or 20 | | 18 or 21 |

SENIOR YEAR

| First Semester | Hrs. |
|---|---|
| Electrical Engineering 434 Electrical Circuits and Machinery I | 4 |
| Mechanical Engineering 414 Machine Design I | 4 |
| Mechanical Engineering 412 Mechanical Engineering Lab. | 2 |
| Mechanical Engineering 372 Dynamics of Machinery | 2 |
| Mechanical Engineering 343 Internal Combustion Engines | 3 |
| Mechanical Engineering 473 Heat Transfer | 3 |
| Military Science 413 Advanced | 3 |
| | 18 or 21 |

| Second Semester | Hrs. |
|---|---|
| Mechanical Engineering 423 Heat Power Engineering | 3 |
| Electrical Engineering 444 Electric Circuits and Machinery II | 4 |
| Mechanical Engineering 433 Heating and Air Conditioning | 3 |
| Political Science 123 State Government | 3 |
| Mechanical Engineering 463 Industrial Management | 3 |
| Mechanical Engineering 442 Machine Design II | 2 |
| Military Science 423 Advanced | 3 |
| | 18 or 21 |

Number or hours required for graduation—145

# DESCRIPTION OF COURSES

## ARCHITECTURAL ENGINEERING

**131. Shades, Shadows and Perspectives. (Arch 131 Shades) (0-3) Credit 1. I and II.** The conventional shades and shadows of common geometrical solids and architectural members; the theory of perspective as applied to simple solids and problems from architectural practice. Prerequisite: General Engineering 113.

**212-222. Freehand Drawing. (Arch 212 222 Frhd Draw) (0-6) Credit 2. I and II.** Drawing of plants and objects; drawing from life in charcoal and pencil; training of eye and hand; application in architectural presentation and drawing.

**213-223. Elements of Architecture. (Arch 213 223 Elements) (0-9) Credit 3. I and II.** Fundamentals of architectural design by their application in the original solution and presentation of simple architectural problems.

**313-323. Architectural Design. (Arch 313 323 Design) (0-9) Credit 3. I and II.** Design of small buildings; development of plan, based on definite requirements, fenestration, influence of materials and construction on design; preparation of working drawings. Prerequisite: Arch. 223.

**333-343. History of Architecture. (Arch 333 343 Hist Arch) (3-0) Credit 3. I and II.** The development of architecture as related to human habitation; ancient, medieval, and modern architecture.

**353. Building Construction I. (Arch 353 Constrctn) (3-0) Credit 3. I.** Common methods of building construction; occasional visits to buildings under construction. Prerequisite: Civil Engineering 243.

**362-372. Building Equipment. (Arch 362 372 Bldg Equip) (2-0) Credit 2. I and II.** Plumbing sanitation systems, mechanical and electrical equipment of buildings.

**363. Working Drawings and Specifications I. (Arch 363 Work Draw) (0-9) Credit 2. I and II.** Plumbing sanitation systems, mechanical and electrical equipment of buildings.

**363. Working Drawings and Specifications I. (Arch 363 Work Draw) (0-9) Credit 3. I.** An introduction to working drawings of small wall-bearing structures in wood and masonry, and fundamentals of specifications. Prerequisite: Architecture 383 and registration in Civil Engineering 354.

**373. Working Drawings and Specifications II. (Arch 373 Work Draw) (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, cost estimates, and construction procedures and methods. Prerequisite: Architecture 363 and registration in C. E. 424.

**383. Building Construction II. (Arch 383 Constrctn) (1-6) Credit 3. II.** An introduction 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 buildings in wood, steel, masonry, and concrete with stress on the usage of various structural forms and materials. Prerequisite: Architecture 353.

**410. Inspection Trip. (Arch 410 Insp Trip) No Credit.** Required of all Seniors.

**432. Architectural Design. (Arch 432 Design) (0-6) Credit 2. I.** Continuation of Architecture 323, advanced problems, time problems, and rapid sketches at frequent intervals.

**452. Architectural Practice. (Arch 452 Practice) (0-6) Credit 2. I.** Special problems in architectural design and development; the preparation of building documents; interpretation of building codes, and analysis of documents; interpretation of the American Institute of Architects; office organization, client and contractor relationships.

## CIVIL ENGINEERING

**122. Elementary Surveying. (C E 122 Surveying) (0-6) Credit 2. II.** Use of tape and chain, engineer's level and transit; methods of surveying in field practice. Prerequisite: G. E. 113 and Math 115 or 123.

**213. Topographic Surveying. (C E 213 Toph Surv) (1-6) Credit 3. I.** Use of tape, transit and level; complete topographic survey, using the stadia method and plane table; astronomical observations for azmuth, time and latitude; drafting of topographic maps from field notes. Prerequisite: Civil Engineering 122.

**223. Advanced Surveying. (C E 223 Adv Surv) (2-3) Credit 3. II.** Horizontal vertical alignment for railways and highways; grades and grade reduction; curves, turnouts, and earthwork, principles of economic location surveys, plans and estimates. Prerequisite: Civil Engineering 213.

**243. Applied Mechanics I—Statics. (C E 243 Statics) (3-0) Credit 3. II.** Composition and resolution of forces; systems of forces in equilibrium; laws of friction; centers of gravity; moments of inertia; special problems to illustrate the application of theory to engineering. Prerequisite: Physics 225 and enrollment in Mathematics 224.

**314. Strength of Materials. (C E 314 Strength) (4-0) Credit 4. I.** Engineering properties and behavior of standard engineering materials in stress strain tension and compression, torsion, shear, and moment, combined stresses and deflection; riveted joints, stresses in columns and the design of beams; use of engineering handbooks. Prerequisite: Civil Engineering 243.

**321. Materials Testing Laboratory. (C E 321 Testing Lab) (0-3) Credit 1. I and II.** Testing of selected specimens of various engineering materials in order to determine their mechanical properties; test procedures; instrumentation; data interpretation.

**324. Soil Engineering and Foundations. (C E 324 Soil Engr) (2-6) Credit 4. II.** Description, origin, structure, identification and classification of soils for engineering purposes; determination and application of their physical properties; the design and construction of foundations for pavements, buildings and bridges.

**333. Applied Mechanics II—Dynamics. (C E 333 Dynamics) (3-0) Credit 3. II.** Velocities and accelerations of various types of mechanics, rectilinear, and curvilinear translation of particles and rigid bodies rotation of rigid bodies about fixed axis, work energy and power, impulse and momentum, moments and products of inertia, and elementary problems in vibration. Prerequisite: Civil Engineering 243.

**343. Engineering Materials (C E 343 Materials) (3-0) Credit 3. I.** Constituents, properties and manufacture of standard structural materials. Prerequisites: Chemistry 114 and registration in Civil Engineering 314.

**353. Geology. (C E 353 Geology) (3-0) Credit 3. II.** General principles of geology and their application to engineering problems. Prerequisite: Chemistry 124.

**354. Structural Analysis I. (C E 354 Analysis) (3-3) Credit 4. II.** Analysis of stress in statically determinate structures. Prerequisite: Civil Engineering 314.

**364. Fluid Mechanics. (C E 364 Fluids) (3-3) Credit 4. I.** The laws governing the action of fluids at rest and in motion, as related to engineering problems; the measurement of the flow of fluids; the description and theory of reaction turbines, impulse wheels and centrifugal pumps. Laboratory work includes measurement of flow, friction in pipes, pumping, and power. Prerequisite or parallel: Civil Engineering 243.

**410. Inspection Trip. (C E 410 Insp Trip) Non Credit Course.** Required of all Seniors.

**414. Reinforced Concrete. (C E 414 Concrete) (3-3) Credit 4. I.** Properties of concrete, effect of water cement ratio, design of beams and floor systems; rigid frame construction, columns, retaining walls, masonry dams, and footings. Prerequisite: Civil Engineering 314.

**423. Contracts, Specifications and Engineering Reports. (C E 423 Contracts) (3-0) Credit 3. II.** A study of contracts, specifications and reports required by engineers; preparation of documents. Prerequisite: Senior standing.

**424. Water Supply and Sewerage Engineering. (C E 424 Sewerage) (2-6) Credit 4. II.** A study of water supply and sewerage systems including design, construction and operation. Prerequisite: Civil Engineering 364.

**432. Structural Analysis II. (C E 432 Analysis) (2-0) Credit 2. I.** Continuation of Civil Engineering 324, including stresses in statically indeterminant structures, secondary stresses and stressed-skin structures; stresses in suspension and steel-arch bridges, rigid and space frames.

**434. Structural Design. (C E 434 Design) (2-6) Credit 4. II.** Design of Civil Engineering structures. Welded and riveted connections. Working drawings including the necessary details for actual construction, economic considerations, the correlation of analysis and design. Mostly steel and timber structures. Prerequisite: Civil Engineering 432.

**443. Engineering Construction. (C E 443 Constructn) (3-0) Credit 3. II.** Management of construction projects; methods of construction, equipment, form design quantity take-offs and estimating; frequent visits to building projects. Prerequisite: Senior standing.

**453. Highway Engineering. (C E 453 Highway) (2-3) Credit 3. I.** Highway laws and the administration of street and highway improvements; the design and construction of streets and highways. Prerequisite: Civil Engineering 324.

## ELECTRICAL ENGINEERING

**214. Basic Electrical Engineering. (E E 214 Basic Engr) (4-0) Credit 4. II.** Introduction to the fundamental principles underlying all branches of electrical engineering; the analysis of electric, magnetic, and electrostatic circuits. Prerequisites or parallel: Physics 225 and Mathematics 224.

**304. Principles of Electrical Engineering. (E E 304 Principls) (3-3) Credit 4.** The fundamental principles of direct-current and alternating-current circuits and machinery. Prerequisite: Physics 225.

**313-323. Alternate Current Circuits, I and II. (E E 313 323 A C Circ) (3-0) Credit 3. I and II.** A mathematical treatment of alternating-current phenomena in single and polyphase circuits. Prerequisite: Electrical Engineering 214.

**334. Direct-Current Machinery. (E E 334 D C Mach) (3-3) Credit 4. I.** Principles of operation and characteristics of direct-current generators and motors. Laboratory experiments on characteristics of direct-current machines. Prerequisite: Electrical Engineering 214.

**344-384. Electronics I and II. (E E 344 384 Electronics) (3-3) Credit 4. I and II.** Fundamental principles of electronic tubes; study of electronic circuits, amplifiers, oscillators, and rectifiers. Prerequisite or parallel: Electrical Engineering 214.

**374. Electrical Measurements. (E E 374 Elec Meas) (3-3) Credit 4. II.** Methods for electrical and magnetic measurements; resistance, capacity, electromotive force, current, inductance, and power. Laboratory work includes measurements of resistance, current, electromotive force, capacity, inductance watts, and energy. Prerequisite: Electrical Engineering 313.

**414-424. Alternating-Current Machinery. (E E 414 424 A C Mach) (3-3) Credit 4. I and II.** Principles of design, construction, and operating of transformers, alternating-current generators, polyphase induction motors, synchronous motors, converters, rectifiers, and accessory apparatus. Laboratory work includes experiments illustrating the characteristics of alternating-current circuits and transformers. Prerequisite: Electrical Engineering 323.

**434. Electric Circuits and Machinery I. (E E 434 Circuit Mach) (3-3) Credit 4. I.** Fundamentals of electric, magnetic, and electrostatic circuits, direct-current circuits and machinery, and alternating-current circuits. Prerequisites: Physics 225 and Mathematics 224.

**444. Electric Circuits and Machinery II. (E E Circuit Mach) (3-3) Credit 4. II.** Polyphase circuits transformers, alternating-current machines and electronic circuits. Prerequisite: Electrical Engineering 434.

**453. Wiring and Illumination. (E E 453 Wiring) (3-0) Credit 3. I.** Fundamentals of commercial and industrial wiring and illumination practice.

**463. Electrical Design. (E E 463 Elec Dsgn) (2-3) Credit 3. I.** A study of the details of electrical design; station layouts, wiring diagrams, switchboards, installation of electrical machinery and equipment, oil circuit breakers, protective relays, and miscellaneous equipment. Two lecture-recitation periods, and one three-hour drafting room period per week. Prerequisite: Electrical Engineering 414.

**484. Electronics III. (E E 484 Electronic) (3-3) Credit 4. I and II.** Radio-frequency amplifiers and oscillators, modulation, demodulation limiters, clampers, multi-vibrators, transistors and other fundamental electronic circuits. Prerequisite: Electrical Engineering 384.

## GENERAL ENGINEERING

**111. Engineering Lectures. (G E 111 Engr Lect) (1-0) Credit 1. I.** Fundamental principles of profession; a general survey of field; reviews of articles in the technical press; reports of engineering projects; industrial experiences and lectures by prominent men engaged in the profession.

**113. Engineering Graphics I. (G E 113 Graphics I) (1-6) Credit 3. I.** Use of drafting instruments; freehand Gothic and Roman lettering (vertical and inclined); introductory orthographic projection; isometric drawing; freehand technical sketching, dimensioning, and tracing with pencil on vellum tracing paper, and in ink on tracing cloth.

**122. Engineering Graphics II. (G E 122 Graphics II) (0-6) Credit 2. II.** Principles of descriptive geometry, as related to the projection of points, lines, planes, and solids, and their applications to problems of engineering and architecture; development, intersections, double curved and warped surfaces. Prerequisite: Engineering Drawing 113.

**162. Problems and Slide Rule. (G E 162 Slide Rule) (1-3) Credit 2. II.** Solution of simple engineering problems; use of the slide rule; and the correct form of presenting problem work.

**212. Engineering Graphics III. (G E 212 Graphics III) (0-6) Credit 2. I.** Review of orthographic projection; working drawings, isometric, oblique, perspective, chart, and diagram, topographical, instrumental, and wiring diagrams. Prerequisites: General Engineering 113.

**313. Estimating Building Costs. (G E 313 Estimating) (3-0) Credit 3. I and II.** Problems in the preparation of cost estimates from plans and specifications. Problems in comparative costs of construction, and preparation of costs for bids on construction projects.

## MECHANICAL ENGINEERING

**111. Welding and Heat Treatment. (M E 111 Weld Heat) (0-3) Credit 1. I.** General Metal Work; gas and electric welding, the heat treatment of metals.
**212. Metallurgy. (M E 212 Metal) (2-0) Credit 2. I.** A study of the manufacture, properties, and use of iron, steel, copper, aluminum and their alloys; and an introduction to Metallography and its application to ferrous and nonferrous alloys. Prerequisite: Chemistry 124.

**262. Foundry and Machine Tool. (M E 262 Foundry) (0-6) Credit 2. II.** Pattern making floor bench, and machine moulding; brass furnace and cupola practice; metallurgy of gray iron; sand testing. An introduction to machine shop practice and tool design to meet the needs of mechanical engineering students. Prerequisites: Mechanical Engineering 111 and Mathematics 115.

**313. Thermodynamics I. (M E 313 Thermodyn) (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.

**322. Heat Power Laboratory. (M E 322 Heat Powr) (0-6) Credit 2. II.** Practical experience with steam engines, boilers, turbines, internal combustion engines, fuel and combustion, power plant equipment and air compressors. Prerequisite: Mechanical Engineering 313.

**323. Thermodynamics II. (M E 323 Thermodyn) (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. Mechanism. (M E 333 Mechanism) (3-0) Credit 3. I.** Elements of machinery with references to the transmission of motion, and force, cams, gears; graphical construction; kinetics; balancing; arrangement in actual machines. Prerequisite: Mathematics 115.

**343. Internal Combustion Engines. (M E 343 Engines) (3-0) Credit 3. II.** Fundamentals of internal combustion engines; cycles capacity, efficiency, thermodynamics, combustion and operating conditions. Prerequisite: M.E. 313.

**372. Dynamics of Machinery. (M E 372 Dynamics) (2-0) Credit 2. II.** Velocities, accelerations, working and inertia forces in machine parts. Deflections, critical speeds and vibrations. Prerequisites: Mechanical Engineering 333 and Civil Engineering 333.

**412. Mechanical Engineering Laboratory. (M E 412 Engr Lab) (0-6) Credit 2. I.** Instruments and tests of steam prime movers, boilers, pumps, fans, internal combustion engines, air compressors, air-conditioning equipment, and flow of compressible media; engineering reports. Prerequisite: Mechanical Engineering 322 and 323.

**414. Machine Design I. (M E 414 Mach Dsgn) (4-0) Credit 4. I.** The theory and practice of machine design applied to various machine parts such as columns, screws, shafts, bearings, brakes, springs, fastenings, friction and lubrication, power transmission, and an introduction to machine vibration. Prerequisites: Civil Engineering 314 and registration in Mechanical Engineering 372.

**423. Heat Power Engineering. (M E 423 Heat Powr) (3-0) Credit 3. II.** A study of the design of power plant equipment including furnaces, pressurized boilers, condensers, etc; and the selection of prime movers and auxiliary 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. Heating and Air-Conditioning. (M E 433 Heat and Air) (3-0) Credit 3. II.** Steam boilers and water heaters, direct and indirect heating, gravity systems; district heating, ventilation air analysis; air-conditioning. Prerequisite: Mechanical Engineering 313.

**442. Machine Design II. (M E 442 Mach Dsgn) (0-6) Credit 2. II.** Calculations and drawings for a number of simple machines and machine parts including both graphical and analytical analyses. Prerequisite: Mechanical Engineering 414.

**463. Industrial Management. (M E 463 Ind Mgt) (3-0) Credit 3. II.** Problems of the industrial executive; organization, plant location; section and arrangement of buildings and equipment; production planning and control; simplification and standardization; time and motion study; job methods standardization; control of inventory and cost; personnel and problems and business policy. Prerequisite: Junior standing in engineering.

**473. Heat Transfer. (M E 473 Heat Tran) (3-0) Credit 3. II.** Heat transfer principles and apparatus applied to power production and utilization. Prerequisite: Mechanical Engineering 323.

# School of Home Economics

The School of Home Economics aims to give training for home and family living to both men and women and also to provide special opportunity for study of the problems of homemaking, extension, and other phases of the home economics field. Students desiring to major or minor in home economics education, textiles and clothing, dietetics, foods and nutrition, household economics and child development, should consult with the Dean of the School.

The School of Home Economics offers some opportunities for graduate study. The bulletin of the Graduate School gives full information concerning requirements and nature of the work.

**Informal Instruction:** An important aspect of the School of Home Economics is the consultant-teaching service offered to men and women who request assistance with problems of grooming; etiquette; budgeting; the care, selection, modeling, or construction of clothing; the daily tasks of management; the use of equipment; and the purchase and preparation of food for themselves or groups. Thus through out-of-class informal experiences, men and women are helped to meet practical problems involved in personal and group living and in personal and social development.

The School of Home Economics offers curricula with a major or minor in Foods and Nutrition, Dietetics, Textiles and Clothing, Dressmaking and Design, Household Economics, and Home Economics Education, Child Development and Art. These curricula are arranged in a manner sufficiently flexible to provide for needs of the following specific groups.

1. Those who wish to enrich their general and cultural education by electing courses from the Home Economics Curriculum.
2. Those who wish to take a minor in Home Economics.
3. Those who wish to become proficient in one phase of Home Economics in preparation for a career other than teaching.
4. Those who wish to become teachers of homemaking in High School or some phase of Home Economics in College.
5. Students who wish to take refresher work, or who plan to become candidates for a Master's Degree.
6. Persons desiring a special curriculum in Dietetics, Clothing, Dressmaking and Design, Foods and Nutrition, or Household Economics and Child Development.
7. Those who desire to follow a Career in Social Welfare or Public Health.

## REQUIREMENTS FOR GRADUATION

To receive the degree of Bachelor of Science in Home Economics a student must complete a minimum of 132 semester hours, with an average of "C" or above. At least thirty (30) semester hours are required for a major and 16-24 semester hours for a minor in all areas. Unless otherwise provided for the student will consult with the adviser about satisfying the six hours of American History requirement.

## HOME ECONOMICS EDUCATION

FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Chemistry 114<br>Inorganic Chemistry | 4 | Chemistry 124<br>Inorganic and Qualitative | 4 |
| English 113<br>Grammar and Composition | 3 | English 123<br>Reading and Composition | 3 |
| Mathematics 173<br>Applied Mathematics | 3 | Physical Education 121<br>Freshman Practice | 1 |
| Physical Education 111<br>Freshman Practice | 1 | Home Economics 123<br>Family Life Education | 3 |
| House 123<br>Introduction to Family Economics | 3 | Foods 123<br>Elementary Nutrition | 3 |
| Art 113<br>Elementary Design | 3 | Clothing 123<br>Textiles and Clothing | 3 |
| | 17 | | 17 |

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Industrial Education 203 Household Mechanics | 3 | Political Science 123 State Government | 3 |
| Political Science 113 National Government | 3 | English 223 Introduction to Literature | 3 |
| Economics 203 Survey of Economics | 3 | Physical Education 221 Sophomore Practice | 1 |
| English 213 Public Speaking | 3 | Foods 223 Family Nutrition | 3 |
| Physical Education 211 Sophomore Practice | 1 | Clothing 223 Children's Clothing | 3 |
| Education 273 Pupil Growth and Development | 3 | Education 283 Pupil Growth and Development | 3 |
| | 16 | | 16 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Biology 304 Physiology | 4 | Sociology 303 The Family | 3 |
| Household Economics 313 General Home Management | 3 | Household Economics 393 House Planning, Furnishings and Equipment | 3 |
| Clothing 313 Tailoring for Women | 3 | Household Economics 283 Personal and Family Finance | 3 |
| Home Economics Education 363 Special Methods | 3 | Foods 323 Meal Planning, Preparation and Service | 3 |
| History 173 United States 1492 to 1876 | 3 | History 183 United States 1877 to Present | 3 |
| Parental Education 403 Nursery School Observation | 3 | Electives | 3 |
| | 19 | | 18 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| *Home Economics Education 406 Practice Teaching | 6 | *House 463 Home Economics Agriculture | 3 |
| *House 403 Supervised Home Management | 3 | *Home Economics Education 403 Methods and Materials in Extended Programs | 3 |
| *Parental Education 413 Child Guidance | 3 | *Education 323 High School Curriculum | 3 |
| *Clothing 413 Advanced Clothing Problems | 3 | *Education 293 Foundations of American Education | 3 |
| *Foods 413 Advanced Nutrition | 3 | *Education 423 School and Community Relations | 3 |
| | 18 | | 15 |

## Minor in Home Economics

SOPHOMORE YEAR

| | Semester Hrs. |
|---|---|
| Clothing 123 | 3 |
| Art 113 | 3 |
| Family Life Education 123 | 3 |

JUNIOR YEAR

| | |
|---|---|
| Foods 123 | 3 |
| Child Guidance 413 or Nursery School Observation 403 | 3 |
| Clothing 412 | 2 |
| | 17 |

## Minor in Related Art

FRESHMAN YEAR

| | Semester Hrs. |
|---|---|
| Elementary Design 113 | 3 |
| Design 123 | 3 |
| Crafts 103 | 3 |

*Either Semester

**ELIZABETH C. MAY HOME ECONOMICS BUILDING . . . Named in honor of the present and only head of the School of Home Economics, it houses the Dean and her staff's offices, laboratories and classrooms.**

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Art Education 373 | 3 | | |
| Figure Drawing 213 | 3 | | |
| | 15 | | |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Costume Design 322 | 2 | | |
| | 17 | | |

## CLOTHING AND TEXTILES

FRESHMAN YEAR

| | | | |
|---|---|---|---|
| Chemistry 114 Inorganic | 4 | Chemistry 124 Inorganic and Qualitative | 4 |
| Art 113 Elementary Design | 3 | English 123 Reading and Composition | 3 |
| English 113 Grammar and Composition | 3 | Physical Education 121 Freshman Practice | 1 |
| Mathematics 173 Applied Mathematics | 3 | Home Economics 123 Family Life Education | 3 |
| Physical Education 111 Freshman Practice | 1 | Foods 123 Elementary Nutrition | 3 |
| Clothing 103 Elementary Textiles | 3 | Clothing 124 Clothing for the Family | 4 |
| | 17 | | 18 |

SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Industrial Education 203 Household Mechanics | 3 | Political Science 123 State Government | 3 |
| Political Science 113 National Government | 3 | English 223 Introduction to Literature | 3 |
| Physical Education 211 Sophomore Practice | 1 | Physical Education 221 Sophomore Practice | 1 |
| Foods 223 Family Nutrition | 3 | Clothing 223 Children's Clothing | 3 |
| Education 273 Pupil Growth and Development | 3 | Chemistry 224 Elementary Physiological | 4 |
| History 173 United States 1492 to 1876 | 3 | Education 283 Pupil Growth and Development | 3 |
| English 213 Public Speaking | 3 | | |
| | 19 | | 17 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Biology 304 Physiology | 4 | Sociology 303 The Family | 3 |
| Household Economics 313 General Home Management | 3 | Clothing 374 Men's Wear | 4 |
| Home Economics Education 363 Special Methods | 3 | Clothing 423 Advanced Textiles | 3 |
| French 113 Elementary French | 3 | Leatherwork 203 Leathercraft | 3 |
| Art 322 Costume Design | 2 | Art Education 353 Drawing and Composition | 3 |
| Clothing 313 Tailoring for Women | 3 | French 123 Elementary French | 3 |
| | 18 | | 19 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| *Home Economics Education 406 Practice Teaching | 6 | *Clothing 402 Clothing Clinic | 2 |
| *House 403 Home Management Residence | 3 | Tailoring 123 Elementary Tailoring | 3 |
| *Parental Education 403 Nursery School Observation | 3 | Clothing 412 Consumer Economics | 2 |
| *Clothing 413 Clothing Problems | 3 | Electives | 9 |
| History 183 United States 1877 to Present | 3 | | |
| | 18 | | 16 |

*Either Semester

## Minor in Clothing

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Art 113 | 3 | | |
| Clothing 124 | 4 | | |
| Children's Clothing 223 | 3 | | |
| Consumer Education 412 | 2 | | |
| Clothing 314 | 4 | | |
| | 16 | | |

## DRESSMAKING AND DESIGN
### Two-Year Course

| | | | |
|---|---|---|---|
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Mathematics 173 Applied Mathematics | 3 | Mathematics 183 Applied Mathematics | 3 |
| Art 113 Elementary Design | 3 | Physical Education 121 Freshman Practice | 1 |
| Physical Education 111 Freshman Practice | 1 | Home Economics 123 Family Life | 3 |
| Clothing 124 Clothing for the Family | 4 | Clothing 103 Elementary Textiles | 3 |
| Leatherwork 203 Leathercraft | 3 | Clothing 423 Advanced Textiles | 3 |
| | 17 | | 17 |

SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| English 213 Public Speaking | 3 | Clothing 413 Clothing Problems | 3 |
| Industrial Education 203 Household Mechanics | 3 | English 223 Introduction to Literature | 3 |
| Physical Education 211 Sophomore Practice | 1 | Clothing 374 Men's Wear | 4 |
| Art 322 Costume Design | 2 | Clothing 402 Clinic | 2 |
| Natural Science 113 College Science | 3 | Foods 123 Elementary Nutrition | 3 |
| Clothing 314 Tailoring for Women | 4 | Clothing 412 Consumer Economics | 2 |
| | 16 | | 17 |

Note.—Students interested in Dressmaking, a two-year course, will see Dean or Advisor for guidance.

## FOODS AND NUTRITION

FRESHMAN YEAR

| | | | |
|---|---|---|---|
| Chemistry 114 Inorganic Chemistry | 4 | Chemistry 124 Inorganic Chemistry | 4 |
| Art 113 Elementary Design | 3 | English 123 Reading and Composition | 3 |
| English 113 Grammar and Composition | 3 | Physical Education 121 Freshman Practice | 1 |
| Mathematics 173 Applied Mathematics | 3 | Home Economics 123 Family Life Education | 3 |
| Physical Education 111 Freshman Practice | 1 | Foods 103 Food Selection and Preparation | 3 |
| Foods 123 Elementary Nutrition | 3 | Clothing 123 Textiles and Clothing | 3 |
| | 17 | | 17 |

SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Political Science 113 National Government | 3 | Political Science 123 State Government | 3 |
| English 213 Public Speaking | 3 | English 223 Introduction to Literature | 3 |
| Physical Education 211 Sophomore Practice | 1 | Physical Education 221 Sophomore Practice | 1 |
| Physics 214 General Physics | 4 | Chemistry 244 Physiological | 4 |
| Education 273 Pupil Growth and Development | 3 | Foods 223 Family Nutrition | 3 |
| Foods 203 Food Selection and Preparation | 3 | Education 283 Pupil Growth and Development | 3 |
| | 17 | | 17 |

JUNIOR YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Biology 304 | 4 | Sociology 303 | 3 |
| Physiology | | The Family | |
| History 173 | 3 | Biology 334 | 4 |
| United States 1492 to 1876 | | Bacteriology | |
| Economics 213 | 3 | Foods 323 | 3 |
| Principles | | Meal Planning, Preparation and Service | |
| Household Economics 313 | 3 | Education 323 | 3 |
| General Home Management | | High School Curriculum | |
| Education 293 | 3 | History 183 | 3 |
| Foundation of American Education | | United States 1877 to Present | |
| Home Economics Education 363 | 3 | | |
| Special Methods | | | |
| | 19 | | 16 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| *Foods 303 | 3 | *Foods 423 | 3 |
| Techniques of Demonstration | | Advanced Nutrition | |
| *House 403 | 3 | *Foods 343 | 3 |
| Home Management House Residence | | Food Preservation | |
| *Parental Education 403 | 3 | *Foods 422 | 2 |
| Nursery School Observation | | Seminar in Food and Nutrition | |
| Foods 403 | 3 | *Home Economics Education 406 | 6 |
| Experimental Cookery | | Practice Teaching | |
| Cooking and Baking 215 | 5 | Electives | 4 |
| Quantity Cookery III | | | |
| | 17 | | 18 |

Note.—Students interested in Food Preparation as a two-year course must see the Dean.

## Minor in Foods and Nutrition

| | |
|---|---|
| Foods 103 | 3 |
| Advanced Food Selection | |
| Foods 223 | 3 |
| Family Nutrition | |
| Foods 323 | 3 |
| Meal Planning, Preparation and Service | |
| Foods 413 | 3 |
| Special Food Problems | |
| Foods 422 | 2 |
| Seminar in Foods and Nutrition | |
| Electives | 7 |
| Total Semester Credit Hrs. | 24 |

*Either Semester

See Dean or Department Head for selection of elective.

## DIETETICS AND INSTITUTIONAL ADMINISTRATION CAREERS

Individuals choosing the curriculum for dietetics and institution administration may qualify for positions as hospital dietitians; dietitians in research laboratories, industrial concerns, schools, colleges, and universities, restaurants, tea rooms, motels, hotels, and other commercial eating shops, test kitchens, commercial air lines and Government agencies. Individuals may become chefs and Food Supervisors as well as work with public health and social welfare agencies, newspapers and magazines, television and radio.

## AMERICAN DIETETICS ASSOCIATION MINIMUM REQUIREMENTS

### PLAN I

(To Be Discontinued October 1962)

Students who wish to qualify for Dietetic Internships must take the following required courses and semester hours. Numbers in parentheses indicate minimum credit hours required by the American Dietetics Association.

Chemistry (12)
General Inorganic
Organic
Physiological Chemistry with Laboratory

Social Sciences (9)
Two of the Following:
Psychology
Sociology
Economics

Foods (6)
Food Selection and Preparation
Meal Planning and Service

Biology (6)
Human Physiology
Bacteriology

Education (3
One of the following:
Educational Psychology
Methods of Teaching
Principles of Education

Nutrition and Dietetics (6)
Normal Nutrition
Diet and Disease

Institutional Managament (6)
Quantity Cookery
Organization and Management

## PLAN II

(To Be Discontinued October 1965 when PLAN III becomes effective)

GROUP I — Semester Hours 8 - 10

Basic foods, required
Nutrition, required
(Prerequisite or concurrent
3 courses from Group II)

GROUP II — 20 - 25

Inorganic Chemistry
Organic Chemistry
Human Physiology
Bacteriology
Physiological or Biological Chemistry
Food Chemistry
Physics
Other Advanced Nutrition Courses

GROUP III — Semester Hours 12 - 20

Psychology
Education
Sociology
Anthropology
Economics
Personal Relations

GROUP IV — 12 - 25

Experimental Foods
Diet Therapy
Quantity Cookery
Institution Equipment
Purchasing
Organization and Management
Accounting
Cost Control

## DIETETICS AND INSTITUTIONAL ADMINISTRATION

### FRESHMAN YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Chemistry 114 Inorganic Chemistry | 4 | Chemistry 124 Inorganic Chemistry | 4 |
| Art 113 Elementary Design | 3 | English 123 Reading and Composition | 3 |
| English 113 Grammar and Composition | 3 | Home Economics 123 Family Life Education | 3 |
| Mathematics 173 Applied Mathematics | 3 | Clothing 123 Textiles and Clothing | 3 |
| Physical Education 111 W Freshman Practice | 1 | Physical Education 121 W Freshman Practice | 1 |
| Foods 123 Elementary Nutrition | 3 | Foods 103 Food Selection and Preparation | 3 |
| | 17 | | 17 |

### SOPHOMORE YEAR

| | | | |
|---|---|---|---|
| Education 273 Pupil Growth and Development | 3 | Political Science 123 State Government | 3 |
| Physics 214 General Physics | 4 | English 223 Introduction to Literature | 3 |
| Physical Education 211W Sophomore Practice | 1 | Physical Education 221W Sophomore Practice | 1 |
| English 213 Public Speaking | 3 | Education 283 Pupil Growth and Development | 3 |
| Chemistry 314 Introductory Organic | 4 | Foods 223 Family Nutrition | 3 |
| Cooking and Baking 233 Organization and Management | 3 | Chemistry 244 Elementary Physiological | 4 |
| | 18 | | 17 |

### JUNIOR YEAR

| | | | |
|---|---|---|---|
| Biology 334 Bacteriology | 4 | Education 323 High School Curriculum | 3 |
| Cooking and Baking 215 Quantity Cookery I | 5 | Political Science 113 American National Government | 3 |
| Education 293 Foundation of American Education | 3 | Biology 304 Physiology for H.E. Students | 4 |
| History 173 United States 1492 to 1876 | 3 | History 183 United States 1877 to Present | 3 |
| Home Economics Education 363 Special Methods | 3 | Electives | 3 |
| | 18 | | 16 |

### SENIOR YEAR

| | | | |
|---|---|---|---|
| Household Economics 393 Equipment and Management | 3 | Home Economics Education 406 Practice Teaching | 6 |
| Economics 203 Survey of Economics | 3 | House 403 Home Management Residence | 3 |
| Psychology 113 General Psychology | 3 | Foods 443 Diet in Health and Disease | 3 |
| Accounting 253 Elementary Accounting | 3 | Education 423 School and Community Relations | 3 |
| Mathematics 183 Applied Mathematics | 3 | Child Development 403 Nursery School Participation | 3 |
| | 15 | | 18 |

## HOUSEHOLD ECONOMICS AND CHILD DEVELOPMENT

### FRESHMAN YEAR

| | | | |
|---|---|---|---|
| Chemistry 114 Inorganic Chemistry | 4 | Chemistry 124 Inorganic and Qualitative | 4 |
| English 113 Grammar and Composition | 3 | English 123 Reading and Composition | 3 |
| Mathematics 173 Applied Mathematics | 3 | Physical Education 121 Freshman Practice | 1 |
| Physical Education 111 Freshman Practice | 1 | Home Economics 123 Family Life Education | 3 |
| Household Economics 123 Introduction to Family Economics | 3 | Foods 123 Elementary Nutrition | 3 |
| Art 113 Elementary Design | 3 | Clothing 123 Textiles and Clothing | 3 |
| | 17 | | 17 |

SOPHOMORE YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Industrial Education 203 Household Mechanics | 3 | Political Science 123 State Government | 3 |
| Political Science 113 National Government | 3 | English 223 Introduction to Literature | 3 |
| English 213 Public Speaking | 3 | Physical Education 221 Sophomore Practice | 1 |
| Physical Education 211 Practice | 1 | History 173 United States 1492 to 1876 | 3 |
| Clothing 223 Children's Clothing | 3 | Foods 223 Family Nutrition | 3 |
| Elective | 3 | Child Development 413 Child Guidance | 3 |
| | 16 | | 16 |

JUNIOR YEAR

| | | | |
|---|---|---|---|
| Biology 304 Physiology | 4 | Sociology 303 The Family | 3 |
| Household Economics 313 General Home Management | 3 | Household Economics 393 Equipment and Furnishing | 3 |
| Education 273 Pupil Growth and Development | 3 | Child Development 403 Nursery School Problems | 3 |
| History 183 United States 1877 to Present | 3 | Foods 323 Meal Planning, Preparation, and Service | 3 |
| Home Economics Education 363 Special Methods | 3 | Household Economics 283 Personal and Family Finance | 3 |
| | 16 | Education 283 Pupil Growth and Development | 3 |
| | | | 18 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Household Economics 423 Housing | 3 | House 403 Home Management Residence | 3 |
| Home Economics Education 406 Practice Teaching | 6 | Child Development 323 Parent Education | 3 |
| Child Development 453 Problems of Child Development | 3 | Electives | 11 |
| Electives | 5 | | 17 |
| | 17 | | |

## 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 a better understanding and appreciation for children. The infants in the home management house; the nursery school children, ages two to five; the play group made up of 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 education may be accepted.

Students are advised to select courses with assistance of their advisers or the Dean.

## HOME ECONOMICS INDUSTRY FOR ARTS AND SCIENCE STUDENTS

| | |
|---|---|
| Home Economics | 102-122 |
| Clothing | 112-122-212-222 |
| Foods | 112-122-212-222 |

A student who takes either of the sequences listed above may be eligible, as a Junior, for the regular advanced courses taken by Home Economics majors. A minor or major may be secured, by adding sufficient hours to

the 8 hours of industry courses. Any of the other Home Economics courses, for which there are no prescribed prerequisites or for which prerequisites have been taken may be elected by any student, enrolled in the College.

## DESCRIPTION OF COURSES

### Art

**113. Elementary Design. (Art 113 Elem Dsgn) (1-4) Credit 3. I.** Basic Design principles applied to everyday living. Space, pattern, texture, line and color as related to clothing, home furnishings and arrangement and table decoration. Art appreciation. Lab fee: $2.00.

**123. Design. (Art 123 Design) (1-4) Credit 3. II.** Basic Design principles applied to composition. Media: Tempera, pen and ink pastels. Lab fee: $2.00.

**132. Crafts. (Art 132 Crafts) (0-4) Credit 2. II.** Creative design through a variety of crafts; clay modeling and plaster casting, leathercraft; textile design (stenciling, block printing, silk screen printing) and metal craft. Lab fee: $2.00.

**213. Figure Drawing. (Art 213 Figures) (0-6) Credit 3. I.** Fundamentals of structure and anatomy; a study of the human figure to establish a sense of figure proportion and relationships. Lab fee: $2.00.

**322. Costume Design. (Art 322 Cstm Dsgn) (0-4) Credit 2. I.** Adaptation and creation of fashions; selection of appropriate costumes and accessories for occasions; fashion illustration; media: pencil, charcoal, pen, ink, and water color. Offered alternate years. Lab fee: $2.00.

### Child Development

**302. Children's Literature. (Chdn 302 Child Lit) (2-0) Credit 2. II.** Literature as a resource in the child's living; relation of children's literature to world literature; traditional and modern forms; illustration in children's books.

**313. History and Philosophy of Early Childhood Education. (Chdv 313 History) (3-0) Credit 3. I.** The educational position of the young child in twentieth-century America; the view of social philosophers concerning the problems of early childhood; family education in America out of which evolved the kindergarten and nursery school; observation in kindergartens and early grades in the community.

**322. Nursery Education Music and Creative Arts. (Chdv 322 Nurs Musc) (1-2) Credit 2. II.** Selection of books, stories, music and art for children two to ten years old. Lab fee: $2.00.

**323. Parent Education. (Chdv 323 Parent) (3-0) Credit 3. II.** Parent needs in relation to children; investigation of methods, materials, and literature used in work with parents.

**413. Child Guidance. (Chdv 413 Chld Guid) (3-0) Credit 3.** The development characteristics of young children; needs and principles involved in the guidance of children at the pre-school age.

**414. Problems in Observation and Participation in Nursery School. (Chdv 414 Obsv Prob) (1-14) Credit 4. I or II.** Work as assistant in Nursery School; experience to be earned in a selected nursery school away from campus. (9 weeks.) Elective.

**333. Physical Development of Children. (Chdv 333 Phys Dvlp) (3-0) Credit 3. I.** Nutritional requirements and growth patterns of children; factors influencing this growth.

**401. Nursery School Observation. (Chdv 401 Nur Sc Ob) (0-1) Credit 1. I or II.** Observation of pre-school children; participation in nursery school activities; meetings with parents.

**403. Problems and Practice in Nursery and Kindergarten Observation. (Chdv 403 Problems). I or II.** Evaluation of changing practice in school procedures; teacher-child relationship; individual needs and group structure; implications of current therapeutic techniques for teaching.

**422. Home Nursing. (Chdv 422 Home Nurs) (3-0) Credit 2. I or II.** Personal and family health problems in homes.

**453. Problems of Child Development. (Chdv 453 Dvlp Prob) (3-0) Credit 3. I.** Opportunities to discuss problems of the classroom, the community and related fields.

**473. Curriculum in Early Childhood Education. (Chdv 473 Curriculum) (3-0) Credit 3. I.** Analysis of basic needs, activities, and interests of young children; how to plan a school environment best adapted to fulfill these needs. Physical, intellectual, and social development as aspects to the total sequence of integrated growth.

**Clothing and Textiles**

**103. Elementary Textiles. (Clo 103 Elem Text) (1-4) Credit 3. I.** A study of basic and special weaves and finishes in fabrics. Experience in the use of the weaving machine. Creating of designs for printed and woven textiles as the application of design of cloth. Offered alternate years. Lab fee: $2.00.

**112-122. Clothing. (Ind 112-122 Clothing) (0-4) Credit 2.** Elementary selection and construction of garments for self. Grooming and the wearing and care of clothing.

**123. Textiles and Clothing. (Clo 123 Text Clo) (1-4) Credit 3. II.** Analyzing personal finances in relation to standards of selection, construction, wear and care of the wardrobe. Lab fee: $2.00.

**124. Clothing for the Family. (Clo 124 Family) (2-4) Credit 4. II.** Construction, cost, care and maintenance of clothing for the family. Lab fee: $2.00.

**133. Elementary Construction. (Clo 133 Elem Constr) (0-6).** Beginning course in clothing construction for non-majors-graduate or undergraduate.

**212-222. Clothing. (Ind 212-222 Clothing) (0-4) Credit 2.** Advanced construction of clothing for self and family, including construction and care of household fabrics.

**223. Children's Clothing. (Clo 223 Child Clo) (1-4) Credit 3. I or II.** Selection and construction of garments for infants and young children.

**312. Fabrics in Home Furnishings. (Clo 312 Fabrics) (1-2) Credit 2.** A study and use of color, design, textures, and accessories in household fabrics. Upholstering, making of slip covers, draperies and bed spreads. One field trip. Offered alternate years. Lab fee: $2.00.

**313. Tailoring for Women. (Clo 313 Tailoring). (1-4) Credit 3. I.** Experience in handling various types of woolens and the problems involved in the construction of a suit, coat and slacks. Prerequisites: Clothing 124, 223. Estimate for materials and supplies: $40.00.

**374. Men's Wear and Clothing Reclamation. (Clo 374 Mens Wear) (2-2) Credit 4. II.** Use of commercial and custom made patterns in construction of simple garments for men; remodeling and dyeing of garments. Estimate for supplies: $5.00.

**402. Clothing Clinic. (Clo 402 Clinic) (0-4) Credit 2. I or II.** Experience in clothing construction; fitting and design for customers.

**403. Draping. (Clo 403 Draping) (0-6) Credit 3.** Principles of design; draping of fabric on dress form; interpretation of design in relation to different fabrics and figures.

**413. Advanced Clothing Problems. (Clo 413 Adv Prob) (1-4) Credit 3.** Pattern study, selection and fitting for individuality in dress using silk fabric. Estimate for supplies: $20.00.

**423. Advanced Textiles (Clo 423 Adv Text) (1-4) Credit 3.** Nature of the raw materials; economics, chemical and physical applications involved in their manufacture and use; methods and significance of physical testing. Prerequisites: Chemistry 214; Biology 304; Physics 214. Offered alternate years. Lab fee: $2.00.

**443. Consumer Economics. (Clo 443 Cons Econ) (3-0) Credit 3.** Living and cultural background and clothing consumer programs.

**Foods and Nutrition**

**103. Food Selection and Preparation. (Fds 103 Food Prep) (1-4) Credit 3.** Marketing; choice of foods and selection of methods of preparation of protein, carbohydrate and fats. Emphasis on breakfast foods. Lab fee: $2.00.

**112-122. Foods. (Ind 112-122 Foods) (0-4) Credit 2.** Elementary food preparation for the family.

**113-123. Elementary Nutrition. (Fds 113-123 Elem Nutr) (3-0) Credit 3.** Developing food selection habits which meet nutritional standards; developing scientific knowledge of foods.

**203. Advanced Food Selection and Preparation. (Fds 203 Adv Selc) (1-4) Credit 3.** Fundamentals of selecting, serving and preparing food in large quantities; rudiments of cafeteria and institutional management; menu planning, preparation and serving large groups. Fee: $2.00.

**212-222. Foods (Ind 212-222 Foods) (0-4) Credit 2.** Advanced planning, preparation and service for groups of various sizes and ages.

**223. Family Nutrition and Child Feeding. (Fds 223 Fmly Nutr) (1-4) Credit 3. I or II.** Preservation and discussion of current ideas on feeding children and their families; relation of nutrition to physical growth and development. Prerequisite: Elementary Nutrition. Fee: $2.00.

**303. Techniques and Principles of Demonstration. (Fds 303 Demnstrt) (1-4) Credit 3. I or II.** Purpose and technique of demonstration and food preparation and nutrition. Each student expected to prepare and give several demonstrations. Fee: $2.00.

**323. Meal Planning and Preparation. (Fds 323 Meal Plng) (1-4) Credit 3. II.** Planning, marketing, preparing and serving palatable, nutritious and attractive meals for families at various economic levels; use and care of equipment and table appointments. Lab fee: $2.00.

**343. Food Preservation. (Fds 343 Presrvatn) (1-4) Credit 3. I.** Equipment, recipes and directions for home food preservation. Taught in School of Agriculture.

**403. Experimental Cookery. (Fds 403 Expr Cook) (1-4) Credit 3. I or II.** Factors involved in meal planning; preparation and serving of food with special units on food experimentation and comparison of commercial and home products. Fee: $2.00.

**413. Individual Problems in Foods and Nutrition. (Fds 413 Indvl Prob) (1-4) Credit 3. II.** Advanced course for students wishing to do work in a special phase of Foods and Nutrition before graduation. Lab fee $2.00.

**423. Advanced Nutrition and Diet Therapy. (Fds 423 Adv Nutr) (1-4) Credit 3. II.** Principles of human nutrition; energy, mineral, vitamin, fat, and carbohydrate requirements of human body. Practical application of recent developments in the dietary treatment of disease in which nutrition plays a major role by planning diets for various diseases. Lab fee: $2.00.

**422. Seminar in Food and Nutrition. (Fds 422 Seminar) (2-0) Credit 2.** Recent trends and findings in foods and nutrition topics related to practical problems in human nutrition. Prerequisites: Physiology, chemistry and nutrition.

**Foods 443. Diet in Health and Disease. (Fds 443 Hlth Diet) (3-0) Credit 3.** Principles involved in diet for healthy individuals and abnormal individuals.

**Foods 463. Organization and Management (Fds 463 Orgn Mgt) (3-0) Credit 3.** Discussion and application of techniques in organization and managing Food Service institutions.

**Home Economics Education**

**102. Personal Development and Social Usages. (Ind 102 Persnl Dvlp) (2-0)** (For men or women) Manners, personality development, other general information on personal relations. 1 semester only.

**123. Family Life Education. (H E 123 Family Life) (3-0) Credit 3. I or II.** Family life problems and experiences in solving them.

**363. Special Methods. (H Ed 363 Spec Meth) (3-0) Credit 3. I or II.** Curriculum, methods of teaching, management, and other problems of the homemaking teacher.

**H. E. 400. Investigative Paper. (HE 400 Inv Paper).** Seniors in all curricula are required to present a paper on some phase of work in the major field.

**403. Methods and Material in Extended Programs. (H Ed Extnd Prog) (3-0) Credit 3. I or II.** A study of aims and values of home and summer experiences and club work; consideration of special problems, present trends; methods of promotion; selection and organization of subject matter.

**406. Student Teaching and Problems. (H Ed 406 Stud Tchg) Credit 6. I or II.** Supervised teaching of homemaking in schools for a period of 9 weeks.

**Household Economics**

**123. Introduction to Family Economics. (Hse Fmly Econ) (3-0) Credit 3. II.** Major social and economics problems faced by home managers in bringing about good family relationships.

**283. Personal and Family Finance. (Hse 283 Finance) (3-0) Credit 3.** Specific financial problems confronting individuals and family groups; a study of the legal aspects of a successfully run home.

**313. General Home Management. (Hse 313 Home Mgt) (3-0) Credit 3.** Specific financial problems confronting individuals and family groups; a study of the legal aspects of a successfully run home.

**393. House Planning, Furnishing and Equipment. (Hse 393 Hse Plng) (3-0) Credit 3.** Consideration of dwellings, their environment, plans and space requirements; selection, use, and care of certain furniture and equipment used in the home, which promote effective utilization of family resources.

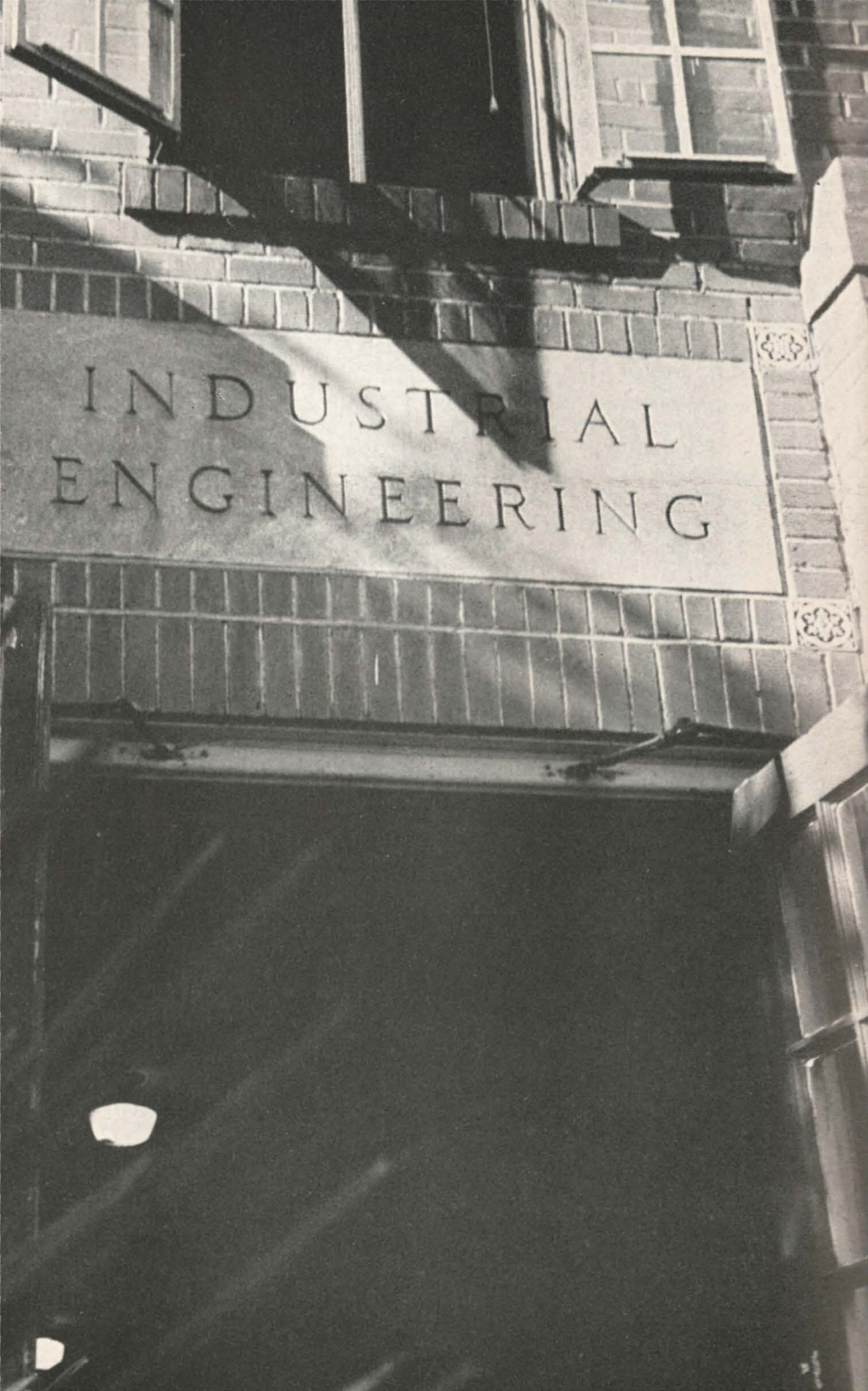
**403. Supervised Home Management. (Hse 403 Residence) (1-4) Credit 3. I or II.** Home residence provides for the application of principles related to satisfactory home life; opportunity is provided for experience in group living and for management of the human and material resources of a home. Lab fee: $2.00.

**423. Housing. (Hse 423 Housing) (3-0) Credit 3. II.** Housing standards and conditions; home ownership, financing, house design from consumer's point of view; government housing. Prerequisite: Household Economics 393.

**463. Kitchen Gardening. (Hse 463 Ktch Grdn) (3-0) Credit 3. I.** (Same as Foods 343 and Horticulture 343 taught in School of Agriculture.) Equipment, recipes and directions for home food preservation.

Note.—Students in all curricula will consult advisers relative to courses for certification.

Note.—Unless otherwise provided for, the student will consult adviser about satisfying American History requirement.


INDUSTRIAL
ENGINEERING

# Division of Industrial Education

## GENERAL INFORMATION

The Division of Industrial Education offers an educational program designed to help prepare young men and women to meet the demands of industry, society and life. The Division of Industrial Education is made up of two departments, the Industrial Arts Department and the Vocational Industrial Education Department. The division offers undergraduate courses leading to the Bachelor of Science Degree in Industrial Education and Trade Certificates in the following industrial fields:

Auto Mechanics
Cabinet Making
Carpentry
Commercial Cooking
Drafting
Dry Cleaning
Electricity
Foundry
Laundering
Machine Shop
Masonary
Painting and Decorating
Plumbing
Printing
Radio and Television
Sheet Metal
Shoemaking and Leatherwork
Tailoring
Welding: gas and electric

The Division of Industrial Education has a physical plant occupying over 48,000 square feet of floor space and valued above one quarter million dollars. The offices, classroom and shops are housed in the following buildings:

1. **Industrial Education Building**—In this building are located the administrative offices; classrooms; library and reading rooms; drafting rooms and shops for instruction in shoemaking and leatherwork, printing, woodwork, painting and decorating, plumbing, sheet metal and auto mechanics.

2. **N. Y. A. Shop**—In this building are located shops for instruction in bench and machine metalwork, welding and foundry. This building is fully equipped with hand tools, machine tools, testing and processing equipment in order to maintain a first-rate instructional program for the metalworking industry.

3. **Industrial Education Annex** — In this building are located classrooms for related instruction and shops for instruction in radio, television, electricity and masonary. This building is equipped with the latest radio, television and electronic equipment in order to provide the students with the best possible instruction.

Due to changes in industry, education and our advancing technology, the Division may make, from time to time, appropriate changes in its curricula in order to maintain always an up-to-date and adequate educational program. Students shall follow the prescribed outline of courses which was required at the time they entered a particular curriculum. All substitutions of courses must be approved by the Director of the Division prior to the time they are made.

## ADMISSION

In order to pursue the courses leading to a Degree in Industrial Education or to a Trade Certificate, the student must satisfy the same entrance requirements as are required for entrance to freshman college courses. Students transferring from a college of similar standing to that of Prairie View A. and M. College shall be given credit for the courses transferred whenever they are equivalent or similar to prescribed courses in the Division of Industrial Education.

**THE INDUSTRIAL ENGINEERING BUILDING . . . has classroom and shop laboratories in various trades as well as housing for the Director of the Division of Industrial Education and the Division's staff.**

## GRADUATION REQUIREMENTS*

The requirements for graduation from the Division of Industrial Education are the satisfactory completion of all courses in one of the prescribed curricula, with at least a "C" average.

## INDUSTRIAL ARTS DEPARTMENT

The Industrial Arts Department is 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 in Industrial Education. He will be entitled to make application and receive a certificate valid to teach Industrial Arts Education in any public school in the State.

### Major

The requirements for a major in Industrial Education consist of not less than 53 semester hours. Ten semester hours shall be in courses above the sophomore level. Majors shall elect one of the following plans:

**Plan I**

### Unit Shop Teacher

The shop major shall consist of at least 12 semester hours of drawing, including general drawing and technical sketching. A major concentration of 30 semester hours in shop work shall be selected from the areas listed below. An additional 11 hours of related shop courses will go to make up the remainder of the requirements under Plan I.

Auto Mechanics
Commercial Cooking
Dry Cleaning
Electricity
Laundering
Masonary
Metalwork
Painting and Decorating
Plumbing
Printing
Radio-Television
Shoemaking and Leatherwork
Tailoring
Woodwork-Carpentry

**Plan II**

### General Shop Teachers

The shop shall consist of at least 12 semester hours drawing, including general drafting and technical sketching. A minimum of 12 semester hours in shop work is required in three of the areas listed below. An additional 5 semester hours of electives in the same areas will make up the remainder of the requirements under Plan II.

Auto Mechanics
Carpentry
Cabinet Making
Crafts
Dry Cleaning
Electricity
Foundry
Laundering
Machine Shop
Masonry
Painting and Decorating
Plumbing
Printing
Radio-Television
Sheet Metal
Shoemaking and Leatherwork
Tailoring
Welding

*See detailed explanation of requirements for graduation from the College in Academic Information Section of this bulletin.

### Minor

A minor in Industrial Education requires the completion of 24 semester hours in drawing and shopwork. At least 6 semester hours shall be in drawing, including general drafting and technical sketching. The remaining hours must be in shop work with not less than 6 semester hours in any area selected.

## DEGREE REQUIREMENTS

## BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL EDUCATION

To earn the Bachelor of Science Degree in Industrial Education, the student must complete 140 semester hours of academic and shop work, including 4 semester hours Military Science (men) or 4 semester hours Physical Education (women). Thirty-six (36) semester hours of total semester hours required for graduation must be in courses above the sophomore level. The academic and shop work shall be distributed as follows:

### Major

Fifty-three (53) semester hours, including 10 semester hours in advanced courses, in drawing and shop work according to Plan I or II.

## PROFESSIONAL REQUIREMENTS

A minimum of 29 semester hours is required from the following list, to include 6 semester hours which shall bear upon high school teaching and 6 of which shall consist of study methods, observation of methods and practice teaching.

| First Semester | Hrs. |
|---|---|
| Industrial Education 111 and 121 — Orientation | 2 |
| Industrial Education 113 — Foundations of Industrial Education | 3 |
| Industrial Education 273 — Classroom Organization and Management | 3 |
| Industrial Education 323 — Course Making | 3 |
| Education 293 — Foundations of Education | 3 |

| Second Semester | Hrs. |
|---|---|
| Industrial Education 413 — Methods in Industrial Education | 3 |
| Audio-Visual Education 303 — Utilization of Audio-Visual Materials | 3 |
| Education 383 — Educational Psychology | 3 |
| Industrial Education 406 — Supervised Teaching | 6 |

## GENERAL EDUCATION REQUIREMENTS

The following courses are required of all majors in Industrial Education:

| | |
|---|---|
| Mathematics | 6 |
| College Algebra, 3 hours | |
| Trigonometry, 3 hours | |
| Science | 18 |
| Chemistry, 8 hours | |
| Physics, 10 hours | |
| Government | 6 |
| State Government, 3 hours | |
| National Government, 3 hours | |
| History | 6 |
| American History | |
| English | 12 |
| Composition and Grammar, 3 hours | |
| Reading and Grammar, 3 hours | |
| Public Speaking, 3 hours | |
| Introduction to Literature, 3 hours | |
| Sociology Elective | 3 |
| Electives as necessary to satisfy the curriculum | |

### Thesis Requirements

A comprehensive theme paper will be required of each student pursuing the Bachelor of Science Degree in Industrial Education. This paper shall be devoted to work in his specific concentration of study or to the general field of Industrial Education. The paper should demonstrate an ability to gather, organize, and report Industrial Education information.

## VOCATIONAL INDUSTRIAL EDUCATION DEPARTMENT

The Vocational Education Department (Trades and Industries) is designed to offer experiences for the following purposes: (1) To prepare students to enter various skilled trades and manufacturing industries as workers, supervisors, technicians or sales personnel; (2) To allow students who cannot afford the 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 follow it as a trade; (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; (4) To provide special trade courses for individuals who have special needs, i.e., industrial rehabilitation students or students who wish to learn only a part of a trade such as linotype operation, lettering, motor winding, etc.; and (5) To prepare teachers of vocational industrial education subjects.

A student in the Department of Vocational Industrial Education may qualify for the Bachelor of Science Degree by showing satisfactory proof of having 3 years of experience as a journeyman in a recognized trade and completing the following courses:

| | |
|---|---|
| Mathematics | 6 semester hours |
| Chemistry | 8 semester hours |
| Physics | 10 semester hours |
| History | 6 semester hours |
| Government | 6 semester hours |
| English | 12 semester hours |
| Sociology | 3 semester hours |
| Industrial Education | 28 semester hours |
| Electives (Minor) | 18 semester hours |

A student may enter the two-year program in Vocational Industrial Education (Trades and Industries) and work toward a trade certificate in the following areas:

Auto Mechanics
Carpentry
Commercial Cooking
Drawing and Design
Dry Cleaning
Electricity
Laundering
Masonry
Metalwork, Foundry, Welding
Painting and Decorating
Plumbing
Printing
Radio-Television
Shoemaking and Leatherwork
Tailoring

## INDUSTRIAL INTERNSHIP

It is indeed imperative that the industrial education student have close contact with some industry or industrial occupation during his program at the College. It is for this reason that an opportunity is provided for each student to engage in supervised work in industry and receive college credit for the same. Students will enroll in I.E. 200, Industrial Internship. Credit will be allowed on the following basis: One semester hour of college credit for each 100 clock hours on a job. A maximum of 15 semester hours can be earned in this manner. All internship programs must be approved by the Director of Industrial Education prior to the student actually going on the job.

## SPECIAL STUDENTS

Special one-year vocational-technical training programs are offered to meet the needs of students who are under contract with the Vocational Rehabilitation Division, Texas Education Agency. Students may earn a Certificate of Apprenticeship in the following technical fields:

1. Automobile Mechanics
2. Cabinet Making
3. Carpentry
4. Cooking and Baking
5. Drawing and Design
6. Dry Cleaning
7. Electricity
8. Laundering
9. Masonry
10. Metal work, Foundry, and Welding
11. Plumbing
12. Printing
13. Radio-Television
14. Shoemaking and Leathercraft
15. Tailoring

All students in the above programs shall enroll in I.E. 200, Industrial Internship. Credit awarded shall be fifteen semester hours during each semester of the regular school year and six semester hours for each of the summer terms. The courses of instruction shall be arranged in terms of the individual needs of each student and shall be supervised by the Director of the Division.

## DISTRIBUTIVE EDUCATION

In the field of Distributive Education, courses are offered in business practices, how to teach an employee, wholesale and retail selling and buying, advertising, display, bookkeeping, salesmanship, employer-employee relations, public relations, retail record keeping, laws of retailing, professional development in retail selling, grocery procedure and food service. These courses will be offered in the field in short units, and carry no college credit. Any one or all may be taken on request. Summer Business and Distributive Education Clinics will be held upon demand.

## INDUSTRIAL EDUCATION

Curriculum outline for a major in Industrial Education who expects to teach Industrial Arts.*

| First Semester | Hrs. |
|---|---|
| Mathematics 113 | 3 |
| College Algebra | |
| English 113 | 3 |
| Grammar and Composition | |
| Industrial Education 113 | 3 |
| Foundations of Industrial Education | |
| Drawing 113 | 3 |
| General Drafting | |
| Industrial Laboratory | 3 |
| Industrial Education 111 | 1 |
| Orientation | |
| Military Science 111 | |
| Elementary or | |
| Physical Education 111 | 1 |
| Freshman Practice (Women) | |
| | 17 |

| Second Semester | Hrs. |
|---|---|
| Mathematics 123 | 3 |
| Trigonometry | |
| English 123 | 3 |
| Reading and Composition | |
| Elective** | 3 |
| Drawing 123 | 3 |
| General Drafting | |
| Industrial Laboratory 123 | 3 |
| Industrial Education 121 | 1 |
| Military Science 121 Orientation | |
| Elementary or | |
| Physical Education 121 | 1 |
| Freshman Practice (Women) | |
| | 17 |

### SOPHOMORE YEAR

| | |
|---|---|
| Political Science 113 | 3 |
| National Government | |
| English 213 | 3 |
| Public Speaking | |
| Drawing 203 | 3 |
| Technical Sketching | |
| Chemistry 114 | 4 |
| Inorganic Chemistry | |
| Industrial Laboratory | 3 |
| Military Science 211 | |
| Elementary Military Science | |
| Physical Education 211 | 1 |
| Sophomore Practice (Women) | |
| | 17 |

| | |
|---|---|
| Political Science 123 | 3 |
| State Government | |
| English 223 | 3 |
| Introduction to Literature | |
| Drawing 313 | 3 |
| Design | |
| Chemistry 124 | 4 |
| Inorganic Chemistry | |
| Industrial Laboratory | 3 |
| Military Science 221 | |
| Elementary Military Science | |
| Physical Education 221 | 1 |
| Sophomore Practice (Women) | |
| | 17 |

*Students who wish to earn the Bachelor of Science degree in Industrial Education but do not wish to teach may substitute industrial laboratory for Professional Education courses upon the approval of the Director of the Division of Industrial Education.

**Students must elect 3 semester hours from the following courses: Sociology 103; Economics 203; or Home Economics 123.

JUNIOR YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Physics 215 | 5 | Physics 225 | 5 |
| General Physics | | General Physics | |
| Industrial Education 273 | 3 | Education 383 | 3 |
| Classroom Organization | | Educational Psychology | |
| History 173 | 3 | History 183 | 3 |
| American History | | American History | |
| Industrial Laboratory | 4 | Industrial Laboratory | 7 |
| Education 293 | 3 | | |
| Foundations of Education | | | |
| | 18 | | 18 |

SENIOR YEAR

| | | | |
|---|---|---|---|
| Industrial Education 323 | 3 | Audio-Visual Education 303 | 3 |
| Course Making | | Utilization of Audio-Visual Materials | |
| Industrial Education 413 | 3 | Industrial Education 406 | 6 |
| Methods of Teaching | | Student Teaching | |
| Industrial Laboratory | 9 | Industrial Laboratory | 9 |
| Electives | 3 | | |
| | 18 | | 18 |

## Curriculum outline for two-year technical courses automobile mechanics.

FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 113 | 3 | Drawing and Design 123 | 3 |
| General Drafting | | General Drafting | |
| Applied Science 133* | 3 | Applied Science 143* | 3 |
| Related Mathematics | | Related Mathematics | |
| English 133* | 3 | English 143* | 3 |
| English for Trade Students | | English for Trade Students | |
| Industrial Education 111 | 1 | Industrial Education 121 | 1 |
| Orientation | | Orientation | |
| Auto Mechanics 153 | 3 | Auto Mechanics 163 | 3 |
| Auto Mechanics Practice | | Auto Mechanics Practice | |
| Auto Mechanics 133 | 3 | Auto Mechanics 123 | 3 |
| The Chassis | | Power I | |
| Military Science 111 | 1 | Military Science 121 | 1 |
| Elementary | | Elementary | |
| | 17 | | 17 |

SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 | 3 | Applied Science 233 | 3 |
| Business Relations | | Industrial Management | |
| Metal Work 113 | 3 | Welding 103 | 3 |
| Bench Work | | General Welding | |
| Science 113 | 3 | Sociology 263 | 3 |
| College Science | | General Sociology | |
| Auto Mechanics 213 | 3 | Auto Mechanics 263 | 3 |
| The Fuel System | | Chassis II | |
| Auto Mechanics 233 | 3 | Auto Mechanics 243 | 4 |
| The Electrical System | | Power II | |
| Military Science 211 | 1 | Military Science 221 | 1 |
| Elementary | | Elementary | |
| | 17 | | 17 |

SUMMER: I. E. 200—Industrial Internship—6 semester hours.

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

## CARPENTRY

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| Carpentry 117 Elementary | 7 | Carpentry 127 Elementary Carpentry II | 7 |
| | | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

SUMMER: I. E. 200—Industrial Internship—6 semester hours.

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Industrial Management | 3 |
| Drawing and Design 303 Working Drawings | 3 | Painting 123 Elementary Painting | 3 |
| Science 113 College Science | 3 | Sociology 123 General Sociology | 3 |
| Carpentry 217 Advanced Carpentry I | 7 | Carpentry 227 Advanced Carpentry II | 7 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 17 | | 17 |

## COOKING AND BAKING

### FIRST YEAR

| | | | |
|---|---|---|---|
| Cooking and Baking 132 Nutrition | 2 | Cooking and Baking 142 Nutrition | 2 |
| Cooking and Baking 112 Food Products | 2 | Cooking and Baking 122 Food Products | 2 |
| Cooking and Baking 113 Elementary Food Preparation | 3 | Cooking and Baking 123 Elementary Food Preparation | 3 |
| Cooking and Baking 117 Quantity Cookery I | 7 | Cooking and Baking 127 Quantity Cookery II | 7 |
| English 113* English for Trade Students | 3 | Mathematics 173* Applied Mathematics | 3 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| | 19 | | 19 |

### SUMMER

| | | | |
|---|---|---|---|
| Cooking and Baking 253 Advanced Food Preparation | 3 | Cooking and Baking 263 Advanced Food Preparation | 3 |
| Political Science 103 Federal Government | 3 | Sociology 263 General Sociology | 3 |
| | 6 | | 6 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Cooking and Baking 213 Sanitation | 3 | Cooking and Baking 223 Food Service | 3 |
| Cooking and Baking 233 Business Management | 3 | Cooking and Baking 243 Menu Planning | 3 |
| Cooking and Baking 215 Quantity Cookery III | 5 | Cooking and Baking 225 Quantity Cookery IV | 5 |
| Cooking and Baking 200 Internship | 6 | Cooking and Baking 200 Internship | 6 |
| Military Science 211 Elementary | 1 | Military Science 221 | 1 |
| | 18 | | 18 |

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

SUMMER

| First Term | Hrs. | Second Term | Hrs. |
|---|---|---|---|
| Cooking and Baking 200 | 6 | Cooking and Baking 200 | 6 |
| Internship | | Internship | |

## DRAWING AND DESIGN

FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Applied Science 133* | 3 | Applied Science 143* | 3 |
| Related Mathematics | | Related Mathematics | |
| English 133* | 3 | English 143* | 3 |
| English for Trade Students | | English for Trade Students | |
| Drawing and Design 113 | 3 | Drawing and Design 123 | 3 |
| General Drafting | | General Drafting | |
| Architectural Engineering 212 | 2 | Architectural Engineering 222 | 2 |
| Freehand Drawing | | Freehand Drawing | |
| Science 113 | 3 | Architectural Engineering 243 | 3 |
| College Science | | Architectural Drawing | |
| Industrial Education 111 | 1 | Industrial Education 121 | 1 |
| Orientation | | Elementary | |
| Military Science 111 | 1 | | |
| Elementary | | | |
| | 16 | | 16 |

SECOND YEAR

| | | | |
|---|---|---|---|
| Mathematics 113 | 3 | Mathematics 123 | 3 |
| College Algebra | | Trigonometry | |
| Applied Science 213 | 3 | Applied Science 223 | 3 |
| Business Relations | | Industrial Management | |
| Electives | 3 | Sociology 263 | 3 |
| Architectural Engineering 244 | 4 | General Sociology | |
| Architectural Drafting | | Architectural Engineering 263 | 3 |
| Architectural Engineering 363 | 3 | Architectural Drawing | |
| Working Drawings | | Architectural Engineering 273 | 3 |
| Military Science 211 | 1 | Working Drawings | |
| Elementary | | Military Science 221 | 1 |
| | | Elementary | |
| | 17 | | 16 |

## DRY CLEANING

FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 113 | 3 | Drawing and Design 123 | 3 |
| General Drafting | | General Drafting | |
| Applied Science 133* | 3 | Applied Science 143* | 3 |
| Related Mathematics | | Related Mathematics | |
| English 133* | 3 | English 143* | 3 |
| English for Trade Students | | English for Trade Students | |
| Dry Cleaning 117 | 7 | Dry Cleaning 127 | 7 |
| Dry Cleaning | | Dry Cleaning | |
| Industrial Education 111 | 1 | Industrial Education 121 | 1 |
| Orientation | | Orientation | |
| Military Science 111 | 1 | Military Science 121 | 1 |
| Elementary | | Elementary | |
| | 18 | | 18 |

SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 | 3 | Applied Science 223 | 3 |
| Business Relations | | Industrial Management | |
| Laundering 112 | 2 | Tailoring 113 | 3 |
| Elementary Laundering | | Elementary Tailoring | |
| Science 113 | 3 | Sociology 263 | 3 |
| College Science | | General Sociology | |
| Dry Cleaning 217 | 7 | Dry Cleaning 227 | 7 |
| Dry Cleaning | | Dry Cleaning | |
| Military Science 211 | 1 | Military Science 221 | 1 |
| Elementary | | Elementary | |
| | 16 | | 17 |

*Students who plan to continue in the four-year program should enroll in English 113 and Mathematics 113.

## ELECTRICITY

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Electricity 114 Elementary Electricity | 4 | Electricity 124 Elementary Electricity | 4 |
| Electricity 113 Electrical Wiring and Repair | 3 | Electricity 123 Electrical Wiring and Repair | 3 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Industrial Management | 3 |
| Electricity 232 D.C. Motor-Generator Repair | 2 | Electricity 242 A.C. Motor-Generator Repair | 2 |
| Science 113 College Science | 3 | Sociology 263 General Sociology | 3 |
| Electricity 217 Electrical Wiring and Illumination | 7 | Electricity 227 Electrical Wiring and Illumination | 7 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 16 | | 16 |

## LAUNDERING

### FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Laundering 117 Elementary Laundering | 7 | Laundering 127 Elementary Laundering | 7 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 233 Industrial Management | 3 |
| Science 113 College Science | 3 | Tailoring 112 Tailoring | 2 |
| Laundering 217 Laundering | 7 | Sociology 263 General Sociology | 3 |
| Dry Cleaning 112 Dry Cleaning Lab. | 2 | Laundering 227 Laundering | 7 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 16 | | 16 |

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

## MASONRY

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Masonry 117 Elementary Masonry | 7 | Masonry 127 Elementary Masonry | 7 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Industrial Management | 3 |
| Drawing and Design 303 Working Drawings | 3 | Carpentry 204 General Carpentry | 4 |
| Science 113 College Science | 3 | Sociology 263 General Sociology | 3 |
| Masonry 217 Advanced Masonry | 7 | Masonry 227 Advanced Masonry | 7 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 17 | | 18 |

## METALWORK, WELDING, FOUNDRY

### FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| Welding 113 Electric Welding | 3 | Welding 123 Gas Welding | 3 |
| Metalwork 113 Benchwork | 3 | Metalwork 123 Machine Work | 3 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 17 | | 17 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Industrial Management | 3 |
| Foundry 213 Foundry I | 3 | Sociology 263 General Sociology | 3 |
| Science 113 College Science | 3 | Foundry 223 Foundry II | 3 |
| Welding 213 Advanced Electric | 3 | Metalwork 323 Materials and Processes | 3 |
| Metalwork 213 Advanced Machine | 3 | Welding 223 Advanced Gas | 3 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 16 | | 16 |

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

## PAINTING

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 113* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Painting 117 Elementary Painting | 7 | Painting 127 Elementary Painting | 7 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Industrial Management | 3 |
| Painting 213 Furniture Finishing | 3 | Carpentry 224 General Carpentry | 4 |
| Science 113 College Science | 3 | Sociology 263 General Sociology | 3 |
| Painting 217 Advanced Painting | 7 | Painting 227 Advanced Painting | 7 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 17 | | 18 |

## PLUMBING

### FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 113 General Drafting | 3 | Drawing and Design 123 General Drafting | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Plumbing 117 Industrial and Elementary Plumbing | 7 | Plumbing 127 Industrial and Elementary Plumbing | 7 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Industrial Management | 3 |
| Welding 103 General Welding | 3 | Sheetmetal 113 Elementary Sheetmetal | 3 |
| Science 113 College Science | 3 | Sociology 263 General Sociology | 3 |
| Plumbing 217 Advanced Plumbing | 7 | Plumbing 227 Advanced Plumbing | 7 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 17 | | 17 |

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

## PRINTING

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| English 133* | 3 | English 143* | 3 |
| English for Trade Students | | English for Trade Students | |
| Applied Science 133* | 3 | Applied Science 143* | 3 |
| Related Mathematics | | Related Mathematics | |
| Printing 112 | 2 | Printing 124 | 4 |
| Typography I | | Typography II | |
| Printing 152 | 2 | Printing 162 | 2 |
| Platen Presswork I | | Cylinder Presswork I | |
| Printing 113 | 3 | Printing 172 | 2 |
| Graphic Arts Survey | | Platen Presswork II | |
| Printing 133 | 3 | Printing 182 | 2 |
| Layout, Design and Lettering | | Machine Composition I | |
| Industrial Education 111 | 1 | Industrial Education 121 | 1 |
| Orientation | | Orientation | |
| Military Science 111 | 1 | Military Science 121 | 1 |
| Elementary | | Elementary | |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 | 3 | Sociology 263 | 3 |
| Business Relations | | General Sociology | |
| Printing 211 | 1 | Printing 262 | 2 |
| Bindery Operations | | Cylinder Presswork III | |
| Printing 252 | 2 | Printing 283 | 3 |
| Cylinder Presswork II | | Machine Composition III | |
| Printing 273 | 3 | Printing 222 | 2 |
| Machine Composition II | | Typography IV | |
| Printing 212 | 2 | Printing 243 | 3 |
| Estimating | | Plant Management | |
| Electives | 2 | Printing 294 | 4 |
| Printing 234 | 4 | Printing Production | |
| Typography III | | Military Science 221 | 1 |
| Military Science 211 | 1 | Elementary | |
| Elementary | | | |
| | 18 | | 18 |

## RADIO

### FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 113 | 3 | Drawing and Design 123 | 3 |
| General Drafting | | General Drafting | |
| Applied Science 133* | 3 | Applied Science 143* | 3 |
| Related Mathematics | | Related Mathematics | |
| English 133* | 3 | English 143* | 3 |
| English for Trade Students | | English for Trade Students | |
| Industrial Education 111 | 1 | Industrial Education 121 | 1 |
| Orientation | | Orientation | |
| Electricity 114 | 4 | Electricity 124 | 4 |
| Elementary Electricity | | Elementary Electricity | |
| Radio 113 | 3 | Radio 123 | 3 |
| Radio Servicing | | Radio Servicing | |
| Military Science 111 | 1 | Military Science 121 | 1 |
| Elementary | | Elementary | |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Mathematics 113 | 3 | Mathematics 123 | 3 |
| College Algebra | | Trigonometry | |
| Applied Science 213 | 3 | Applied Science 223 | 3 |
| Business Relations | | Industrial Management | |
| Electricity 102 | 2 | Radio 222 | 2 |
| Electrical Appliances | | Test Instruments | |
| Radio 217 | 7 | Radio 227 | 7 |
| Radio Servicing | | Radio Servicing | |
| Military Science 211 | 1 | Military Science 221 | 1 |
| Elementary | | Elementary | |
| | 16 | | 16 |

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

## SHOEMAKING AND LEATHERWORK

### FIRST YEAR

| First Semester | Hrs. | Second Semester | Hrs. |
|---|---|---|---|
| Drawing and Design 133 Applied Drawing I | 3 | Drawing and Design 143 Applied Drawing II | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| Shoe Repair 117 Shoemaking | 1 | Shoe Repair 127 Shoemaking | 7 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Shop Management | 3 |
| Drawing and Design 233 Applied Drawing III | 3 | Leatherwork 203 Leathercraft | 3 |
| Shoe Repair 217 Shoemaking | 7 | Shoe Repair 227 Shoemaking | 7 |
| Science 113 College Science | 3 | Sociology 263 General Sociology | 3 |
| Military Science 211 Elementary | 1 | Military Science 221 Elementary | 1 |
| | 17 | | 17 |

## TAILORING

### FIRST YEAR

| | | | |
|---|---|---|---|
| Drawing and Design 133 Applied Drawing I | 3 | Drawing and Design 143 Applied Drawing II | 3 |
| Applied Science 133* Related Mathematics | 3 | Applied Science 143* Related Mathematics | 3 |
| English 133* English for Trade Students | 3 | English 143* English for Trade Students | 3 |
| Industrial Education 111 Orientation | 1 | Industrial Education 121 Orientation | 1 |
| Tailoring 117 Elementary Tailoring | 7 | Tailoring 127 Elementary Tailoring | 7 |
| Military Science 111 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

### SECOND YEAR

| | | | |
|---|---|---|---|
| Applied Science 213 Business Relations | 3 | Applied Science 223 Shop Management | 3 |
| Science 113 College Science | 3 | Sociology 263 General Sociology | 3 |
| Drawing and Design 223 Applied Drawing III | 3 | Drawing and Design 243 Applied Drawing IV | 3 |
| Dry Cleaning 113 Elementary Dry Cleaning | 3 | Electives | 3 |
| Tailoring 215 Advanced Tailoring | 5 | Tailoring 225 Advanced Tailoring | 5 |
| Military Science 211 Elementary | 1 | Military Science 121 Elementary | 1 |
| | 18 | | 18 |

*Students who plan to continue in the four-year program should enroll in Mathematics 113, 123 and English 113, 123.

# DESCRIPTION OF COURSES

## INDUSTRIAL EDUCATION

**111-121. Orientation (I E 111 121 Orientatn) (1-0) Credit 1.** Required of all freshmen in the Division of Industrial Education. Deals with the problems facing beginning college students.

**113. Foundations of Industrial Education (I E 113 Foundations) (3-0) Credit 3.** Scope and character of industrial education in public schools of United States with particular emphasis on secondary school level. Study of philosophy, objectives, organization, administration and duties and responsibilities of classroom teacher.

**273. Classroom Organization and Management. (I E 273 Clsrm Orgn) (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 Cours Mkg) (3-0) Credit 3. I.** Principles of curriculum construction and study of industrial education curricula as used throughout leading high schools; analytical technique in curriculum construction; course making and syllabus construction.

**343. Trade and Job Analysis. (I E 343 Job Anal) (3-0) Credit 3. II.** A study of analysis technique as it has been developed by various leaders in industrial education; job analysis for the purpose of determining the content of training for an occupation; related content analysis for determining what should be taught as classroom materials; analysis of a trade, industry or industrial plant for determining the general outline of a program of trade or industrial training. (For undergraduates only.)

**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.

**406. Student Teaching in Industrial Education. (I E 406 Stud 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; selection 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.

**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

## *VOCATIONAL-INDUSTRIAL EDUCATION

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 Director of the Division of Industrial Education.

*Offered in summer session only.

**402. Introduction to Trade and Industrial Teaching. (I E 402 Ind Tchg)** Orientation course: 10 to 30 clock hours. Definition of vocational education; fields of vocational education; types of classes, requirements; the administration of vocational education; courses and course material available and the organization of course; analysis of teaching and lesson content.

**412. Development, Organization, and Use of Industrial Material. (I E 412 Instr Matrl) 45 clock hours.** Study of available instructional material and its adaptation; development and preparation of teaching aids; organization and material for effective coordination with courses of study.

**422. Methods of Teaching. (I E 422 Tchg Meth) 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.

**432. Shop and Classroom Organization and Management. (I E 432 Orgnz Mgt) 45 clock hours.** Organization plans for classrooms and shops for efficient instruction and management, including roll-keeping, grading, recording, and reporting systems; specifying, purching, receiving, storing, installing, and inventorying of tools, equipment, and supplies; heating, lighting, ventilation, sanitation and accident prevention; recitation and library centers; tool, supply and project storing and issuing systems.

**442. Analysis and Course Making. (I E 442 Analysis) 45 clock hours.** A study of analysis available in the teacher's field of work; reviewing systems of analysis; adaptation 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.

**462. Aims and Objectives of Vocational Education. (I E 462 Aims Objtv) 30 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.

**472. Selection, Placement, and Follow-up in Vocational Education. (I E 472 Placement) 45 clock hours.** Factors which influence the schooling, work opportunities, and educational objectives of young people; techniques of interviewing and advising young people in regard to vocational courses; factors affecting placement in suitable employment either part or full-time; methods of follow-up and coordination.

**482. Development and Use of Visual Aids. (I E 482 Visl Aids) 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.

**492. Problems in Cooperative Training. (I E 492 Coop Trng) 45 clock hours.** A review of the duties of the teacher-coordinator; the solution of actual problems; procedures and techniques involved in community surveys; interpretation of survey data; program expansion; guidance and counselling; organization and coordination of all types of part-time and evening classes.

## APPLIED SCIENCE

**133-143. Related Mathematics. (Apsc 133-143 Rltd Math) (3-0) Credit 3. I and II.** Numeral manipulation as applied to the trade and industry fields.

**202-203. Household Mechanics. (Aspec 202-203 Hsld Mech) (2-3) Credit 2-3. I.** Practical and the theoretical training in the maintenance of various home appliances; the upkeep of household furnishings; fire protection and minor repairs. Lab fee: $2.00.

**213. Business Relations. (Apsc 213 Bus Reltn) (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 Ind Mgt) (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.

## AUTOMOBILE MECHANICS

**112-122. Introduction to Auto Mechanics. (Auto 112 122 Introduct) (1-6) Credit 2. I.** How the problems of appearance, comfort, convenience, safety, economy, and power have produced the modern automobile. Lab fee: $2.00.

**123-243. The Power. (Auto 123-243 The Power) (0-9) 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 Chassis. (Auto 133-263 Chasis) (0-9) 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, propellor shafts, final drive, brakes, and chassis lubrication. Lab fee: $2.00.

**153-163-223. Auto Mechanic Practice. (Auto 153-163-223 Mech Prac) (0-9) Credit 3. I and II.** Actual shop conditions; automobile trouble, diagnosis and service on a basis that is comparable to that in the best shops; jobs taken as they come and handled by individual students as they will operate in commercial situations. Lab fee: $2.00.

**213. The Fuel System. (Auto 213 Fuel Syst) (0-9) 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 Syst) (0-9) 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.

**304. Advanced Auto Mechanic Practice. (Auto 304 Adv Prac) (0-12) Credit 4. I and II.** Continuation of Auto Mechanics 223. Lab fee: $3.00.

**404. Advanced Auto Mechanic Practice. (Auto 404 Adv Prac) (0-12) Credit 4. I and II.** Continuation of Auto Mechanics 223. Lab fee: $3.00.

## AUDIO-VISUAL EDUCATION

### Undergraduate

**102. Motion Picture Projection. (Audo 102) (0-6) (3) Credit 2. I and II.** An Industry course for liberal arts students. Use of the motion picture projector and other audio-visual aids in the life of the American citizen. Lab fee: $2.00.

**303. Utilization of Audio-Visual Materials. (Audo 303 Utilizatn) (2-3) 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.

## CARPENTRY

**117. Elementary Carpentry I. (Carp 117 Elem Carp) (2-15) 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 Carp) (2-15) 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 Gen Carp) (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 Adv Carp) (2-15) 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 II. (Carp 227 Adv Carp) (2-15) 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

**102-3. Elementary Photography. (M A 102-103 Photogrph) (0-6) (1-6) Credit 2-3. I and II.** The picture making process; cameras, enlargers, printer, film, papers, elementary skill in developing, processing and printing. Lab fee: $2.00.

**132-133. Art Metal. (M A 132-133 Art Metal) (1-6) Credit 2-3. I and II.** Designing, layout, shaping, polishing, finishing aluminum, pewter, copper, brass and silver. Lab fee: $2.00.

**202-203. Leathercraft. (M A 202-203 Lthcrft) (1-6) Credit 2-3. I, II.** Designing, laying out, cutting, tooling, dyeing, lacing construction of project in leather. Lab fee: $2.00.

## COOKING AND BAKING

**112. Food Products. (C B 112 Food Prod) (2-0) Credit 2. I.** The production of fruits and vegetables, sugar, beverages, fats and oils; the variety of foods, their production centers and distribution. Lab fee: $2.00.

**113. Elementary Food Preparation. (C B 113 Food Prep) (3-0) Credit 3.** Preparation and fixing; waste testing and portion control; cooking and serving vegetables and potatoes; preparation, fixing, waste testing, portion control, serving of salad and salad dressing.

**117. Quantity Cookery. I. (C B 117 Quan Cook) (2-15) Credit 7. I.** Experimentation and practice in preparing and serving foods in large quantities. Lab fee: $3.00.

**122. Food Products. (C B 122 Food Prod) (2-0) Credit 2. II.** Continuation of C. B. 112; variety, production centers, distribution of dairy products, poultry and game, meat, fish, condiments, cereals and their products.

**123. Elementary Food Preparation. (C B 123 Feed Prep) (3-0) Credit 3. II.** Preparation, fixing, waste testing, portion control, and serving appetizers, sandwiches and breakfast dishes.

**127. Quantity Cookery II. (C B 127 Quan Cook) (2-15) Credit 7. II.** Experimentation and practice in preparing and serving food in large quantities. Lab fee: $3.00.

**132-142. Nutrition. (C B 132 142 Nutrition) (2-0) Credit 2. I.** Nutrition standards as applied to quantity cookery.

**213. Sanitation. (C B 213 Sanitatn) (3-0). I.** Principles of sanitation as applied to meats, milk, milk products, and other foods; sanitation and personal hygiene.

**215-225 Quantity Cookery III and IV. (C B 215-225 Quan Cook) (0-15) Credit 5. I.** Experimentation and practice in preparing and serving food. Lab fee: $3.00.

**223. Food Service. (C B Food Serv) (3-0) Credit 3.** Proper methods of handling food service in dining rooms, banquets, special occasions; service of liquids with meals.

**233. Business Organization and Management. (C B 233 Bus Organz) (2-0) Credit 3. I.** Selection and arrangement of equipment, food purchasing, cost and wage systems and other factors related to production in a commercial establishment.

**243. Menu Planning. (C B 243 Menu Plng) (3-0) Credit 3.** Analysis of dietary (food) habits, customs and prejudices; food as sources of nutrients; practice in planning meals in normal nutrition; menu planning for banquets, community meals, formal meals, teas, buffet service and foreign buffets.

**253. Advanced Food Preparation. (C B 253 Feed Prep) (2-3) Credit 3.** The breakdown of whole animal carcasses for restaurant use; classifying and precasting standard cooking methods of meat and poultry; preparation of soups, and sauces. Lab fee: $2.00.

**263. Advanced Food Preparation. (C B 263 Food Prep) (3-0) Credit 3.** Preparation and service of basic doughs, pies, cakes, cookies, creams, jello, puddings, ice cream; testing and precasting of items prepared; utilization of leftovers; preparation of fish and shellfish, service of cold buffet.

## DRAWING AND DESIGN

**113-123. General Drafting. (Draw 113 123 Drafting) (1-6) Credit 3. I, II.** Use of drafting tools, freehand and perspective sketching in industrial design; orthographic, isometric, oblique and cabinet drawing as applied to industrial products. Applied descriptive geometry; meets the need of Industrial Education students. Lab fee: $2.00.

**133-143. Applied Drawing I and II. (Draw 133 143 Appl Draw) (1-6) Credit 3. I and II.** Drawing which will be 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.

**203. Technical Sketching. (Draw 203 Sketching) (1-6) Credit 3. I, II.** Freehand drawing and design as applied to industrial products. Lab fee: $2.00.

**233-243. Applied Drawing III and IV. (Draw 233 243 Appl Draw) (1-6) 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.

**303. Working Drawings. (Draw 303 Wrkg Draw) (1-6) Credit 3. I and II.** Preparing working drawings and specifications for specific construction problems. Lab fee: $2.00.

**313. Design. (Draw 313 Design) (1-6) 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.

## DRIVER EDUCATION

**102-202. Driver Education. (Auto 102 202 Driver Ed) (0-6) Credit 2. I, II.** A general education course in driver education; a basic knowledge of the operation of the automobile; practice driving, learning information and developing necessary skills to pass the written and road test necesary to secure a driver's license. Lab fee: $2.00.

**303. Driver Education. (Atuo 303 Driver Ed) (1-6) Credit 3. I, II.** Preparation for teaching driver education in workshops or secondary schools; state laws and degulations, safety practice, teaching methods, course construction, 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.

## DRY CLEANING

**112-122. Dry Cleaning. (Ind 112 122 Dry Clean) (0-6) Credit 2. I and II.** Dry Cleaning as an industry course for School of Arts and Sciences students only. Lab fee: $2.00.

**113. Dry Cleaning. (Drcl 113 Dry Clean) (0-9) Credit 3. I.** First steps in the care of fabrics; woven fabric construction; leathers and fur; cleaning fluids other than water; inspection of materials for cleaning; dry cleaning equipment and its care; static electricity, its prevention; motors, belts and their care; dry cleaning aids. Lab fee: $2.00.

**117. Dry Cleaning. (Drcl 117 Dry Clean) (2-15) Credit 7. I.** Dry Cleaning and spotting, fibers in fabric; moisture, its source and effect; materials that may be dry cleaned; dry cleaning equipment and its care; dry cleaning solvent; inspecting garments for cleaning. Lab fee: $3.00.

**123. Dry Cleaning. (Drcl 123 Dry Clean) (0-9) Credit 3. II.** Soil in garments and sorting; care of garments in cleaning; fur and leather cleaning; purification of dirty-used solvent; first steps in the spotting of garments; wood fibers; artificial wool fibers, their behavior; pure silk, weighted silk and its behavior; rayon, two classifications discussed. Lab fee: $2.00.

**127. Dry Cleaning. (Drcl 127 Dry Clean) (2-15) Credit 7. II.** Miscellaneous cleaning problems, chemical analysis and trouble finding, spotting of garments, pure silk and its behavior and identification. Lab fee: $3.00.

**213. Dry Cleaning. (Drcl 213 Dry Clean) (0-9) Credit 3. I.** Cotton, its origin and use; linen, jute and tinsel fibers, their use, behavior and identification; identification of all fibers in plant practices; spotting, basic dyestuffs, acid dyestuff, color change of dyestuff in wear, storage cleaning. Lab fee: $2.00.

**217. Dry Cleaning. (Drcl 217 Dry Clean) (2-15) Credit 7. I.** Cotton, its origin, use, behavior and identification; identification of fibers as an aid in all cleaning plant practices; basic dyestuffs; acid dyestuffs; color change of dyestuff in wear, storage, staining, cleaning; stains and how to know them. Lab fee: $3.00.

**223. Dry Cleaning. (Drcl 223 Dry Clean) (0-9) Credit 3. II.** Simple tests to know all dyestuffs; equipment, its care and operation; good and bad, in receiving dyeing; study chart for overdyeing; chart for tinting; blending colors. Leb fee: $2.00.

**227. Dry Cleaning. (Drcl 227 Dry Clean) (2-15) Credit 7. II.** Spotting tools, their use and care; wet and dry system, its use and limits; pressing, all types of materials, silk finishing; shop management. Lab fee: $3.00.

## ELECTRICITY

**102. Electrical Appliances. (Elec 102 Appliancs) (0-6) Credit 2. I.** Construction, repair, maintenance and servicing. Lab fee: $2.00.

**113-123. Electrical Wiring and Repair. (Elec 113 123 Wiring) Credit 3. I and II.** Practice in house wiring; general repairs to wiring and electrical equipment; installation and serving of motors, telephones, transformers and generators. Lab fee: $2.00.

**114-124. Elementary Electricity. (Elec 114 124 Elem Elec) (2-6) Credit 4. I. and II.** Fundamental principles of electricity and electrical machinery; construction, simple wiring; theory of magnetic and direct surrent circuits. Lab fee: $2.00.

**115. Direct Current Apparatus and Circuits. (Elec 115 D C Circ) (0-15) Credit 5. I.** Direct current circuit and magnetic circuit theory and calculations; principles of design and construction of direct-current motors and generators, theory, concerning torque, flux, speed, voltage and speen regulations, commutation, and armature reaction of shunt and compound machines, parallel operations, and mechanical couplings of electrical machienery; 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 Circ) (0-15) 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 capacitances; series, parallel, and resonant circuits; polyphase circuits, balanced and unbalanced; construction, haraterists and operation of alternators, induction motors, transformers, synchronous motors, synchronous converters, mercury-arc rectifiers and their regulating and control devices; fundamentals of telephone tranmission. Prerequisite: Electricity 115. Lab fee: $3.00.

**217-227. Electrical Wiring and Illumination. (Elec 217 227 Wiring) (2-15) 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.

**242. Alternating-Current Motor-Generator Repair. (Elec 242 A C Motor) (0-6) Credit 2. II.** Repair of alternating-current motors and generators. Lab fee: $2.00.

## FOUNDRY

**213. Foundry. I. (M A 213 Foundry) (1-6) Credit 3. I.** Processes used in casting non-ferrous alloys, kiln-drying and moisture fired furnaces, moulding and casting non-ferrous metals, foundry layouts. Lab fee: $2.00.

**223. Foundry II. (M A 223 Foundry) (1-6) 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.

## LAUNDERING

**112-122. Laundering. (Ind 112-122 Laundering) (0-6) Credit 2. I, II.** Laundering as an industry course for School of Arts and Sciences students only.

**113-117. Elementary Laundering. (M A 113 117 Laundering) (1-6) (2-15) Credit 3-7. I.** Laundry terms, care and operation of machinery; kind of machinery; use and structure of machines.

**123-127. Elementary Laundering. (M A 123 127 Laundering) (1-6) (2-15) Credit 3-7. II.** Checking in, marking and separation of garments; finishing flat work; starch work and other wearing apparels.

**213-217. Laundering. (M A 213 217 Laundering) (1-6) (2-15) 3-7. I.** Classification; mechanical aids to washing; chemical aids to washing; the washing formula.

**223-227. Laundering. (M A 223 227 Laundering) (1-6) (2-15) Credit 3-7. II.** White work washing processes; washing processes for colors, silk, rayons and woolens.

## MASONARY

**112-122. Masonry. (Ind 112-122 Masonary) (0-6) Credit 2. I, II.** Masonry as an industry course for School of Arts and Sciences students only. Lab fee: $2.00.

**113. Elementary Masonry. (Masn 113 Elem Masn) (1-6) Credit 3. I.** Use, care and values of tools; the common materials and methods used in bricklaying; mortar making and spreading; laying straight walls using standard bonds. Lab fee: $2.00.

**117-127. Elementary Masonry. (Masn 117 127 Elem Masn) (2-15) Credit 7. I, II.** Use, care and values of tools; the common materials and methods used in bricklaying; mortar making and spreading; laying straight walls using standard bonds; concrete footings, walls, piers, plain and reinforced mortars, underpinnings; laying out foundations; excavating. Lab fee: $3.00.

**123. Elementary Masonry. (Masn 123 Elem Masn) (1-6) Credit 3. II.** Spread and stepped footings; foundations, walls and piers in concrete, plain and reinforced concrete mortars, underpinnings; laying foundations; excavating. Lab fee: $2.00.

**213. Intermediate Masonry. (Masn 213 Intermedt) (1-6) Credit 3. I.** Theory and practice in building walls using various structural bonds, running veneer wall against hollow tile and frame backings; building construction work to include openings, arches, builder's iron, windows, doors, flues and vents. Lab fee: $2.00.

**217-227. Advanced Masonry. (Masn 217 227 Adv Masn) (2-15) Credit 7. I, II.** Theory and practice in advanced brick and concrete work; laying fire brick, dry bricklaying, fireplace work, gate piers, garden walls, etc. Lab fee: $3.00.

**223. Plastering. (Masn 223 Plastering) (1-6) Credit 3. I.** Theory and practice in use, care, value of plastering tools; proportioning, mixing of mortars; application and finishing of plain and ornamental plastering, including stucco work. Lab fee: $2.00.

**323. Ornamental Concrete. (Masn 323 Ornm Conc) (1-6) Credit 3. II.** Theory and practice of ornamental and decorative work in concrete, moldings, pedestals, columns, pottery, vases, benches and other decorative work. Lab fee: $2.00.

**413. Concrete, Stone and Tile Work. (Masn 413 Conc Work) (1-6) Credit 3. I.** Theory and practice of simple reinforced concrete work, forms; mixing and placing concrete, testing; finishing; stone cutting, setting, tile and bric-abrac work. Lab fee: $2.00.

**423. Advanced Masonry. (Masn 423 Adv Masn) (0-9) Credit 3. II.** Theory and practice in special construction in brick and concrete work; laying fire brick, dry bricklaying, fireplace work, gate piers, garden walls, etc. Lab fee: $2.00.

## METALWORK

**102-113. Benchwork. (Mach 102 113 Benchwork) (0-6) (1-6) Credit 2-3. I.** Units that lay a foundation for further metal work, hand tools, precision measuring instruments, laying out, filing, tool grinding, use of tap and dies, drill press and the use of metals and their cutting speeds. Lab fee: $2.00.

**123. Machine Shop (Mach 123 Mach Shop) (1-6) 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.

**213. Advanced Machine Shop. (Mach 213 Mach Shop) (1-6) Credit 3. I.** The index head, milling square surfaces, hexagonal surfaces, milling keyways for plain and Woodruff keys, gear cutting, spur and miter gears, cylindrical and surface grinding. Lab fee: $2.00.

**223. Toolmaking. (Mach 223 Toolmakng) (1-6) 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) (1-6) Credit 3. I.** The heat treatment of ferrous alloys, heat treating operations, microstructure and physical properties, hardenability, grain size testing, machineability and some heat treating operations as applied in industry. Lab fee: $2.00.

**323. Material and Processes. (M A 323 Material) (1-6) Credit 3. II.** The limitation and usefulness of materials, techniques of processes; their relative importance industrially and their relation to one another. Lab fee: $2.00.

## PAINTING

**112-122. Elementary Painting. (Pnt 112-122 Elem Pntg) (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 Elem Pntg) (1-6) Credit 3. I.** Various kinds of paints, varnishes, stains, lacquers, and their ingredients; the relation and recognition of color; tools, equipment and their uses; practical experience. Lab fee: $2.00.

**117. Elementary Painting. (Pnt 117 Elem Pntg) (2-15) 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 Elem Pntg) (1-6) Credit 3. II.** Preparation for exterior surfaces; mixing and applying paints; the effect of weather conditions upon paint jobs; color analysis and color matching; practical experience. Lab fee: $2.00.

**127. Elementary Painting. (Pnt 127 Elem Pntg) (2-15) 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 Furn Fnsh) (1-6) Credit 3. I.** Knowledge of woods used in furinture 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 Adv Pntg) (2-15) 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.

**202-223. Upholstering. (Pnt 223 Upholstrg) (1-6) Credit 2-3. II.** Knowledge of tools and materials for upholstering, reupholstering simple pad back and cushion chairs; resetting springs in overstuffed furniture; use of webbing and pad and platform cloth. Lab fee: $2.00.

**227. Advanced Painting. (Pnt 227 Adv Pntg) (2-15) Credit 7. II.** Simple steps in paper hanging; shop management and furniture finishing; estimating and practical experience. Lab fee: $3.00.

**243. Paper Hanging. (Pnt 243 Paper Hng) (1-6) Credit 3. II.** Knowledge and practicing the best methods of hanging wall papers; proper use and care of tools and equipment, preparing surfaces; measuring and cutting patterns and plain papers. Lab fee: $2.00.

**313. Advanced Painting. (Pnt 313 Adv Pntg) (1-6) Credit 3. I.** Preparing interior surfaces; blending color with furniture; effect of position and light upon interiors; modernistic wall finishing; practical experience. Lab fee: $2.00.

**323. Advanced Painting. (Pnt 323 Adv Pntg) (1-6) Credit 3. I.** Advanced knowledge and experience of interior and exterior painting; producing flat, gloss and sand finished walls; blended, stippled, mottled, and plastic finishes. Lab fee: $2.00.

**343. Advanced Furniture Finishing. (Pnt 343 Furn Fnsh) (1-6) Credit 3. I.** Producing natural finishes with shellac, varnish and lacquer; graining and enameling; polishing and striping. Lab fee: $2.00.

**413. Advanced Paper Hanging. (Pnt 413 Paper Hng) (1-6) Credit 3. I.** Advanced work in the best methods of hanging high grade wall papers, plain and pattern; cutting and matching high grade papers; estimating the amount of materials for given jobs; practical experience to require speed, neatness, and accuracy. Lab fee: $2.00.

**423. Advanced Upholstery. (Pnt 423 Upholstrg) (1-6) Credit 3. II.** Best methods of estimating materials; reupholstering overstuffed chairs and sofas; reupholstering curved backs; slip covering. Lab fee: $2.00.

## PLUMBING

**112-122. Plumbing. (Ind 112 122 Plumbing) (0-6) Credit 2. II.** Plumbing and steam fitting as an industry course for School of Arts and Sciences students only. Lab fee: $2.00.

**113. Elementary Plumbing. (Plmb 113 Elem Plmb) (1-6) 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 Ind Plmb) (2-15) 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.

**123. Elementary Plumbing. (Plmb 123 Elem Plmb) (1-6) Credit 3. II.** Theory and Practice in leadwork and gas pipe work. Lab fee: $2.00.

**127. Industrial and Elementary Plumbing. (Plmb 127 Ind Plmb) (2-15) 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 Adv Plmb) (2-15) 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 boarding schools. Lab fee: $3.00.

**313. Advanced Plumbing. (Plmb 313 Adv Plmb) (1-6) Credit 3. I.** Theory and practice of small heating systems to include boiler work for house and small commercial uses. Lab fee: $2.00.

**323. Advanced Plumbing. (Plmb 323 Adv Plmb) (1-6) Credit 3. II.** Theory and practice in advanced problems of hot and cold water distribution; heaters and other plumbing features in homes and commercial businesses. Lab fee: $2.00.

## PRINTING

**102-202. Printing. (Ind 102 202 Printing) (0-6) Credit 2. I, II.** Printing as an industry course for Arts and Sciences students only. Lab fee: $2.00.

**112. Typography. I. (Prnt 112 Typography) (0-6) Credit 2. I.** Hand composition; basic problems and techniques in setting type; setting of straight matter and simple display jobs; proofing; care of type and material. Lab fee: $2.00.

**113. Graphic Arts Survey. (Prnt 113 Graph Art) (3-0) Credit 3. I.** The history of printing; general survey of allied processes, methods and practices followed.

**133. Layout, Design, and Lettering. (Prnt 133 Layout) Credit 3. I.** Skill development in drawing letters for layouts and reproduction purposes, fundamentals of resign, incorporating "thumbnail," "rough," space break-up, movement, balance, type legibility, and copyfitting.

**124. Typography II. (Prnt 124 Typography) (2-6) Credit 4. II.** Advanced problems in composition and selection of type; proportion, balance, shape, harmony, contrast, color; designing of letters, folders, broadsides, brochures, etc., their function and solving problems involved in their production. Lab fee: $2.00.

**152. Platen Presswork I. (Prnt 152 Presswork) (0-6) Credit 2. I.** Operation of the platen press; feeding and simple make-ready. Lab fee: $2.00.

**162-163. Cylinder Presswork. (Prnt 162 163 Cyl Prswk) (0-6) (0-9) Credit 2, 3. II.** Operation and care of small cylinder presses; the make-ready and feeding of commercial job forms. Lab fee: $2.00.

**172-173. Platen Presswork. (Prnt 172 173 Presswork) (0-9) Credit 2, 3. II.** Advanced made-ready on half-tones and more intricate work; introduction to automatic platen press. Lab fee: $2.00.

**182. Machine Composition. (Prnt 182 Mach Comp) (0-6) Credit 2. II.** Elementary phases of linotype operation; keyboard fingering, and practice in setting from simple copy. Lab fee: $2.00.

**211. Bindery Operation. (Prnt 211 Bindery) (3-0) Credit 1. I.** Folding, inserting, gathering, stitching, gluing on backs, and trimming; proper methods of wrapping. Lab fee: $2.00.

**212. Estimating. (Prnt 212 Estimating) (2-0) Credit 2. II.** Application of the elements of cost-finding to jobs of printing in process.

**222. Typography IV. (Prnt 222 Typography) (0-6) Credit 2. II.** Craftsmanship and efficiency in handling typical jobs; creative and experimental typography. Lab fee: $2.00.

**234. Typography III. (Prnt 234 Typography) (2-6) Credit 4. II.** Trade practice in handling typical jobs, training in application of principles in experimental typography; working up of different kinds of type and combination form; imposition and lockup begining with single forms. Lab fee: $2.00.

**243. Plant Management. (Prnt 243 Plant Mgt) (3-0) Credit 3. II.** Solution of problems of finance, profits, plant layout, equipment, operation, and employee relations.

**252-253. Cylinder Presswork. (Prnt 252 253 Cyl Prswk) (0-6) (0-9) Credit 2, 3. I.** Advanced Presswork, make ready and feeding, including newspaper and book work; press mechanism and adjustments. Introduction to simple color work.

**262-263. Cylinder Presswork. (Prnt 262 263 Cyl Prswk) (0-6) (0-9) Credit 2, 3. II.** Operation and care of large cylinder presses; make-ready of half-tone and process color work.

**272-273. Machine Composition. (Prnt 272 273 Mach Comp) (0-6) (0-9) Credit 2, 3. I.** Accuracy, development of speed, correct handling of straight matter, simple tabular work, and moderately complex composition.

**282-283. Machine Composition. (Prnt 282 283 Mach Comp) (0-6) (0-9) Credit 2, 3. II.** The development of trade accuracy and speed; understanding and practice of accepted typographic usage; setting for color separation, headings, display and advertising matter; twin-matter composition; work in the routine care of machines.

**292-294. Printing Production. (Prnt 292 294 Prnt Prod) (0-6) (2-6) Credit 2, 4. II.** Planning, estimating, scheduling and complete manufacture of printing jobs.

## RADIO

**112-122. Radio. (Ind 112 122 Radio) (0-6) Credit 2. I, II.** Radio as an industry course for School of Arts and Sciences students only. Lab fee $2.00.

**113-123, 217-227. Radio Servicing. (Radio 113 123 217 227 Servicing) (0-9) (2-15) Credit 3, 7. I, II.** Measuring and Testing instruments; vacuum tube voltmeters, output meters, frequency meters, signal generators, and cathode-ray oscilloscopes; analysis and interpretation of measurements results; "trouble-shooting" and repairing commercial radios. Lab fee: $2.00 (113-123); $3.00 (217-227).

**212. Test Instruments. (Radio 212 Test Inst) (2-0) Credit 2. I.** Commercial test instruments in use by repairmen and technicians; operation and repair; repairs to the d'arsonval type meter.

**213. Radio Theory. (Radio 213 Theory) (3-0) Credit 3. I.** Detectors; superhetrodyne theory, A. F. amplifiers; R.F. amplifiers; filters, special circuits; sound and sound production.

**223. Radio Theory (Radio 223 Theory) (3-0) Credit 3. II.** Trouble in A. C and D. C. sets; radio measurements; classification and use of meters; tube troubles; repairs and replacements; superheterodyne troubles and remedies.

**273. Frequency Modulation. (Radio 273 Freq Modl) (0-9) Credit 3. I.** General principles and advantages; block diagram of transmitter; block diagram of receiver; use of limiter and discrimination. Lab fee: $2.00.

**274. Television. (Radio 274 Televisn) (2-6) Credit 4. I and II.** Theory and laboratory experience with television receivers and antennas, including installation, aligning, trouble shooting, and practice with television receivers and antennas. Lab fee: $2.00.

**423. Research and Problems. (Radio 423 Research) Credit to be arranged. I.** Every student taking Radio Repair as a trade must do intensive research work on it. The result of his project or problem must be written and presented in a regular seminar.

## SHEET METAL

**112-122 Sheet Metal. (Ind 112 122 Sheet Mtl) (0-6) Credit 2. I, II.** Sheet metal as an industry course for School of Arts and Sciences students only. Lab fee: $2.00.

**113. Elementary Sheet Metal. (M A 113 Sheet Mtl) (1-6) Credit 3. I.** Fundamental machine and hand tool operation. Study of materials; development and execution of simple patterns. Lab fee: $2.00.

**117-127. Elementary Sheet Metal. (M A 117 127 Sheet Mtl) (2-15) Credit 7. I, II.** Templates, soldering, brazing, seaming, and study and use of sheet and bar materials. Lab fee: $3.00.

**123. Elementary Sheet Metal. (M A 123 Sheet Mtl( (1-6) Credit 3. II.** Continuation of Sheet Metal 113 to include direct layouts and short methods. Lab fee: $2.00.

**213. Elementary Sheet Metal. (M A 213 Sheet Mtl) (1-6) Credit 3. I.** Use of templates, soldering, brazing, seaming, drafting of irregular patterns by means of triangulation. Lab fee: $2.00.

**217-227 Advanced Sheet Metal. (M A 217 227 Sheet Mtl) (2-15) Credit 7. I, II.** Different types of sheet and wrought-iron works as applied to furniture, building construction, heating ducts, and ornament; welding and brazing. Prerequisite: Elementary Sheet Metal 127. Lab fee: $3.00.

**223. Intermediate Sheet Metal. (M A 223 Sheet Mtl) (1-6) Credit 3. II.** Continuation of Sheet Metal 213, including advanced problems. Lab fee: $2.00.

**313. Industrial Arts Sheet Metal. (M A 313 Sheet Mtl) (1-6) Credit 3. I.** Sheet metal for industrial arts classes in the typical secondary school. Suitable projects, materials, tools and equipment. Lab fee: $2.00.

**323. Industrial Arts Sheet Metal. (M A 323 Sheet Mtl) (1-6) Credit 3. II.** 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.

## SHOEMAKING AND LEATHERWORK

**112-122. Shoemaking. (Ind 112-122 Shoemaking) (0-6) Credit 2. I and II.** Shoemaking as an industry course for students in the School of Arts and Sciences only. Lab fee: $2.00.

**117. Shoemaking. (Shoe 117 Shoemaking) (2-15) Credit 7. I.** Care of shop; care and use of tools; making bristled waxed thread ends; sewing with hand sewing awl; tempering shoe leather; moulding whole and half soles for bottom use; fitting half soles; sewing rips in uppers and soles by hand. Lab fee: $3.00.

**127. Shoemaking. (Shoe 127 Shoemaking) (2-15) Credit 7. I.** Selection of lasts to correct the shape of shoes to the repaired; nailing shoes previously fitted; repairing leather and wood heels; lock stitching; trimming edges by hand; classification on soles and upper patch leather; fitting needles and the repair of the universial feed machine; getting outlines of vamp; quarter and sole patches; putting on cement; vamp and sole patches; sewing soles by the hand method. Lab fee: $3.00.

**217. Shoemaking. (Shoe 217 Shoemaking) (2-15) Credit 7. I.** The care of the finishing machine; fitting and preparing cement soles; repairing light half soles on shoes; history of footwear; fitting insoles; repairing turn soles by the turn method; sewing welts; putting on plain bottoms; stitching soles with machine and trimming and finishing edges with machine. Lab fee: $3.00.

**227. Shoemaking. (Shoe 227 Shoemaking) (2-15) Credit 7. II.** The use and care of the McKay Self-channeling Machine; fitting needles in the machine; general repairs to machine; the use and care of the rough rounding machine; the lip channel method of fastening whole sole with the stitches; general organization and shop management; keeping books and job records. Lab fee: $3.00.

## TAILORING

**112-122. Tailoring. (Ind 112 122 Tailoring) (0-6) Credit 2. I and II.** Tailoring as an industry for students in the School of Arts and Sciences only. Lab fee: $2.00.

**113. Elementary Tailoring. (Tail 113 Elem Tail) (0-9) Credit 3. I.** Names and uses of various stitches; trouser cutting and making; the tailor's square and its uses; trouser measurements. Lab fee: $2.00.

**117. Elementary Tailoring. (Tail 117 Elem Tail) (2-15) Credit 7. I.** Names and uses of various stitches; trouser cutting and measurements; the tailor's square and its uses. Lab fee: $3.00.

**123. Elementary Tailoring. (Tail 123 Elem Tail) (0-9) Credit 3. I.** Use and care of tailoring machines; skirt drafting, cutting and making. Lab fee: $2.00.

**127. Elementary Tailoring. (Tail 127 Elem Tail) (2-15) Credit 7. I.** Trouser drafting, trimming and making; serges and worsteds; use and care of tailoring machines; skirt drafting, cutting and making. Lab fee: $3.00.

**213. Tailoring. (Tail 213 Tailoring) (0-9) Credit 3. II.** Proportionate vest cutting, drafting and making; collar and canvas construction. Lab fee: $2.00.

**215. Advanced Tailoring. (Tail 215 Adv Tail) (0-15) Credit 5.** Coat and vest measurement; direct and proportionate vest cutting, drafting and making; collar and canvas construction. Lab fee: $3.00.

**223. Tailoring. (Tail 223 Tailoring) (0-9) Credit 3. II.** Sack coat cutting, trimming and making. Lab fee: $2.00.

**225. Advanced Tailoring. (Tail 225 Adv Tail) (0-15) Credit 5. II.** Coat cutting, trimming, drafting, and making; alterations and repairs; hand and machine made coats; methods of lining and relining. Lab fee: $3.00.

**313. Tailoring. (Tail 313 Tailoring) (0-9) Credit 3. II.** Tuxedo and full-dress coat cutting, trimming and making. Lab fee: $2.00.

**323. Tailoring. (Tail 323 Tailoring) (0-9) Credit 3. II.** Alterations and repairs to garments worn by women and men; methods of lining and relining. Lab fee: $2.00.

## WELDING

**102-103. General Welding. (Weld 102-103 Gen Weld) (1-3) (1-6) Credit 2-3. 1 and II.** An exploration of the welding field. An introduction to the fundamentals of oxyacetylene, electric arc and resistance welding, including cutting. Lab fee: $2.00.

**113. Welding I—Electric. (Weld 113 Elec Weld) (1-6) Credit 3. I and II.** Theory and practice of techniques in arc welding maintenance and fabrication; servicing of equipment and controls; a study of welding symbols. Lab fee: $2.00.

**123. Welding II—Gas. (Weld 123 Gas Weld) (1-6) Credit 3. I and II.** Theory and practice of techniques in gas welding fabrication and maintenance; shortage and manufacture of gas; servicing and regulation of equipment. Lab fee: $2.00.

**213. Advanced Welding I—Electric. (Weld 213 Adv Elec) (1-6) 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.

**223. Advanced Welding II—Gas. (Weld 223 Adv Gas) (1-6) Credit 3. I and II.** Modern techniques of gas welding; methods of fusion and bronze welding, cast iron and methods of welding non-ferrous metals. Lab fee: $2.00.

## WOODWORK

**112-122. General Woodwork. (Ind 112 122 Gen Wdwk) (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 Fund Wdwk) (1-6) 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 Equipment) (0-3) Credit 1. I, II.** The care and upkeep of shop tools and equipment; gumming, milling, jointing, sharpening of circular saws, setting and filing hand saws, brazing band saws, sharpening jointer knives. Lab fee: $2.00.

**214. Cabinetmaking. (Wdwk 213 Cabnetmkg) (2-6) Credit 4. I.** Introduction to woodworking machines through their use 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 Wood Tech) (3-0) Credit 3. II.** Structures and properties of woods; characteristics and distribution of common species; lumbering, saw-milling, kilning, grading, measurements, markets.

**314. Machine Woodworking. (Wdwk 314 Mach Wdwk) (2-6) Credit 4. I, II.** Production methods in use of power machines. Practical experience with techniques of modern mass production. Prerequisite: Woodwork 113-214. Lab fee: $3.00.

**322. Patternmaking. (Wdwk 322 Patrnmkg) (0-6) Credit 2. II.** 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 Turn) (1-6) 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: Woodwork 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.

# Division of Nursing Education

The Division of Nursing Education offers a curriculum leading to the degree of Bachelor of Science in Nursing. Upon satisfactory completion of all of the requirements of the Division of Nursing Education curriculum, the student is eligible to write the State Board Examination given by the Board of Nurse Examiners for the State of Texas.

The following procedure should be followed when applying for admission:

1. Obtain application forms and information from the Registrar.
2. Return the completed application forms and two copies of high school record to the registrar.
3. The applicant will be notified of the date, time, and place the Pre-nursing test will be given. The fee for this test is $4.00.
4. After the test results are completed, the applicant will be notified as to her admission standing.
5. A personal interview is required of each applicant.
6. Each applicant is informed when to return the pre-entrance physical examination and dental form.

## Program in Nursing Education

FIRST YEAR—FIRST SEMESTER

| Course | No. | Descriptive Title | Hours |
|---|---|---|---|
| English | 113 | Grammar & Composition | 3 |
| Bio. | 154 | Anatomy & Physiology | 4 |
| Chem. | 114 | General Chemistry | 4 |
| Phy. | 113 | General Psychology | 3 |
| Nsg. Ed. | 102 | History & Orientation to Nursing | 2 |
| P. E. | 111 | Freshman Practice | 1 |
| | | | 17 |

FIRST YEAR—SECOND SEMESTER

| | | | |
|---|---|---|---|
| English | 123 | Grammar & Composition | 3 |
| Bio. | 164 | Anatomy & Physiology | 4 |
| Chem. | 124 | General Chemistry | 4 |
| Fds. | 123 | Elementary Nutrition | 3 |
| Soc. | 263 | General Sociology | 3 |
| P. E. | 121 | Freshman Practice | 1 |
| | | | 18 |

SECOND YEAR—FIRST SEMESTER

| | | | |
|---|---|---|---|
| English | 213 | Fundamentals of Speech | 3 |
| Bio. | 174 | General Microbiology | 3 |
| Soc. | 403 | Introduction to Social Case Work | 3 |
| Phil. | 303 | Philosophies of Life | 3 |
| Psy. | 343 | Abnormal Psychology | 3 |
| Soc. | 303 | The Family | 3 |
| | | | 18 |

SECOND YEAR—SECOND SEMESTER

| | | | |
|---|---|---|---|
| | | Clinical Experience | |
| N. E. | 216 | Fundamentals of Nursing | 6 |
| N. E. | 228 | General Medical Nursing | 8 |
| N. E. | 183 | Pharmacology | 3 |

SUMMER SESSION

| | | | |
|---|---|---|---|
| N. E. | 218 | General Surgical Nursing | 8 |

THIRD YEAR—FIRST SEMESTER

| | | | |
|---|---|---|---|
| N. E. | 310 | Maternal and Child Health | 10 |
| N. E. | | Maternal and Child Health | |
| N. E. | 310 | Nursing Service Management | 10 |
| Educ. | 273 | Pupil Growth & Development | 3 |

THIRD YEAR—SECOND SEMESTER

| Course | No. | Descriptive Title | Hours |
|---|---|---|---|
| N. E. | 228 | General Medical Nursing (Cont'd) | |
| N. E. | 218 | General Surgical Nursing (Cont'd) | |
| | | SUMMER SESSION | |
| N. E. | 324 | Psychiatric Nursing | 4 |
| N. E. | 409 | Public Health Nursing | 9 |

FOURTH YEAR—FIRST SEMESTER

| | | | |
|---|---|---|---|
| N. E. | 453 | Principles and Methods of Teaching in Schools of Nursing | 3 |
| Hist. | 173 | U. S. History 1492-1876 | 3 |
| Pol. Sci. | 113 | National Government | 3 |
| Guided Electives | | | 3 |
| | | | 12 |

FOURTH YEAR—SECOND SEMESTER

| | | | |
|---|---|---|---|
| English | 223 | Introduction to Literature | 3 |
| Hist. | 183 | U. S. History, 1877 to Present | 3 |
| Pol. Sci. | 123 | State Government | 3 |
| N. E. | 423 | Seminar in Nursing | 3 |
| Guided Electives | | | 3 |
| | | | 12 |

Note.—The Collegiate Program is in the process of revision therefore, subject to change.

## SUPPLEMENTARY DEGREE CURRICULUM

The supplementary degree program is designed for the graduate professional nurse of a three-year school of nursing who wishes to meet the requirements for the degree of Bachelor of Science in Nursing. Requirements for graduation:

| | Semester Hours |
|---|---|
| English | 12 |
| Political Science | 6 |
| American History | 6 |
| Psychology | 6 |
| Sociology | 9 |
| Chemistry | 8 |
| Anatomy & Physiology | 8 |
| Philosophy | 3 |

Upper division courses include

| | |
|---|---|
| Public Health Nursing | 9 |
| Trends in Nursing | 3 |
| Ward Administration | 3 |
| Comprehensive Nursing | (yet to be determined) |
| Principles and Methods of Teaching in School of Nursing | 3 |

The last thirty hours (30) required for the degree must be taken in residence.

Note.—The Supplementary Degree Program is in the process of revision therefore, subject to change.

## DESCRIPTION OF COURSES

**213. Fundamentals of Nursing (NE 213 Fund Nursng) (12-252) Credit 6.** Lectures, demonstrations and clinical experience 9 weeks. Principles of nursing; attitude toward the patient; existing social relationship; the physical requirements for proper care of patients; procedures helpful for the promotion of health.

**183. Pharmacology and Therapeutics (NE 183 Pharmacol) (3-0) Credit 3.** Lectures, demonstrations and clinical experience; Agents used in the treatment and prevention of disease (drugs); desired effects; probable reactions; the place of the nurse in administration; the various social problems associated with the indiscriminate use of drugs. Integrated with medical and surgical nursing.

**M. E. SUAREZ DORMITORY . . . For women and named in honor of the late beloved Dean of Women.**

**218. General Surgical Nursing (NE 218 Surg Nursng) (4-36) Credit 8.** Lectures, demonstrations and clinical experience 18 weeks in addition to 8 weeks assigned to the operating room. Principles underlying the treatment of disorders requiring surgery; total nursing care of the patient; physical mental, social, economic and health aspects; the nurse's role in prevention of disease.

**228. General Medical Nursing (NE 228 Med Nursng) (4-36) Credit 3.** Lectures, demonstrations and clinical experience 18 weeks including 6 weeks assigned to tuberculosis nursing. Total nursing care of the patient; nurse's part in prevention of diseases; cause, pathology, prevention, and treatment of medical conditions; the related emotional, social, nutritional, and rehabilitative aspects; and the nursing care essential to meet the needs of individual patient.

**310. Maternal and Child Health (NE 310 Mtrnl Hlth) (6-34) Credit 10.** Lectures, demonstrations and 18 weeks of clinical experience. Obstetric nursing and Pediatric Nursing; physiology of pregnancy, labor, delivery, perperium and care of the newborn infant; the growth and development of the child from infancy to childhood; the physical, mental, social and emotional development of the child.

**324. Mental Hygiene and Psychiatric Nursing (N E 324 Mental Hyg) (4-0) Credit 4.** Etiology, symptomatology, treatment, special therapy and nursing care of more common types of mental conditions; mental hygiene integrated throughout.

**403. Public Health Administration (NE 403 Publ Hlth) (3-0) Credit 3.** Lecture, discussion. Principles of administration as they apply in international, national, state and local health agencies.

**406. Public Health Nursing (NE 406 Publ Hlth) (5-35) Credit 6.** 9 weeks of field experience. Lectures, discussions and field trips. A generalized public health nursing program; arranged with local community agencies; opportunity through carefully planned and supervised observations and participation to apply principles and skills to actual situations.

**413. Trends in Professional Nursing (NE 413 Prof Trends) (3-0) Credit 3.** Lectures, discussions. Historical development of nursing; current trends utilization of principles in analyzing and solving personal and professional problems confronting the professional nurse.

**423. Seminar in Nursing (NE 423 Seminar) (3-0) Credit 3.** Lectures, discussions. Application of principles and procedures to care of patients.

**453. Principles and Methods of Teaching in Schools of Nursing (NE 453 Tchng Mthds) Credit 3.** Lectures, discussions. Application of the principles and methods of general education to nursing.

**316. Nursing Service Management (NE 316 Service Mgmt) Credit 6.** Lectures, discussions. Functions and responsibilities of the head nurse as a member of the hospital service-team; methods and practices of nursing service, administration and teaching. Given concurrently with clinical experience.

# Department of Military Science

Instruction in General Military Science at this institution is a part of the officer procurement program of the Armed Forces of the United States. Under provisions of the National Defense Act of 1920, as amended, a Senior Division (Army) ROTC Unit, Class CC (Civilian College) is established and maintained at this college. All instruction and training in General Military Science is conducted by US Army personnel stationed at Prairie View A. and M. College, and in accordance with requirements of pertinent Army Regulations, directives and training programs promulgated by the Department of Army.

The General Military Science course of instruction is a conversion from the Infantry course of instruction. The purpose of the GMS course is to produce junior officers with basic knowledge essential to officers of all branches of the active United States Army. Training in military leadership will be emphasized. Instruction will be given in subjects common to all branches of the Army.

Duration of the complete course of instruction comprises four years, with not less than 90 hours of instruction in each of the first two years of the course, and 150 hours of instruction in each of the last two years of the course. The complete course of instruction covers four broad and distinct areas of military knowledge and skill. Under a modified training program, junior and senior year Military Science students will apply at least 45 classroom hours of credit in designated college academic courses to meet part of their Military Science curriculum requirements during one semester of their junior and senior years of study. Designated courses are listed under topic areas below, for selection as electives by MS III and MS IV ROTC students.

Enrollment of all physically qualified male students of the College in the first two years of Basic Military Science is required, except for veterans, students who are past their 25th birthday upon initial entrance and those who enter with Advanced Standing. Successful completion of these first two years of General Military Science fulfills one of the college requirements for graduation. Enrollment in the last two years years of the Advanced General Military Science Course is limited to students who complete successfully the first two years, or who are veterans of the Armed Forces, discharged after one or more years of honorable military service. Students who pass the prescribed survey and screening tests may be enrolled in the last two years of the Advanced General Military Science Course after they are selected by the President of the College and the Professor of Military Science. Successful completion of the Advanced General Military Science Course normally will result in the tender of a commission as Second Lieutenant, United States Army Reserve, in one of the branches of the Army for which the student is qualified and, as nearly as possible, in accordance with his desire. Outstanding students may be designated as Distinguished Military Students and may, during their last year in the ROTC, be recommended for appointment as Second Lieutenants in the Regular Army on graduation from college as Distinguished Military Graduates. A written agreement must be executed in connection with enrollment in the Advanced Course. Students who have Advanced Course ROTC contracts accepted are required to attend ROTC Summer Camp, and accept a reserve commission if one is tendered.

## MONETARY ALLOWANCES

Students enrolled in the last two years of the General Military Science course of instruction receive a monetary allowance which is known as **Commutation of Subsistence.** This allowance is paid at a rate prescribed by the Secretary of the Army. The amount at present is computed at about ninety cents ($.90) per day—or about twenty-seven dollars ($27.00) per month. Students are required to attend ROTC Summer Camp, normally, at end of the third year in the course. Such students receive pay of about one hundred and seventeen dollars ($117.00) and monetary allowance for travel from their home to the camp and return. Total pay and allowances for students in the last two years of the General Military Science course is about six hundred

and fifty two dollars ($652.00), excluding travel cost reimbursement which is additional. Uniforms and textbooks required for all phases of the ROTC program are furnished each student at the expense of the Government.

The last two years of the Advanced General Military Science Course together with the required summer camp, become a requirement for graduation for each student electing such course unless he is released from ROTC. A student may be discharged from the ROTC at the convenience of the Government. Requests for withdrawal, discharge from current contract, or reinstatement under prior contract will be approved or disapproved as prescribed by directives of the Army Commander, and will be based upon the merits of each individual case and the recommendations of the Professor of Military Science. Except when withdrawal or discharge from the contract is for the convenience of the Government, the student may be required to refund to the Government any sums previously paid to him as commutation of subsistence. The withdrawal from the institution of a student under contract terminates his obligation to continue the ROTC training unless he returns within two (2) calendar years to the institution or enrolls in another institution which maintains a senior division Army ROTC Unit, in which case he will be required to fulfill the provisions of his contract.

## DEFERMENT

Students enrolled in the General Military Science course may be granted a Military Deferment from induction for service under the Universal Military Training and Service Act of 1951, as amended. Such deferment when granted, shall be in force so long as the student meets academic, military, and other standards, and until completion or termination of the course of study in General Military Science.

## COURSES OFFERED IN GENERAL MILITARY SCIENCE

### MILITARY SCIENCE I

**111, 121. (MS 111, 121 Elem MS) (2-2) Credit 1. I and II.** Organization of the Army and ROTC; American Military History; Individual Weapons and Marksmanship; Leadership Laboratory.

### MILITARY SCIENCE II

**211, 221. (MS 211, 221 Elem MS) (2-2) Credit 1. I and II.** Map and Aerial Photograph Reading; United States Army and National Security; Introduction to Operations and Basic Tactics; Leadership Laboratory.

### MILITARY SCIENCE III

**311(4)*, 323. (MS 311(4)*, 323 Adv MS) (4-2) Credit 3(4)*. I and II.** Branches of the Army; Leadership; Military Teaching Principles; Small Unit Tactics and Communications; Leadership Laboratory; Pre-camp Orientation; Academic Subject.

### MILITARY SCIENCE IV

**413, 421(4)*. (MS 413, 421(4)* Adv MS) (4-2) Credit 3(4)*. I and II.** Operations; Logistics; Army Administration; Military Law; The Role of the US in World Affairs; Service Orientation; Leadership Laboratory; Academic Subject.

## ELECTIVE SUBJECTS (MS III and MS IV)

Elective subjects will be chosen from the following general academic areas for utilization in the junior and senior years:

1. **Effective Communication.**
2. **Science Comprehension.**
3. **General Psychology.**
4. **Political Development and Political Institutions.**

(*Includes credit for elective academic course during one semester.)

# Department of Extramural Services

## EXTENSION SCHOOLS

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 and undergraduate levels, 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.

## TEXAS INTERSCHOLASTIC LEAGUE OF COLORED SCHOOLS

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.

## TEACHER PLACEMENT SERVICE

The Placement Bureau in Room 201, Spence Hall (Old Agricultural Building), assists graduating seniors and alumni in securing positions for which they are qualified. It assists with follow-up and counseling service and arranges interviews between prospective employees and employers.

The Placement Bureau 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 Placement Bureau 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.

# School of Graduate Study

## ADMINISTRATIVE OFFICERS

EDWARD B. EVANS, V.M.D.; Sc.D., President of the College

JESSE M. DREW, Ed.D., Dean of Instruction, Dean of Graduate School

THOMAS P. DOOLEY, Ph.D., Dean of School of Arts and Sciences

CLAUDE L. WILSON, M.E., M.S., Dean of School of Engineering

GEORGE L. SMITH, M.S.; D.Ed. (Honoris Causa), Dean of School of Agriculture

MRS. E. MAY GALLOWAY, M.S., Dean of School of Home Economics

ALVIN I. THOMAS, Ph.D., Director of Division of Industrial Education

MRS. MAIDA S. BRANNON, M.A., Director of Division of Nursing Education

JONEL L. BROWN, Ph.D.; Ll.D., Director of Extramural Services

*THOMAS R. SOLOMON, Ph.D., Director of Student Life

HARRY E. FULLER, Dean of Men and Acting Director of Student Life

MRS. R. L. BLAND EVANS, M.S., Dean of Women

ARTHUR H. BOOTH, B.S., Lieutenant Colonel, Artillery, U.S.A. PMS&T and Commandant, Reserve Officers Training Corps

LEMMON C. McMILLAN, M.A., Registrar

ORESTES J. BAKER, M.L.S., Librarian

HORACE D. MURDOCK, M.B.A., Business Manager

MARSHALL V. BROWN, B.S., State Leader, Extension Service for Negroes

## COMMITTEE ON GRADUATE STUDY

JESSE M. DREW, Chairman.....Dean of Instruction

JONEL L. BROWN.....Head of Department of Economics

THOMAS P. DOOLEY.....Dean of School of Arts and Sciences

JACK W. ECHOLS.....Head of Department of Education

ELIZABETH M. GALLOWAY.....Dean of School of Home Economics

EARL M. LEWIS.....Head of Department of Political Science

ERNEST M. NORRIS.....Professor of Agricultural Education

ANNE C. PRESTON.....Professor of Elementary Education

*THOMAS R. SOLOMON.....Director of Student Life

ALVIN I. THOMAS.....Director of Division of Industrial Education

GEORGE L. SMITH.....Dean of School of Agriculture

CLAUDE L. WILSON.....Dean of School of Engineering

LEMMON C. McMILLAN.....Registrar

## ADMINISTRATION

The Graduate School is composed of the schools and departments which offer graduate instruction leading to the Master's degree, and its faculty is composed of the members of these schools and departments who offer graduate instruction.

The Committee on Graduate Study formulates graduate policies. The Chairman of this Committee is responsible for the Administration of the regulations and requirements for advanced degrees.

*On Leave

## 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.

Students are admitted by the Committee on Graduate Study, acting through the Chairman, to whom application should be made. For admission to the School of Graduate Study an applicant must have received his baccalaureate degree from a senior college of recognized standing.

Graduates of such institutions who have met the prerequisite requirements of the departments or divisions in which they wish to major are in the upper 50 per cent of their class while carrying an undergraduate program with a normal distribution of courses. All cases are considered on an individual basis. This includes a study of the courses taken and the grades made, which should average "B" or above at least in the junior-senior years of the undergraduate curriculum.

Students not eligible to admission in full standing as prospective candidates on probation or as Graduate Special students may be permitted to take individual courses with the approval of the instructors concerned.

## 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 Committee on Graduate Study, 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 Committee on Graduate Study 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 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.

## FELLOWSHIPS

Prairie View Agricultural and Mechanical College offers eight graduate fellowships with a stipend of $500.00 each, for the encouragement of research and advanced study.

The primary object of these appointments is to stimulate research and not to give pecuniary aid. The award is paid in twelve equal monthly installments and does not include a remission of college fees. The appointments are made for one year only, but application may be made for their renewal.

These fellowships are open to students who hold bachelor's degrees from colleges or universities in good standing. No student should apply for one of these awards who does not cherish a real and earnest desire to do a good quality of research and graduate work.

Forms for making application may be secured from the Dean of the Graduate School.

## REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS, MASTER OF SCIENCE, AND MASTER OF EDUCATION

Graduates of Prairie View Agricultural and Mechanical College or of any other college of approved standing may, on the satisfactory completion of an approved program of study, receive the degree of Master of Arts, Mas-

ter of Science, or Master of Education. The degree received will depend upon the field of subject matter emphasized at the graduate and undergraduate level.

The requirements for the degree are.

1. **Admission to Candidacy—**

A graduate student enrolled in the Graduate School does not automatically become a candidate for the Master's degree. To become a candidate, the student must complete the following requirements:

a. A candidate must be accepted by the department in which the major and minor are to be performed. A student to be considered for admission to candidacy for the Master's degree must present evidence of satisfactory preparation for graduate study in the fields chosen. The general undergraduate record, the record in the fields selected for graduate study, and the record on the graduate work completed will be considered in determining admission to candidacy. As further evidence of satisfactory preparation, the major department may require the candidate to pass a qualifying examination.

b. The prerequisites for the Master of Education degree are eighteen semester hours and two years of teaching experience.

c. After twelve semester hours of graduate work have been satisfactorily completed, with an average of "B" or better, a formal application must be made for admission to candidacy. This application, approved by the heads of the major and minor departments, must be submitted to the Dean of the School of Graduate Study not later than twelve weeks prior to the date on which the degree is to be conferred.

2. **Residence—**

The minimum residence requirement is two semesters of at least 12 semester hours of graduate credit in each, five six-week summer terms, or an equivalent approved by the Committee on Graduate Study.

3. **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.

4. **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 Committee. 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.

5. **Extension and Correspondence Courses—**

A student who has satisfied requirements 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 Committee on Graduate Study; (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 deficiencies in his undergraduate training.

6. Not more than a total of nine semester hours of extension and transferred credits combined may be counted toward the Master's degree.

7. **Quality of Work—**

A candidate must maintain at least a "B" average in all work taken in graduate study.

8. **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.

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 Master 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 he expects it to be filed with the Graduate Office. A candidate should complete his thesis not later than three weeks 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

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
Presented to the Graduate School
of Prairie View Agricultural and Mechanical College
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.

b. 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.

**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 the 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 Committee on Graduate Study 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 Committee on Graduate Study. 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 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. A course in which a grade of "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 of graduate students is reported as "A" (95-100); "B" (85-94); "C" (75-84); "D" (65-74); "F" (below 65); "I" (Incomplete); "K" (Delinquent Account); "W" (Withdrew officially or withdrew passing); "Q" (Withdrew unofficially or withdrew failing).

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 extension courses, may not be used to validate a grade of "C" earned in this College.

The work of a graduate student performed in connection with his 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 up 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.

## FIELDS OF STUDY

Majors and Minors may be selected in the following fields:

Administration
Agricultural Economics
Agricultural Education
Biology
Business Education
Chemistry
Economics
Education
Elementary Education
English
Extension Education
Guidance
History
Home Economics Education
Industrial Education
Mathematics
Music
Physical and Health Education
Political Science
Secondary Education
Sociology
Special Education
Supervision

For further information regarding course offerings on the graduate level write the Office of the Registrar, or the Office of Graduate Study.

# School of Agriculture

## AGRICULTURAL ECONOMICS

The prerequisite for majoring in Agricultural Economics is the Bachelor of Science Degree in Agriculture from a recognized college of agriculture.

To fulfill the requirements for a major in this field, one must complete at least twenty semester hours of work in Agricultural Economics. For the

minor, the student is required to complete at least ten semester hours of work in the minor field agreed upon in consultation with the major professor and approved by the Dean. However, if it becomes necessary, the hours required in the major and minor fields may vary to the extent of two or three hours accumulated in either field. In such a case, the total hours must amount to thirty or more.

**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. Prerequisite: Principles of Agricultural Economics.

**552. Agricultural Economics Seminar. (AgEc 552 Seminar) (2-0) Credit 2.** Current problems in Agricultural Economics discussed; topics reported by students.

**613. Government and Agricultural Policy. (AgEc 613 Govt Policy) Credit 3.** Primarily for Extension Agents and staff members who want to remain generalists. Provides clearer understanding and better appreciation of the nature of political and economic processes in our democracy and the relationship of these processes to American agriculture.

**633. Rural Development for Extension Workers. (AgEc 633 Extn Dvlp) Credit 3.** Methods, procedures, and techniques of farm and home development. Farm and home problems will be used in teaching principles of management; group activities will be utilized in developing farm and home plans.

**713. Economics of Agricultural Seminar. (AgEc 713 Production) (3-0) Credit 3.** Principles of production economics applied to production of major farm products in various areas; economic geography and agriculture, national production programs and the tariff on agricultural products. Prerequisite: Principles of Agricultural Economics.

**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, vegetable, livestock and cotton marketing associations.

**733. Advanced Farm Management, Business Organization of Texas Farms. (AgEc 733 Farm Mgt) (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. Prerequisite: Principles of Agricultural Economics.

**743. Land Tenure and Problems. (AgEc 743 Land Tenure) (3-0) Credit 3.** Land as a factor of production, land utilization, tenure and income. Prerequisite: Principles of Agricultural Economics.

**763. Agricultural Land Use Planning. Local Regional and National. (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

Undergraduate work equivalent to the Bachelor of Science Degree in Agriculture is required.

**503. Agricultural Education Seminar. (AgEc 503 Seminar) (1-0 or 2-0) Credit 3.** Designed for all graduate students having majors in Agricultural Education. Only candidates for an advanced degree are eligible to take this course.

**513. Methods of Conducting Part-Time and Evening Schools in Vocational Agriculture. (AgEd 513 Evng Schs) (2-0) Credit 3.** Teaching Vocational Agriculture. Permission of instructor is required. An analysis of the problems related to part-time and evening schools in Vocational Agriculture and to the development of objectives and procedures in the organization and conduct of such instruction.

**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. Extension Organization and Program Determination. (AgEd 533 Extn Prog) (3-0) Credit 3.** Best procedure to be followed in developing state, county, and community programs of work, and outlining of plans of work looking to the orderly development of specific projects; discussion of the place of local studies for the purpose of discovering points of contact and interest for cooperation in the conduct of extension work.

**543. Extension Methods. (AgEd 543 Extn Meth) (3-0) Credit 3.** Aims and objectives of extension teaching and possible ways of measuring accomplishments reviewed and critically analyzed; various means and agencies employed in extension teaching as result of demonstrations, method demonstrations, meetings, news articles, personal services, bulletins, exhibits, and circular letters; evaluated from the standpoint of their teaching functions, adaptability, relative influence, cost, interrelationship and general effectiveness.

**553. Organization and Conduct of 4-H Club Work. (AgEd 553 4-H Club) (3-0) Credit 3.** Development of 4-H Club programs and organization: objectives, psychological groupings; community integration; program content; community, county, state, and Federal organization, selection and use of local leaders, annual plans of work, evaluation; methods employed in 4-H work: projects, club meetings, demonstrations, judging work exhibits, achievement days, camps, short courses, and leadership training.

**562-563. Special Problems in Home Economics Extension. (AgEd 562 563 Extn Prob) (2-0 or 3-0) Credit 2 or 3.** Extension research and other data of special significance to the organization and conduct of extension work with rural women; current problems of home demonstration workers.

**571 and 581. Young Farmers I and Young Farmer Problems II. (1-2) (AgEd 571-581 Frmr Prob) Credit 1.** A correlate to 572 and 622; given on an unassembled basis for teachers in service who are enrolled in either Agricultural Education 572 or 622. The classroom instructor in these two courses is followed up on an individual enrollee on-the-job basis.

**572. Methods of Working with Out-of-School Groups (AgEd 572 Groups) (1-2) Credit 2.** Special techniques for working with young-farmer and adult-farmer groups on farm and community problems; integration of such work into the total program of Agricultural Education in the community.

**613. History and Philosophy of Extension Education. (AgEd 613 Extn Hist) (3-0) Credit 3.** Development of Agricultural Extension Education; socio-economic influence responsible for the establishment of extension education; development of agricultural policy that has a bearing on the philosophy of extension education.

**622. Supervised Farming Program Building for Out-of-School Groups. (AgEd 622 Supv Farm) (1-2) Credit 2.** Enterprise planning, accounting and analysis; selecting and developing over-all supervised farming programs with special reference to working with young-farmer and adult-farmer groups.

**623. Public Relations and Extension Education. (AgEd 623 Public Rltns) (3-0) Credit 3.** Methods and practices of acquainting the public with the scope and purposes of extension work through print, radio, visual aids, and full use of written and spoken words.

**633. Psychology for Extension Workers. (AgEd 633 Extn Psy) (3-0) Credit 3.** Significance of psychology to extension workers in relation to its meaning, the job of the extension worker, the meaning of education and of teaching; problem of motivation; nature of learning; basic principles and major types of learning; and conditions favorable for learning.

**643. Extension Work Evaluation. (AgEd 643 Evaluatn) (3-0) Credit 3.** Measuring results of extension work; sampling procedures, analysis and interpretation, and presentation and use of data in reference to study plans; methods of systematically appraising extension work.

**712 or 713. Problems in Agricultural Education. (AgEd 712 713 Problems) (2-0) or (3-0) Credit 2 or 3.** Community-program approach to agricultural problems; scientific approximation of aims, objectives and standards; participation in field experiences and field research.

**722 or 723. Principles of Teaching Methods in Agricultural Education. (AgEd 722 723 Prin Meth) (2-0 or 3-0) Credit 2 or 3.** Logical and psychological bases for selecting methods of teaching agriculture.

**753. Extension Supervision. (AgEd 753 Extn Supv) Credit 3.** Analysis of the role of the Extension Supervisor and presentation of best methods available for aiding in the effective operation of the extension program.

## AGRONOMY

**501. Graduate Seminar. (Agrn 501 Seminar) (1-0) Credit 1.** Each student will present organized papers on assigned subjects in crops, soils and genetics, based upon library and local research.

**514. Plant Ecology. (Agrn 514 Ecology) (2-4) Credit 4.** Native and crop vegetation in relation to factors of environment. The application of environmental factors to general plant production.

**523. Advanced Farm Crops. (Agrn 523 Adv Crops) (2-2) Credit 3.** Emphasis will be placed on the geographical distribution, classification and physiology of the important farm crops.

**533. Principles of Plant Pathology. (Agrn 533 Plnt Path) (2-2) Credit 3.** Virus, bacterial and fungus diseases of field and horticultural crops. Symptoms and possible controls.

**543. Range and Pasture Improvement and Management. (Agrn 543 Pastures) (2-2) Credit 3.** Types of pastures; pasture and range vegetation, methods of establishment and improvement.

**553. Plant Breeding. (Agrn 553 Breeding) (2-2) Credit 3.** Crossing and breeding techniques for the most important farm crops. Inheritance and disease resistance and susceptibility. Field plot technique.

**554. Soil Chemistry. (Agrn 554 Soil Chem) (2-4) Credit 4.** The application of the principles of chemistry to soils. The relationship between chemical properties and soil productivity.

**563. Diseases of Field Crops. (Agrn 563 Diseases) (2-2) Credit 3.** Common diseases found in field crops and best known methods of control.

**573. Fertilizers and Soils. (Agrn 573 Fertlzrs) (2-2) Credit 3.** Fertilizer recommendations for various crops and localities. Soil types and fertilizer requirements.

**583. Soil Mapping. (Agrn 583 Soil Mapg) (1-3) Credit 3.** The study of soil type characteristics by profiles; the mapping of selected local areas.

**593. Advanced Soil Management. (Agrn 593 Soil Mgt) (2-2) Credit 3.** The application of the principles of soil management to the solution of practical farm problems.

## ANIMAL HUSBANDRY

**503. Marketing Livestock. (A H 503 Livestock) (3-0).** Livestock marketing services, functions and prices.

**513. Extension Practices. (A H 513 Extn Prac) (3-0).** Accumulation, interpretation, and dissemination of published and pictorial information as related to livestock practices.

**523. Veterinary Obstetrics. (A H 523 Obstetric) (3-0).** Physiology of reproduction, principles of normal and abnormal parturition, diagnosing and treating sterility, abortion, and reproductive failures.

**533. Herd and Flock Management. (A H 533 Flock Mgt) (3-0).** Systematic studies of methods of breeding, feeding and management practices used in commercial livestock production.

**543. Range and Pasture Improvement and Management. (A H 543 Pastures) (3-0).** The course deals primarily with the types of pasture, and pasture and range vegetation; methods of establishment and improvement.

**501. Seminar. (A H 501 Seminar) (1-0).** Reviews and discussions of animal research articles.

## DAIRY HUSBANDRY

**503. Dairy Inspection and Ordinances. (Dair 503 Inspectn) Credit 3.** Farm, plant, and products inspection; equipment and personnel; milk ordinances; standards.

**514. Dairy Laboratory Methods. (Dair 514 Lab Meth) Credit 4.** Theory of and practice in analytical methods used for control and research in dairy manufactories. Emphasis placed on various methods of fat determination, procedures for platform and plant quality tests, detergents, washing and sterilizing compounds.

**523. Dairy Farm Management. (Dair 523 Dair Mgmnt).** Specific examples of dairy farmer needs and how to meet them. Relationship between production, testing, artificial breeding association, sire proving, work of dairy production fieldman.

**533. Dairy Bacteriology. (Dair 533 Bacteriol) Credit 3.** Bacterial flora of milk products; milk sanitation, contamination and control — pure culture studies.

**543. Technical Dairy Production. (Dair 543 Tech Prod). Credit 3.** Technical aspects of nutrition, milk secretion, and reproduction in dairy cattle.

**551-561. Seminar. (Dairy Production) (Dair 551-561 Seminar).** Current literature relating to various phases of milk production.

**552-562. Special Problems. (Dair 552-562 Spec Prob).** Research problems in Animal Husbandry; planning, execution, compiling and summarizing the data in publication form.

**571. Seminar. (Dair 571 Seminar) Credit 1.** Current literature review and reports in dairy manufacturing industry.

**572-582. Special Problems. (Dair 572-582 Spec Prob).** Reports on special problems in dairy farm management.

## HORTICULTURE

**513. Genetics. (Hort 513 Genetics) (2-2) Credit 3.** Plant genetics which include Mendel's Laws, chromosome phenomena and plant improvement.

**523. Systematic Pomology. (Hort 523 Pomology) (2-2) Credit 3.** Description, nomenclature, classification and identification of deciduous and non-deciduous fruits with reference to varietal relationships. Exhibits and judging.

**533. Marketing of Fruits and Vegetables. (Hort 533 Mkt Fruit) (2-2) Credit 3.** A study of economic factors involved in the marketing of fruits and vegetables, transportation, methods of handling, middlemen and costs of distribution.

**543. Fertilizers and Soils. (Hort 543 Fertlizrs) (2-2) Credit 3.** A study of soils and fertilizers in relation to production of stone, pome and small fruits, subsoils, drainage, elevation and contour.

**553. Economic Entomology. (Hort 553 Econ Entmlgy) (2-2) Credit 3.** A course which deals with the study of insects which attack fruits and vegetables. Includes the use of spray calendars, insecticides and equipment.

**563. Diseases of Fruit and Vegetable Crops. (Hort 563 Diseases) (2-2) Credit 3.** Problems in the design of small land areas; orientation, arrangement and circulation, including instruction in drafting and presentation.

## ORNAMENTAL HORTICULTURE

**613. Introduction to Landscape Design. (Hort 613 Landscape) Credit 3.** Problems in the design of small land areas; orientation, arrangement and circulation, including instruction in drafting and presentation.

**623. Taxonomy of Cultivated Plants. (Hort 623 Taxonomy) Credit 3.** Principles of plant classification; bibliographic tools of systematic botany; methods of collection, preservation and study of vascular plants.

**633. Problems in the Propagation of Ornamental Plants. (Hort 633 Plnt Prop) Credit 2-4.** Problems in the propagation of ornamental plants in which the student is interested and which are approved by the instructor. Problems must be of a representative nature and must be worked out independently.

**643. Nursery Principles and Practices. (Hort 643 Nurs Prin) Credit 3.** Fundamentals and practices involved in the management of a modern nursery; status of the industry, its development, growing, merchandising, and marketing of nursery products in all phases. Trips to nurseries in the state will be made.

**653. Ecology of Ornamental Plants. (Hort 653 Ecology) Credit 3.** Patterns of vegetation, local, regional and continental, relation of environmental conditions that limit and various plant communities and influence the growth of the competition in ornamental plants.

**663. Diseases of Fruit and Vegetable Crops (Hort 663 Diseases) (2-2) Credit 3.** Problems in the design of small and land areas; orientation, arrangement and circulation, including instruction in drafting and presentation.

**673. Commercial Greenhouse Production. (Hort 673 Greenhse) Credit 3.** Practical application of science to the production and marketing of greenhouse crops; the growing of seedling plants in the greenhouse, cloth house, and lath. Trips will be made to greenhouses in the State.

**693. Planting Design. (Hort 693 Plnt Dsgn) Credit 3.** The basic principles of planting design; arrangement and use of plants in landscape design with drafting and field practice; problems in color, texture, and mass in plants.

**713. Problems in Landscape Horticulture. (Hort 713 Problems) Credit 2-4.** Problem in landscaping in which the student is interested and which is approved by the instructor; problem must be of a representative nature and must be worked out independently.

**723. Park, Cemetery, and Institutional Grounds Administration. (Hort 723 Park Adm) Credit 3.** Lectures, collaterial reading, and reports on visits to parks, cemeteries, and institutional grounds; lectures and discussions of problems connected with the administration of parks, cemeteries and institutional grounds.

### POULTRY HUSBANDRY

**Poultry 502. Special Poultry Problems. (Poul 502 Problems).** Research problems of a practical nature in Poultry Husbandry.

**Poultry 512. Turkey Production. (Poul 512 Turkeys).** A study of the principles and practices of turkey production with special emphasis on breeding, brooding, feeding and marketing.

**Poultry 523. Poultry Management. (Poul 523 Poul Mgt).** A detailed study of all phases of farm and commercial flocks, including cost of production.

**Poultry 533. Poultry Disease and Sanitation. (Poul 533 Disease).** Anatomy of domestic fowls; poultry sanitation and hygiene; infectious and manifectious diseases of fowls; parasites, minor surgery.

**542. Domestic Propagation of Turkey, Geese, Ducks and Game Birds. (Poul 542 Game Bird).** The history, characteristics, economic importance, reproduction, and development of the leading breeds and varieties of turkeys, geese, ducks and game birds.

**Poultry 561. (Poul 561 Seminar) Seminar.** Extensive and intensive review and reporting of literature in various phases of Poultry Husbandry.

**Poultry 603. Poultry Breeding. (Poul 603 Breeding).** A study of inherited characteristics; factors affecting the economic characteristics of poultry.

## 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 a major in the field of Extension Education has been made from courses offered by the department of Agricultural Education, Agricultura 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 plus a written master's report of research or problem on a topic in the major field.

Associate 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 the 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 Committee on Graduate Study.

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 Committee on Graduate Study 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 | 613 | Government and Agricultural Policy |
| | 713 | Economics of Agricultural Production |
| | 743 | Land Tenure and Problems |
| | 763 | Agricultural Land Use Planning |
| | 633 | Rural Development for Extension Workers |
| 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 | Economic Problems of the Consumer |
| | 573 | Labor Problems |
| | 773 | Economic Theory and Social Policy |
| Education | Ed. 713 | School and Community Relations |
| | 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 |
| | 693 | Teaching of Health |
| Home Economics Education | 563 | Consumer Education |
| | 703 | Seminar in Nutrition |
| | 793 | Supervision of Home Economics |
| | 553 | Family Life Problems |
| | 753 | Extension Supervision |
| Sociology | 503 | Introduction to Social Welfare |
| | 603 | Problems of Child Welfare |
| | 643 | Modern Social Problems |

## School of Arts and Sciences

### BIOLOGY

A student entering graduate study in the field of biology should present at least an undergraduate minor, 20 hours or the equivalent, which includes: general zoology, botany, and physiology. It is preferable that he shall have had enough credits for an undergraduate minor in biology. 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 biology. It is expected that students who plan to qualify for the Master's Degree should become thoroughly rounded in the general principles of general zoology, botany, physiology, embryology and anatomy (comparative and microscopic).

Students who plan to minor in biology on the graduate level must have fulfilled all requirements for a minor in biology on the undergraduate level stipulated in the catalog. Prerequisite courses such as Vertebrate Embryology (Biology 414) and Comparative Anatomy (Biology 424), 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.

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.

Action on admission for candidacy for a Master's Degree will be taken after the student has been in residence for at least one semester or summer session, earning at least twelve hours of graduate work in biology with an avrage of "B" or better. Research projects for the thesis will be assigned after the student has been approved as a candidate.

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.

**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.

**513. Seminar. (Sci 513 Seminar) (3-0) Credit 3.** Seminar in biology, chemistry and physics for in-service teachers. Lectures, demonstrations, reports on current trends in the fields of science.

**514. Histological Technique. (Biol 514 Hist Tech)** See Biology 354. In addition to the requirements of 354, the student is required to master some of the special techniques. Lab fee: $3.00.

**523. Principles of Plant Pathology. (Biol 523 Plnt Path) (2-3) Credit 3.** The fundamentals of parasitism as they affect plants and the means of controlling the diseases resulting from the various parasites which are detrimental to plants. Lab fee: $3.00.

**524. 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, 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 Physiology. (Biol 534 Physiology) (2-4) Credit 4.** Organs of internal secretion, embryology, physiology, microscopic anatomy, and physiology. Prerequisite: Biology 114, 124 and 324.

**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.

**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) (2-4) Credit 4.** Local flora, giving training in the identification and classification of the higher plants. Prerequisite: Botany 134.

**574. Genetics. (Biol 574 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. Lab fee: $2.00.

**Biology 584. Survey of the Plant Kingdom. (Biol 584 Plnt Kingdom) (2-4) Credit 4.** Comparative morphology, taxonomy, physiology, and anatomy of representatives of the major taxa of the plant kingdom, including fungi, algae, mosses, hepatics, ferns allies, and gymnosperms; theories of evolution in plants, taxonomic principles, comparison of life cycles and methods of culturing, collecting, and identification. Prerequisite: Biology 134 with minimum grade of "C," senior or graduate status. Lab fee: $3.00.

**594. General Microbiology. (Bacteriology) (Biol 594 Microbiol) (2-4) Credit 4.** Morphology, physiology, classification, cultivation of 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

**614. Protozoology. (Biol 614 Protozool) (2-4) Credit 4.** Structure, taxonomy, physiology, life history and adaptations of protozoa, especially the nonparasitic form. Prerequisite: Biology 114 and 124. Lab fee: $3.00.

**624. General Parasitology. (Biol 624 Parasitol) (2-4) Credit 4.** Morphology, life history, dagnosis 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.

**640-650. Seminar in Biological Problems. (Biol 640 650 Biol Prob).** Required of all graduate students in the department. No credit. Lab fee: $8.00.

**644. Mycology. (Biol 644 Mycology) (2-4) Credit 4.** The morphology, anatomy, classification and physiology and fungi; habitats, economic principles and taxomic principles. Lab fee: $3.00.

**664. General Invertebrate Zoology. (Biol 664 Invertebr) (2-4) Credit 4.** Classification, morphology, embryology, physiology, and life histories of invertebrates 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. Discussion, 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.

**694. Animal Breeding. (Biol 694 Breeding) (2-4) Credit 4.** Application of the principles of genetics to animal breeding and improvement. Comparison of various methods of selection and technique. Prerequisite: Biology 524 Genetics. Lab 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. Selected Topics in Biology. (Biol 703 Selct Topics) (2-2) Credit 3.** Basic concepts and recent advances and techniques in physiology, bacteriology, botany, genetics and entomology. Experiments, demonstrations and field trips. Prerequisite: General Zoology or 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 Bacteriol) (3-4) Credit 4.** Importance of bacteria in dairy products; the number and types of bacteria in dairy products and significance of their occurrence. Lab fee: $3.00.

## BUSINESS EDUCATION

The graduate program in business education is designed to provide for the professional development of commercial teachers. The primary purposes of the program are to offer advanced instruction in professional and subject-matter areas for teachers, and to develop research in the field.

The program is adapted to the needs of persons who have completed as undergraduates a course of 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 of 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 Administration | 3 hours |
| Business Statistics | 3 hours |
| | 15 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 Administration | 3 hours |
| | 6 hours |

## DESCRIPTION OF COURSES

**523. Problems in Business Education. (BE 523 Problems) (3-0) Credit 3.** A survey course. Evolution of business and business practices. Business and Government-laws which govern and regulate business practices. Recent developments in business education.

**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 teaching effectiveness in Typewriting, Shorthand, Bookkeeping and Accounting, and Filing.

**553-563. Intermediate Accounting. (BA 553 563 Interm Acct) (3-0) Credit 3.** Theory and problems of valuation of assets; application of funds; corporation accounts and statements and their interpretation.

**573-583. Business Law. (BA 573 583 Busn Law) (3-0) Credit 3.** Fundamental principles of law most frequently involved in business transactions, including contracts, sales, partnerships, corporations, agency, negotiable instruments, property bailments and insurance.

**593. Corporation Finance. (BA 593 Corp Finance) (3-0) Credit 3.** Corporate organization and control; securities; the management of fixed capital and working capital and working capital reserve, surplus and dividend policies; investment banking and the securities market.

**613. Life Insurance. (BA 613 Life Insurnc) (3-0) Credit 3.** A study of the life insurance industry, companies, contracts and markets.

**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 curricular for the secondary school and in appraising present school offerings.

**633. Real Estate Principles. (BA 633 Real Estate) Credit 3.** A survey of the real estate with emphasis upon deeds, leases, zoning, brokerage, selling, advertising, property management and real estate law.

**723. Seminar in Business Administration. (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.

## CHEMISTRY

Persons who plan to pursue the graduate 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 completion 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 the Graduate School 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 recommended 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 two years 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 requirements.

## ANALYTICAL

| Course | Hrs. |
|---|---|
| Identification of Organic Compounds | 4 Lab. and Lec. |
| Organic Theory | 3 Lec. |
| Physical Chemistry (Advanced) | 3 Lec. |
| Advanced Inorganic | 3 Lec. |
| Advanced Analysis | 6 Lec. and Lab. |
| Seminar | |
| Research | |
| Biochemistry | 4 |
| Total | 24 Hrs. (Exclusive of research) |

## BIOCHEMISTRY

| Course | Hrs. | |
|---|---|---|
| Identification of Organic Compounds | 4 | Lab. and Lec. |
| Advanced Inorganic Chemistry | 3 | Lec. |
| Advanced Analysis | 3 | Lec. |
| Advanced Physical | 3 | Lec. |
| Intermediate Metabolism | 3 | Lec. |
| Advanced Organic | 6 | Lec. |
| Seminar | 2 | Lec. |
| Research | | |
| Total | 24 | Hrs. (Exclusive of research) |

## INORGANIC CHEMISTRY

| Course | Hrs. | |
|---|---|---|
| Identification of Organic Compounds | 4 | Lec. |
| Advanced Inorganic Chemistry | 6 | Lec. and Lab. |
| Advanced Physical | 3 | Lec. |
| Advanced Organic | 3 | Lec. |
| Advanced Analytical | 3 | Lec. |
| Seminar | 2 | Lec. |
| Biochemistry | 4 | |
| Total | 25 | Hrs. (Exclusive of research) |

## ORGANIC

| Course | Hrs. | |
|---|---|---|
| Identification of Organic Compounds | 4 | Lab. and Lec. |
| Advanced Organic Chemistry | 6 | Lab. and Lec. |
| Advanced Physical | 3 | Lec. |
| Advanced Analytical | 3 | Lec. |
| Seminar | 2 | Lec. |
| Research | 3 | Lec. |
| Biochemistry | 4 | |
| Total | 25 | Hrs. (Exclusive of research) |

# DESCRIPTION OF COURSES

**500. Research. (Chem 500 Research) Credit arranged.** 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.** 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.** 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.

**600. Research (Chem 600 Research).** See Chemistry 500. Lab fee: $8.00.

**613 and 623. Advanced Inorganic Chemistry. (Chem 613 623 Adv Inorg) (3-0) Credit 3.** 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.

**700. Research. (Chem 700 Research).** See Chemistry 500. Lab fee: $8.00.

**701 and 703. Chemical Principles. (Chem 701 703 Principles) (1-0 or 3-0) Credit 1 or 3.** Fundamental concepts and principles of chemistry; designed especially for persons interested in the teaching of chemistry. Prerequisite: Graduate or advanced undergraduate standing.

**704. Advanced Analytical Chemistry. (Chem 704 Analytical) (1-6) Credit 4.** Lecture-recitation: Theory and picture of sampling, solution of refactory materials, special methods of precipitation, use of radioactive material, water analysis, special types of calculations. Laboratory: Gravimentric and electrylytic 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.** The separation and identification of pure organic compounds and mixtures. Lab fee: $2.00.

**723. Quantitative Organic Chemistry. (Chem 723 Quan Org) (1-4) Credit 3.** The determination of elements and functional groups by micro-methods with an introduction to micromethods. Lab fee: $3.00.

**743. Advanced Topics in Organic Chemistry. (Chem 743 Orgn Topic) (3-0).** (a) Stereochemistry; (b) Reaction Mechanism; (c) Terpenes and Carbohydrates, 3 hours credit for each topic.

**732. Advanced Organic Chemistry. (Chem 732 Adv Org) (2-0) Credit 2.** 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.** A quantitative student of the intermediate formed in cellular metabolism of fats, carbohydrates, proteins, and minerals employing equipment currently used in biochemical research. Both manometric and spectrometric methods are included. Prerequisite: 434, or taken concurrently with 753. Lab fee: $3.00.

**753. Intermediary Metabolism. (Chem 753 Metabolism) (3-0) Credit 3.** 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.** Conferences and laboratory work dealing with the synthesis of various organic compounds. Prerequisite: one year of organic chemistry. Lab fee: $3.00.

**763. Biochemical and Clinical Analysis. (Chem 763 Clin Anal) (0-6) Credit 3.** Conferences and laboratory work dealing with analysis of blood, urine and vitamine assay. Prerequisite: Chemistry 435. Lab fee: $3.00.

**764. Instrumental Analysis. (Chem 764 Instrmtl) (1-3) Credit 4.** The theory and use of modern optical and electrical instruments in chemical analysis. These include the polarograph, oscillometer, geiger counter, nephelometer, colorimeter, titrimeter, potentiometer, pH meter and spectrophotometer. Prequsite: Chemistry 424. Lab fee: $2.00.

**782. Topics in the Chemistry of Nutrition. (Chem 782 Nutrition) (2-0) Credit 2.** 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.** A lecture course consisting of advanced topics in physical chemistry: Thermodynamics, chemical kinetics, theories of solutions, phase rule. Prerequisite: Chemistry 424 and mathematics through differential and integral calculus.

**800. Research. (Chem 800 Research).** See Chemistry 500. Lab fee: $8.00.

**802. Electrochemistry. (Chem 802 Electro) (0-4) Credit 2.** 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.

**900. Research. (Chem 900 Research).** See Chemistry 500. Lab fee: $8.00.

**911 or 913. Seminar. (Chem 911 913 Seminar) (1-0 or 3-0) Credit 1 or 3.** Discussion of topics which are current in the various fields of chemistry.

**921. Seminar. (Chem 921).** Continuation of 911.

## ECONOMICS AND GEOGRAPHY

Majors and minors are offered in the Department of Economics. 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 stability 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. Twenty semester hours are required for a major. Students who plan to minor in the Department are required to complete a minimum of ten hours.

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 1. I or II.** Informal seminar meeting once per week to allow staff members and majors and minors in economics to develop esprit de corps and to discuss contemporary economic developments. Open to others by consent of the instructor.

**513. Economic History. (Econ 513 Econ Hist) (3-0) Credit 3. I.** The development of agriculture, commerce, industry and transportation from colonial times to the present. Prerequisite: Economics 533.

**523. Principles of Economics. (Econ 523 Principles) (3-0) Credit 3. I.** Basic economic principles as applied to contemporary economic institutions; determination of business and industrial organization; pricing, value, money and banking; and international trade and exchange.

**533. Economic Problems. (Econ 533 Problems) (3-0) Credit 3. II.** An application of economic principles to current economic problems and institutions; monopoly, business cycles, labor problems, public expenditures and revenue, public utilities, and comparative economics. Prerequisite: Economics 523. (This course is a prerequisite to all graduate courses in Economics.)

**563. International Trade. (Econ 563 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 investment, tariff history and policy, currency problems, and world interdependence. Prerequisite: Economics 533 and consent of the instructor.

**573. Labor Problems. (Econ 573 Labor) (3-0) Credit 3. I.** Evolution of industrial society; labor movements as a "going government;" protective legislation dealing with wages, hours, and unemployment compensation; problems involving the employer-employee relationships. Prerequisite: Economics 533.

**583. Economic Problems for the Consumer. (Econ 583 Cons Prob) (3-0) Credit 3. II.** Family budgets, marketing, price controls, and other problems of the consumer. Prerequisite: Economics 533.

**603. Money and Banking. (Econ 603 Banking) (3-0) Credit 3. II.** A study of the theory of money and banking with emphasis upon monetary policy. Special consideration is given to the implication of methods, monetary and banking control. Prerequisite: Economics 533.

**643. Personnel Management. (Econ 643 Persnl Mgmt) (3-0) Credit 3.** Development and importance of employee-employer relationships. Consent of instructor.

**653. Economic Statistics. (Econ 653 Statistic) (2-2) Credit 3. I.** Techniques of gathering, assorting, tabulating and presenting statistical data. Prerequisite: Economics 533.

**663. Modern Economic Thought. (Econ 663 Mod Thght) (3-0) Credit 3. II.** Analysis and appraisal of recent and contemporary economists and their contribution to public policy. Prerequisites: Economics 533 and 583.

**703. Public Finance and Taxation. (Econ 703 Taxation) (3-0) Credit 3.** Introduction to the field of government finance; character and growth of public expenditures; public debt creation and fiscal policy; theories, principles and problems of taxation.

**723. Seminar in Economic Theory. (Econ 723 Theory) (3-0) Credit 3. II.** Critical discussion debatable topics in the field of economic theory, prices, value and distribution, reports will be made on recent contemporary theories and theorists. Prerequisite: Consent of instructor.

**743. Capitalism and Socialism. (Econ 743 Capitalism) (3-0) Credit 3. II.** Capitalism, unionism, socialism, fascism, and individualistic anticipatalism, each viewed under the headings of conditions, theories and movements. A research course. Prerequisites: Economics 533, Sociology 213 and the consent of the instructor.

**773. Economic Theory and Social Policy. (Econ 773 Soc Polcy) (3-0) Credit 3. I.** Analysis of 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. Prerequisites: Economics 533 and the consent of the instructor.

## GEOGRAPHY

**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. Each student will prepare resource units using materials available in the community and familiar to local students. Prerequisite: 12 hours in the social sciences (undergraduate and/or graduate).

**713-723. The Teaching of Geography. (Geog 713 723 Tchng Geog) (3-0) Credit 3.** A foundation course for teachers and supervisors of Geography; organization of courses of study; how and where to obtain materials; the place and use of textbooks; and methods of presentation suitable for grades on the Junior and Senior high school level.

**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

**503. Methods of Teaching Social Studies in Secondary Schools. (Soc Sci 503 or Ed 833 HS Methods) (3-0) Credit 3.** Methods and devices for teaching History, Economics, Sociology and Political Science, as well as various social studies on the secondary level; selection and use of appropriate instructional materials.

**583. Methods of Teaching Social Studies in Elementary Grades. (Soc Sci 583 or Ed 763 Elem Meth) (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 Department of 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.

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 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.

## SUGGESTED CURRICULUM FOR A MAJOR IN ELEMENTARY EDUCATION

Prerequisites: Legal certificate valid for teaching in the Elementary School and the following courses.

SUGGESTED CURRICULUM FOR A MAJOR IN ELEMENTARY EDUCATION

Prerequisite: Legal certificate valid for teaching in the Elementary School and the following courses:

| | |
|---|---|
| Elementary Art | 3 hrs. |
| Public School Music | 3 hrs. |
| Teaching of Reading | 3 hrs. |
| Elementary Science | 3 hrs. |
| Pupil Growth and Development | 3 hrs. |
| | 15 hrs. |
| Psychology 593—Pupil Growth and Development | 3 hrs. |
| Education 683—Principles for Curriculum Improvement in Elementary Schools | 3 hrs. |
| Education 753—Teaching the Language Arts | 3 hrs. |
| Education 793—Diagnosis and Remedial Treatment of Elementary School Subjects | 3 hrs. |
| Education 743—Problems of Elementary School Subjects | 3 hrs. |
| Electives from the following: | 6 hrs. |
| Education 653—Arts and Crafts in Public School | |
| Education 663—Special Projects in Public School Art | |
| Education 863—Audio Visual Education | |
| Supervision 643—Elementary School Supervision | |
| Administration 633—Elementary School Administration | |
| Education 603—Survey Course in Education of Exceptional Children | |
| Education 563—Child Accounting | |
| Education 873—Modern Practices in Elementary Education | |
| Education 813—Kindergarten Methods and Materials | |
| | 21 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. |
| | 6 hrs. |
| Education 683—Principles for Curriculum Improvement in Elementary School | 3 hrs. |

## SUGGESTED CURRICULUM FOR A MAJOR IN SCHOOL ADMINISTRATION

Prerequisites: Legal certificate valid for teaching on level of area of major emphasis and the following courses:

| | |
|---|---|
| The Teaching of Reading in the Elementary Grades<br>The Teaching of Science in the Elementary Grades or<br>six hours of Advanced Secondary Level Methods | 6 hrs. |
| Administration 523—Administration of Pupil Personnel | 3 hrs. |
| Administration 533—High School Administration or<br>Administration 633—Elementary School Administration | 3 hrs. |
| Administration 713—School-Community Relations | 3 hrs. |
| Psychology 593—Pupil Growth and Development | 3 hrs. |
| Supervision 753—Principles and Practices of Supervision | 3 hrs. |
| Electives | 3 hrs. |
| | 24 hrs. |

## SUGGESTED CURRICULUM FOR A MINOR IN ADMINISTRATION

| | |
|---|---|
| Prerequisites: Psychology 593—Pupil Growth and Development | 3 hrs. |
| Education 683—Elementary School Curriculum or<br>Education 583—Secondary School Curriculum | 3 hrs. |
| | 6 hrs. |
| Administration 533—High School Administration or<br>Administration 633—Elementary School Administration | 3 hrs. |
| Administration 713—Fundamentals of School Administration | 3 hrs. |
| Supervision 753—Principles and Practices of Supervision | 3 hrs. |
| | 9 hrs. |

## SUGGESTED CURRICULUM FOR A MAJOR IN SUPERVISION OF INSTRUCTION

Prerequisites: Legal certificate valid for teaching on level of area of major emphasis and the following courses:

| | |
|---|---|
| Teaching of Reading in the Elementary Grades<br>Teaching of Science in the Elementary Grades or<br>six hours of Advanced Secondary Level Methods | 6 hrs. |
| Administration 713—Fundamentals of School Administration | 3 hrs. |
| Education 583—High School Curriculum or<br>Education 683—Elementary Curriculum Improvement | 3 hrs. |
| Education 713—School and Community Relations | 3 hrs. |
| Psychology 593—Pupil Growth and Development | 3 hrs. |
| Supervision 643—Elementary School Supervision or<br>Supervision 673—Trends in Supervision | 3 hrs. |
| Supervision 753—Principles and Practices of Supervision | 3 hrs. |
| Electives | 3 hrs. |
| | 24 hrs. |

## SUGGESTED CURRICULUM FOR A MINOR IN SUPERVISION

| | |
|---|---|
| Prerequisites: Psychology 593—Pupil Growth and Development | 3 hrs. |
| Education 683—Elementary Curriculum Improvement or<br>Education 583—Secondary School Curriculum | 3 hrs. |
| | 6 hrs. |
| Administration 713—Fundamentals of School Administration | 3 hrs. |
| Supervision 643—Elementary School Supervision or<br>Supervision 663—High School Supervision | 3 hrs. |
| Supervision 753—Principles and Practices of Supervision | 3 hrs. |
| | 9 hrs. |

## SUGGESTED CURRICULUM FOR A MAJOR IN SECONDARY EDUCATION

Prerequisites: Legal certificate valid for teaching in secondary school subjects; minor in content (subject matter) field.

| | |
|---|---|
| Education 503—Principles of Secondary Education | 3 hrs. |
| Education 583—Secondary School Curriculum | 3 hrs. |
| Education 673—Methods of Teaching Secondary School Subjects | 3 hrs. |
| Education 713—School and Community Relations | 3 hrs. |
| Psychology 593—Pupil Growth and Development | 3 hrs. |
| Administration 533—High School Administration or<br>Supervision 673—High School Supervision | 3 hrs. |
| Elective | 3 hrs. |
| | 21 hrs. |

## SUGGESTED CURRICULUM FOR A MINOR IN SECONDARY EDUCATION

Education 503—Principles of Secondary Education ..... 3 hrs.
Education 583—Secondary School Curriculum ..... 3 hrs.
Education 673—Methods of Teaching Secondary School Subjects ..... 3 hrs.

9 hrs

## SUGGESTED CURRICULUM FOR A MAJOR IN SPECIAL EDUCATION

Prerequisites: Legal certificate valid for teaching in the Elementary School or eighteen semester hours of basic courses in Education.

Education 793—Diagnosis and Remedial Treatment of Elementary School Subjects ..... 3 hrs.
Education 903—Laboratory Experience with Mentally Retarded or
Education 913—Practicum I—Curriculum Building for Mentally Retarded ..... 3 hrs.
Education 523—Principles and Practices of Educational Measurement ..... 3 hrs.
Psychology 593—Pupil Growth and Development ..... 3 hrs.
Special Education 603—Survey Course in the Educational Children ..... 3 hrs.
Special Education 613—Problems and Methods of Teaching Mentally Retarded Children ..... 3 hrs.
Special Education 853—Introduction to Speech Correction ..... 3 hrs.
Special Education 873—Adjustment of Teaching for Exceptional Children ..... 3 hrs.

24 hrs.

## SUGGESTED CURRICULUM FOR A MINOR IN SPECIAL EDUCATION

Prerequisites: Psychology 563—Mental Adjustment ..... 3 hrs.
Psychology 593—Pupil Growth and Development ..... 3 hrs.
Education 523—Principles and Practices of Educational Measurement ..... 3 hrs.

9 hrs.

Education 603—A Survey Course in Education of Exceptional Children ..... 3 hrs.
Education 613—Problems and Methods of Teaching Mentally Retarded Children ..... 3 hrs.
Education 853—Introduction to Speech Correction ..... 3 hrs.
Education 873—Adjustment of Teaching for Exceptional Children ..... 3 hrs.

12 hrs.

## SUGGESTED CURRICULUM FOR A MAJOR IN GUIDANCE

Prerequisites: Legal certificate valid for appropriate grade level served.

Guidance 543—Principles and Philosophy of Guidance ..... 3 hrs.
Guidance 583—Occupational and Educational Information ..... 3 hrs.
Guidance 683—Organization and Administration of Guidance Program ..... 3 hrs.
Guidance 733—Principles of Counseling ..... 3 hrs.
Psychology 513—Psychological Testing ..... 3 hrs.
Psychology 533—Fundamentals of Statistics ..... 3 hrs.
Psychology 593—Pupil Growth and Development ..... 3 hrs.

21 hrs.

## SUGGESTED CURRICULUM FOR A MINOR IN GUIDANCE

Guidance 543—Principles and Philosophy of Guidance ..... 3 hrs.
Guidance 583—Occupational and Educational Information ..... 3 hrs.
Guidance 693—Organization and Administration of a Guidance Program ..... 3 hrs.
Guidance 733—Principles of Counseling ..... 3 hrs.

12 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—Supervised Practice in Counseling and Guidance ..... 3 hrs.

12 hrs.

SUGGESTED CURRICULUM FOR A MINOR IN ART EDUCATION

| | | |
|---|---|---|
| Prerequisites: | Art Education 253—Elementary School Art | 3 hrs. |
| | Art Education 263—Advanced Elementary School Art | 3 hrs. |
| | | 6 hrs. |
| | Art Education 653—Arts and Crafts in Public School | 3 hrs. |
| | Art Education 663—Special Projects in Public School Art | 3 hrs. |
| | Art Education 753—Arts and Recreation or Art Education 763—Ceramics | 3 hrs. |
| | Art Education 823—Methods of Teaching Art in the Elementary Grades | 3 hrs. |
| | | 12 hrs. |

## ADMINISTRATION

**513. Vocational Guidance. (Adm 513 Voc Guid) (3-0) Credit 3.** Open to all graduate students. Surveys required of all students. Vocational Guidance as a means of contributing to a major objective of secondary education; typical centers, movements, and programs as now carried on. Read and reports.

**523. Administration of Student Personnel. (Adm 523 Stud Persnl) (3-0) Credit 3.** Open to students of senior and graduate standing. Common personnel problems of administrators and supervisors such as extra-curricular activities, guidance, student-faculty relationship, health, admission, discipline, records and reports, et cetera.

**533. High School Administration (Adm 533 H S Admin) (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.

**553. Elementary School Principal's Workshop. (Adm 553 Elem Wkshp) Credit 3.** Study and solution of problems arising in elementary schools.

**563. Child Accounting. (Adm 563 Child Acctg) (3-0) Credit 3.** Principles and systems of child accounting courses, attendance, progress, achievement, classification, and guidance records and reports.

**633. Elementary School Administration. (Adm 633 Elem Sch Adm) (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.

**653. High School Principal's Workshop. (Adm 653 H S Wkshp) Credit 3.** Study and solution of problems arising in secondary schools.

**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.

**763. Principles of Rural School Administration. (Adm 763 Rural Sch Adm) (3-0) Credit 3.** Open to graduate students holding administrative and supervisory positions in rural areas. Principles, practices, and problems of school administration with emphasis upon problems of schools located in rural areas. Reports required of all.

## ART EDUCATION

**653. Arts and Crafts in Public Schools. (ArEd 653 Arts and Crafts) (3-0) Credit 3.** Working with leathercrafts, 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 Spec Proj) (3-0) Credit 3.** Methods, procedure and phases of teaching art, problems of art education and methods of teaching art.

**763. Ceramics. (ArEd 763 Ceramics) Credit 3.** Making of pottery shapes by coil, slabs, and mole methods, also the use of the potter's wheel; understanding of teaching ceramics in the public schools. Lab fee: $2.00.

**753. Art and Recreation. (ArEd 753 Recreation) Credit 3.** Art projects for extra-curricula activities in the public schools, camp-crafts, and community recreation centers (YMCA or YWCA, adult classes, et cetera).

**833. Methods of Teaching Public School Art. (ArEd 833 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' works of all types of children. The student is to keep aware of the current developments in art education for both, the elementary and secondary levels.

## ELEMENTARY EDUCATION

**563. Teaching of Arithmetic in Elementary Grades. (Educ 563 Elem Arith) (3-0) Credit 3.** A survey of current issues, including: Teaching arithmetic through pupil's first-hand experiences, the place of meaning, thinking, and drill in effective learning, the grade placement of topics in arithmetic, approved procedures in adapting instruction to pupils of varying ability.

**633. Teaching Reading in the Elementary Grades. (Educ 633 Tch Reading) (3-0) Credit 3.** Special attention to problem of when the child is ready to start learning to read, steps in beginning reading, techniques to be followed in developing the three additional stages of reading development, and how to make the pupil efficient in reading in general in school work.

**683. Basic Principles for Curriculum Improvement in the Elementary School. (Educ 683 Elem Curr) (3-0) Credit 3.** Overview of curriculum and instruction and cultural demands and attempts to harmonize child development with changes in social order.

**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 the Language Arts in the Elementary School. (Educ 753 Tch Lang Art) (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 Social Studies in the Elementary Grades. (Educ 763 Tch So Stud) (3-0) Credit 3.** Emphasis 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 Tch 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 and suitable materials for various age levels.

**783. Modern Practices in Elementary Education (Educ 783 Elem Prac) (3-0) Credit 3.** Changing philosophical, psychological and sociological insights. For in-service teachers.

**793. Diagnosis and Remedial Treatment of Elementary School Subjects. (Educ 793 Diag El Subj) 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

**523. Principles and Practices of Educational Measurements (Educ 523 Educ Msrmn) (3-0) Credit 3.** Typical methods of measuring intelligence, achievement, special aptitudes, and personality with emphasis on the interpretation and use of tests.

**703. Modern Education Tendencies. (Educ 703 Mod Tendencs) (3-0) Credit 3.** Current educational doctrines and controversies; fundamental problems considered with a view to the development of integrated outlook.

**713. School and Community Relations. (Educ 713 Sch Rltns) (3-0) Credit 3.** Place of education, the responsibility of the public school, the curriculum, the reorganization of the educational administrative structure, and the provisions of special educational services, as they relate to child and community needs and methods for their provision from the standpoint of the whole child and the community as a whole. The community centered school philosophy emphasized.

**733. Comparative Education (Educ 763 Comparatv Ed) Credit 3.** International view of educational problems; tracing 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.

**803. Problems in the Education of Negroes. (Educ 803 Negro Prob) (3-0) Credit 3.** Special problems in the education of Negroes which result from segregation and discrimination: attention given to such problems as adequacy of public education, equality of opportunities, the general status of Negro schools, educational facilities, etc.

**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.

**863. Audio-Visual Aid. (Educ 863 Audo Visls) (3-0) Credit 3.** 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 movie projectors, slides, film strips, opaque projectors, etc.

**913. History of Education in America. (Educ 913 History) (3-0) Credit 3.** Historical background of American Education and an analysis of the origin and development of educational practices.

## 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 the classroom teachers, supervisors, counselors and other persons in personnel work.

**583. Educational and Occupational Information. (Guid 583 Occuptn 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 Supv Prac) (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, demonstration of counseling, observations of counseling interviews, and a limited amount of counseling under supervision.

**683. Organization and Administration of a Guidance Program. (Guid 683 Prog Orgzn) (3-0) Credit 3.** Emphasis is placed upon purposes and functions of guidance services; initiating, organizing, and promoting a program of guidance; selecting, organizing, and using adequate tools, techniques and physical facilities for guidance; developing and using evaluating 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.

**743. Seminar in Counseling and Guidance (Research). (Guid 743 Seminar) (3-0) Credit 3.** Opportunity will be given to advance graduate students to undertake individual research on counseling, guidance, and testing problems worthy of investigation. The nature of the research will be governed by the particular needs and abilities of each student.

## 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.

**533. Fundamentals of Statistics. (Psy 533 Statistics) (3-0) Credit 3.** Understanding and techniques of collecting, tabulating and computing statistical data from central tendency through variability, relationship, and the significance of differences among such measures.

**543. Psychology of Personality. (Psy 543 Personality) (3-0) Credit 3.** Evaluation of theories in the field of personality. The development of personality as a pattern of strivings manifested in interpersonal relations. The convergence of constitutional, psychological, social cultural factors in the development of the normal individual and his adjustments.

**553. Psychology of Adjustment. (Psy 553 Psy of Adjsm) (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.

**563. Mental Adjustment (Psy 563 Mentl Adjsm) (3-0) Credit 3.** Personality as an integrated force; psychology of the adjusted school child. Prerequisite: Psychology 113.

**583. Psychology of Exceptional Children. (Psy 583 Excptl Chld) (3-0) Credit 3.** A study of the special psychological and educational problems of the child who deviates from the normal. Behavior patterns of the mentally retarded, the physically handicapped, and the superior children will be considered.

**593. Pupil Growth and Development. (Psy 593 Pupl Dvlp) (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 organism and the conditions under which they may be realized. Applications to educational procedure, 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.

**623. Measurement of Aptitude. (Psy 623 Aptitude Msm) (3-0) Credit 3.** The course will be concerned with the nature of vocational aptitudes and the means of disclosing them. Practice in the application of tests and the interpretation of data will be provided.

## SECONDARY EDUCATION

**503. Principles of Secondary Education (Educ 503 Prin Sec Ed) (3-0) Credit 3.** Development of secondary school and its organization.

**583. Secondary School Curriculum. (Educ 583 Sec Curr) (3-0) Credit 3.** Principles of 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.

**673. Methods of Teaching Secondary School Subjects. (Educ 673 H S Meth) (3-0) Credit 3.** General methods treating the principles and practices of successful high school teaching.

## SPECIAL EDUCATION

**603. A Survey Course in the Education of Exceptional Children. (Sp Ed 603 Excpt Chld) (3-0) Credit 3.** Foundations for special education set forth; its history, philosophy, policy, case studies, measurements and guidance, selection, organization and qualifications of teachers.

**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.

**623. Speech Problems of Exceptional Children. (Sp Ed 623 Speech Prob) (3-0) Credit 3.** This course aims to acquaint the student with the speech problems connected with the education of the atypical child—the blind, the deaf, the crippled, speech defective, mentally retarded, partially seeing, cerebral palsied, gifted, and delicate.

**643. Correction of Speech Disorders. (Sp Ed 643 Spch Disord) (3-0) Credit 3.** Designed to acquaint the student with speech disorders normally found in the public school population, including some pathology, management, and therapy.

**693. Auditory Training and Lip Reading. (Sp Ed 693 Auditory Trg) (3-0) Credit 3.** Review of hearing disorders, use of hearing aid and its employment in auditory training and hearing rehabilitation, use of group auditory training units and principles and practice of speech reading.

**853. Introduction to Speech Correction. (Sp Ed 853 Speech Corr) (3-0) Credit 3.** Training in the recognition, diagnosis, and treatment of minor speech defects, with discussion of classroom handling of major speech defects.

**873. Adjustment of Teaching for Exceptional Children. (Sp Ed 873 Adjustment) (3-0) Credit 3.** Objectives of education for exceptional children and the curricular experiences which may attain them. Ways and means of adapting materials and methods to special needs of exceptional children.

**893. Advanced Speech Correction. (Sp Ed 893 Adv Spch Cor) (3-0) Credit 3.** A consideration of speech disorders traceable to the failure of some part of the speech apparatus to perform its basic and acquired functions, attention given to specific disorders as (a) articulatory defects, (b) cerebral palsy, (c) stuttering, (d) cleft palate, (e) laryngectomy, and less common disorders. Lectures, demonstrations, and case presentations.

**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.

**913. Curriculum Building for Mentally Retarded Children. (Sp Ed 913 Curr Bldg) (3-0) Credit 3.** Basic philosophy and procedures of unit construction as applied to curriculum development; intensive review of foundations of mental retardation. Practical experience theoretical and scientific concepts of mental retardation.

**923. Workshop in Special Education (SpEd 923 Workshop) Credit 3.** Trends and practices in education of mentally-retarded children; modern educational philosophy; new procedures for adapting classroom experiences to special needs of the educable mentally-retarded; principles of actual organization and administration of classroom units for this group of exceptional children; practical insights of specialists and consultants. Prerequisite: Legal certificate or special permit for teaching mentally retarded and/or approval of advisor.

## SUPERVISION

**643. Elementary School Supervision (Supv 643 Elem Supv) (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.

**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.

**663. High School Supervision. (Supv 663 H S Supv) (3-0) Credit 3.** The nature and philosophy of supervision, the needs of supervision, the activities of supervisors, the promotion of teacher growth, and the appraisal of teaching efficiency in the high school.

**723. Rural School Supervision. (Supv 723 Rural Sch) (3-0) Credit 3.** Principles underlying present-day supervision. Relationship of classroom teachers to supervisor, principal and superintendent.

**753. Principles and Practices of Supervision. (Supv 753 Prin Prac) (3-0) Credit 3.** Open to graduate students who hold or are appointed to supervisory or administrative positions or who have consent of Director. Some practice in application of principles required of all. Principles, practices and problems of supervision. Special attention is given to organization for supervision, supervisory programs, research in supervision, cooperation of special agencies, and qualification for supervisors.

**773. The High School Principal as a Supervisor. (Supv 773 H S Principal) (3-0) Credit 3.** Improvement of instruction; evaluation of teaching procedures; selection and use of textbooks and other instructional materials in elementary grades.

**783. The Elementary School Principal as a Supervisor. (Supv 783 Elem Principal) (3-0) Credit 3.** Improvement of instruction; evaluation of teacher procedures; selection and use of textbooks and other instructional materials in elementary grades.

**793. Supervisor's Workshop. (Supv 793 Workshop) (3-0) Credit 3.** Study and solution of problems arising in the supervision of learning experiences.

## 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, 15 semester hours in this field, excluding the English courses required of all students, and English 463, the Teaching of English which is counted as Education. 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 at enrichment of background by including in their program more than the minimum essentials. The following courses are required to fulfill the 20 credit hours for a graduate major in English. The 20 credit hours must be in courses on the graduate level—numbered 500 or above:

### THE MAJOR

| Course Number | Credit Hours |
|---|---|
| English 533 | 3 |
| English 583 | 3 |
| English 543 | 3 |
| English 753 | 3 |
| English 803 | 3 |
| English 813 | 3 |
| English 823 | 3 |

### THE MINOR

Prerequisite—The Equivalent of an Undergraduate Minor in English

The following courses are required to fulfill the 12 credit hours for a graduate minor in English:

| Course Number | Credit Hours |
|---|---|
| English 533 | 3 |
| English 583 | 3 |
| English 753 | 3 |
| English 813 | 3 |

For the Major and the Minor, the candidate's program of studies is always subject to revision and approval by the department.

## DESCRIPTION OF COURSES

### ENGLISH

**513. Studies and Problems in Speech. (Eng 513 Spch Prob) Credit 3.** Problems in speech activities confronting the secondary school teacher such as discussion, debate, dramatics, public speaking, radio and television.

**523. Training of the Speaking Voice. (Eng 523 Spch Trng) Credit 3.** Voice training for the teacher; 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.

**533. Studies in Nineteenth Century Prose. (Eng 533 19th Cent) Credit 3.** Ideas, political and social conditions as revealed in the writings of chief representatives of the period.

**543. A Study of the Short story. (Eng 543 Shrt Stry) Credit 3.** Study and analysis of the short story.

**563. Milton. (Eng 563 Milton) Credit 3.** Chief poetic and prose works.

**573. Wordworth and Coleridge. (Eng 573 Wordsworth) Credit 3.** Advanced critical study of poetry and prose works.

**583. The Novel. (Eng 583 Novel) Credit 3.** Relations between literature and social conditions as revealed in outstanding examples in the English Novel.

**593. Browning and Tennyson. (Eng 593 Browning) Credit 3.** Study and analysis of chief poetic works; comparative studies.

**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 given on the campus during the summer. Field trips involving summer theater productions and radio productions in Houston required.

**623. Play Production. (Eng 623 Play Prod) Credit 3.** Methods and principles involved in the directing of high school plays.

**653. Journalistic Writing and Publicity Methods. (Eng 653 Journalism).** Practical work in the forms.

**753. Seminar in Masterpieces of Literature. (Eng 753 Seminar) Credit 3.** Historical and Comparative study of masters of English and American Literature.

**803. Bibliography and Methods of Research. (Eng 803 Research) Credit 3.** Exercises in minor research projects.

**813. Literary Criticism. (Eng 813 Criticism) Credit 3.** Study of the great critics—classical, foreign, English, and American, from Plato to T. S. Eliot.

**823. Seminar in Thesis Writing. (Eng 823 Thesis) Credit 3.** Open only to candidates who are now working on their thesis in English.

**833. Studies in the Teaching of English. (Eng 833 Tchg) Credit 3.** Special problems; critical study and evaluation of methods.

**853. Twentieth-century Literature. (Eng 853 20th cent) Credit 3.** Modern and contemporary English and American authors.

**873. English Workshop in the Language Arts. (Eng 873 Workshop) Credit 3 or 6.**

**883. Chaucer. (Eng 883 Chaucer) Credit 3.** The Canterbury tales; linguistic studies.

Effective the summer session of 1957, students may begin a program which provides for both a major and a minor in the Department of English. Major: Language and Literature, minor: Speech and Drama. To fulfill requirements for a Minor in Speech and Drama, the following courses are required:

| Course | Descriptive Title | Credit Hours |
|---|---|---|
| English 513 | Studies and Problems in Speech | 3 |
| English 523 | Training of the Speaking Voice | 3 |
| English 613 or 616 | Dramatic Workshop | 6 |
| English 623 | Play Production | 3 |

## HISTORY

Majors and minors are offered in the Department of History. Students pursuing the M.A. degree with a major in History should select their program of studies and the professor under whose direction they wish to prepare for examination and write their thesis as early as possible in the first semester of residence. The minor emphasis of the program of study will be arranged by the student and the major professor with the view to 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 division of the College.

All students are required to take a course in Research. Majors in History should register for History 563. Arrangements should be made to take this course as early as possible after the beginning of the work for the Master's Degree.

Twenty hours of satisfactory work is required for a major in the field of History, and ten hours for the minor. The satisfactory completion of a thesis, the subject of which to be determined in consultation with the major professor, is 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 his research project or that the Minor Field is reasonably associated with the 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 advance 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.

**503. Techniques of Teaching History. (Hist 503 Tchg Hist) (3-0) Credit 3.** Testing devices; visual aids; historical methods.

**513. French Revolution and Napoleon. (Hist 513 French Rev) (3-0) Credit 3.** Causes of the revolution; reforms and discipline by Napoleon.

**523. Imperialism. (Hist 523 Imperialism) (3-0) Credit 3.** Era of Imperialism; causes, results and techniques.

**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 the 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.** 20th 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.

**572. Historical Investigative Paper. (Hist 572 Inv Paper) (2-0) Credit 2. I and II.** Credit allowed upon satisfactory completion of required thesis.

**583. History of Civilization to 1500. (Hist 583) Civilzatn (3-0) Credit 3.** Ideals and institutions connected with the political, social and economic life during periods of Greece, Rome, Feudalism, Renaissance, Reformation. Lectures, readings, tests, and special reports.

**593. History of Civilization from 1500 to the Present. (Hist 593 Civilzatn) (3-0) Credit 3.** Ideals and institutions connected with political, social and economic life in the period of rational liberalism and nationalism, the French Revolution, Nineteenth Century English liberalism, nationalistic unifications, socialism, imperialism, and Twentieth Century fascism and democracy. Lectures, readings, test and special reports.

**603. Western American History. (Hist 603 West 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 Rev) (3-0) Credit 3.** Revolutionary philosophy; declaration of independence; union and drafting the constitution.

**623. Problems in Latin-American History. (Hist 623 Latn 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.

**633 and 643. American Foreign Relations, 1775 to the Present. (Hist 633 643 Frgn Relt) (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, social and political forces that have determined American foreign policy and the agencies through which the policy has been executed. May be taken as Political Science 533 and 543.

**653. Contemporary United States History, 1898 to the Present. (Hist 653 Contempry) (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 associations, cooperative. Lectures, discussions, readings, special reports.

**673. Economic History of the South. (Hist 673 South Eco) (3-0) Credit 3. II.** The agricultural and industrial development of the South; the industrialization of the Southwest; field trips, contact with state historical societies to obtain documents, and preparation for the writing and publication of materials.

**683. Sectionalism and Civil War, 1700-1865. (Hist 683 Sectionlsm) (3-0) Credit 3. I.** Regional hypothesis; socio-economic regionalism; government, politics, and the regional compromise in the middle period; ideas in imbroglio —issues and men; reconstruction and the new nation. Lectures, discussions, special reports.

**693. The New South, 1865 to the Present. (Hist 693 New South) (3-0) Credit 3. II.** Relation of the South to national development since 1860; the death of the Old South; reconstruction and the new nation; the "New Departure," 1876-1900; Southern strivings to follow national patterns, 1900-1932; the New Deal and the new South; the South in World perspective. Lectures, discussions, readings, special reports.

**703. Great American Historians. (Hist 703 Amer Histrns) (3-0) Credit 3.** Survey of the writers of American history; the sociological, economic and political motivations.

## MATHEMATICS

A person holding the Bachelor of Science Degree 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.

Courses with emphasis in Geometry include:

343 Solid Analytic Geometry
713 Advanced Calculus
763 Differential Equations
773 Projective Geometry
783 Differential Geometry

Courses with emphasis in Algebra include:

703 Modern Algebra
713 Advanced Calculus
733 Advanced Algebra
803 Numerical and Literal Solutions of Equations
813 Introduction to Algebraic Theory
833 Number Theory
873 Probability

Courses with emphasis in Analysis include:

623 Measure Theory
713 Advanced Calculus
743 Statistics
753 Theory of Equations
853 Calculus of Variation
863 Real Variables
893 Complex Variables

## MATHEMATICS

**500-503. Workshop. (Math 500 Workshop) Credit 1, 2, or 3.** Workshop designed for the improvement of elementary and secondary school training in mathematics. Experiences in mathematics through lectures, individual and group study and informal discussions. Lectures designed to give the non-specialist a clear and inspiring picture of the sweep and depth of present-day mathematics.

**533. Selected Topics in Modern Mathematics. (Math 533 Selct Topics) (3-0) Credit 3.** Introduction to symbolic logic and set theory; applications to elementary algebra, linear and plane analytical geometry, probability and statistics.

**543. Fourier Series and Boundary Value Problems. (Math 543 Fouriers) (3-0) Credit 3.** Application of partial differential equations to problems involving 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.

**573. Higher Plane Curves. (Math 573 Curves) (3-0) Credit 3.** Properties of logarithmic curves, the lemniscate, strophoid, cardioid, witch, cycloid, epicycloids, the folium, and inversions and invariant characteristics.

**623. Measure Theory. (Math 623 Meas Thry) (3-0) Credit 3.** Fundamental topics on sets and classes, including Lebesgue Measure, Jordan Measure, rings. Integrable simple functions and pointwise convergence.

**633. Theory of Numbers. (Math 633 Numbers) (3-0) Credit 3.** Properties of H.C.F., solution of the diophantane equation ax plus by equals c, infinitude of primes, perfect numbers, simple continued fractions, beginning of periodicity, congruencies, residues of given order, quadratic residues, factoring by means of residues, and equations having no integral solutions.

**703. Modern Algebra. (Math 703 Mod Alg) (3-0) Credit 3.** Fundamental concepts of Algebra, integral domains, fields. Introduction to such concepts as groups, vector spaces, and lattices.

**713. Advanced Calculus. (Math 713 Adv Calc) (3-0) Credit 3.** Advanced topics of the calculus; differential equations. Prerequisites: Differential and Integral Calculus.

**723. Analytic Mechanics. (Math 723 Anal Mech) (3-0) Credit 3.** Statics, the study of equilibrium and dynamics, motion of particles, of rigid bodies, and simple cases of formable bodies under action of forces. Prerequisites: Differential and Integral Calculus.

**733. Advanced Algebra. (Math 733 Adv Alg) (3-0) Credit 3.** Topics not taken up in the elementary courses of college Algebra; inequalities, theory of probability, summation of series, etc. Prerequisite: College Algebra.

**743. Statistics. (Math 743 Statistic) (3-0) Credit 3.** Processes of statistical methods with reference to applications in various fields. Prerequisite: Analytic Geometry.

**753. Theory of Equations. (Math 753 Thry Equa) (3-0) Credit 3.** Complex numbers, general calculations of the cubic and biquadratic, and Horner's and Newton's method. Prerequisites: Differential and Integral Calculus.

**763. Differential Equations. (Math 763 Diff Equa) (3-0) Credit 3.** Methods of solving type forms and the formulation of practical problems as solutions of differential equations. Prerequisites: Differential and Integral Calculus.

**773, Projective Geometry. (Math 773 Proj Geom) (3-0) Credit 3.** Fundamental forms; harmonic sets, perspectivity and projectivity of forms, duality involution. Prerequisite: Calculus.

**783. Differential Geometry. (Math 783 Diff Geom) (3-0) Credit 3.** Curves in the plane, space, and surfaces; introduction to the study of curved spaces. Prerequisites: Calculus and Solid Geometry.

**803. Numerical and Literal Solutions of Equations. (Math 803 Solutions) (3-0) Credit 3.** Methods of solving linear, simultaneous, quadratic, cubic, quartic, transcendental, and algebraic equations of higher degrees than the fourth for real roots, as well as methods for complex roots. Prerequisites: Theory of Equations, or consultation with the Head of the Department.

**813. Introduction to Algebraic Theory. (Math 813 Algb Thry) (3-0) Credit 3.** Theory of linear transformations by use of orthogonal unitary, and hermetian matrices. Linear dependence, covariants, invariants, and eliminants.

**823. Finite Differences. (Math 823 Finite Diff) (3-0) Credit 3.** Difference formulas, symbolic operators, finite integration, Bernoulli polynormals, interpolation, approximate integration, Bea and Gamma functions, and simple difference equations.

**833. Number Theory. (Math 833 Number Thry) (3-0) Credit 3.** Solutions of linear congruences, the Pell equation and its solution by partial fraction expansion. Use of continued fractions to represent certain important constants.

**853. Calculus of Variations. (Math 853 Variations) (3-0) Credit 3.** The concept of maximizing an integral to determine a curve; Euler's equation, parametric equations, and Hamiltonian Principles, and applications to practical problems.

**863. Real Variables. (Math 863 Variables) (3-0) Credit 3.** Introduction to point sets, rigorous approach to the concept of function and limit, the Riemann integral, the Lebesgue integral, and some of their generalizations.

**873. Probability. (Math 873 Probablty) (3-0) Credit 3.** Theory of permutations, combinations, distributions, repeated trial, hitting a target, and discussion of the probability integral.

**893. Complex Variables. (Math 893 Cmplx Varbls) (3-0) Credit 3.** Rational functions of a complex variable, conformal mapping, Cauchy-Riemann equations, analytic continuation, residues and applications.

## 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. (Musc 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. (Musc 753 Elem Sch Tch) (3-0) Credit 3.** Organization 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 Sght Sing) (3-0) Credit 3.** Students 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 the High School. (Musc 873 H S Vocal) (3-0) Credit 3.** Organization and administration of (a cappella) choirs, boys' chorus or glee clubs, girls' chorus or glee clubs, and voice training classes.

**893. The Teaching of Instrumental Music in the High School. (Musc 893 H S Instrm) (3-0) Credit 3.** Organization and administration of bands and orchestras in the junior and senior high schools.

**943. Drill and Band Formation in the High School. (Musc 943 H S 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. (Musc 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. (Musc 653 Score Readng) (3-0) Credit 3.** Transposition and study of various clefs for instruments all voices; ranges of instruments; introduction to the playing of vocal and instrumental scores since the 16th century; practice in sight reading and studying such scores.

**673. Dictation and Sight-Singing. (Musc 673 Dictation) (3-0) Credit 3.** Advanced courses in aural theory.

**693. Analysis of Form. (Musc 693 Anal Form) (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. (Musc 763 Adv Orch) (3-0) Credit 3.** Scoring for full symphony orchestra.

**783. Contrapuntal and Chromatic Dictation. (Musc 783 Diction) (3-0) Credit 3.** Dictation in two and three-part counterpoint, and four-part chromatic harmony.

**793. Chromatic and Modern Harmony. (Musc 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. Arvanced Orchestral Conducting. (Musc 833 Conductng) (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 larger forms of instrumental music.

**953. Advanced Analytical Harmony. (Musc 953 Anal Harmny) (3-0) Credit 3.** Harmonic analysis of Chorales of Bach; piano sonatas of Beethoven, violin sonatas of Brahms and symphonic works of Mozart, Beethoven, Wagner and Franck.

## 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, Rachmanioff, etc.)

**Music 623. Piano. (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 toccatos, 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—(Prel., Choral 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).

**Voice 713. (Musc 713 Voice) Credit 3.** Romantic Composers—Schumann; Schubert, Wagner, Liszt, etc.

**Voice 723. (Musc 723 Voice) Credit 3.** Modern Composers—Dubussy; Rachmanioff; etc., Contemporary writers including American Composers.

## DEPARTMENT OF PHYSICAL EDUCATION

**Requirements for Master of Science Degree in Physical Education**

Students without 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

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. |
| 2. | Methods and Materials in Physical Education | 3 hrs. |
| 3. | Kinesiology | 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. Courses numbered from 500 to 599 are for graduates and undergraduates.

Graduate courses required for a major in physical education:

| | | |
|---|---|---|
| 623. | Physiology of Muscular Exercise | 3 hrs. |
| 633. | Advanced Test and Measurement 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 Foundations of Physical Education | 3 hrs. |
| 763. | Physical Education Curriculum | 3 hrs. |

## GRADUATE MINOR IN PHYSICAL EDUCATION

| | | |
|---|---|---|
| 653. | Administrative Problems in Physical Education | 3 hrs. |
| 733. | Supervision in Physical Education | 3 hrs. |
| 753. | Scientific Foundations 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 or reports. Prerequisite: Physical Education 314 and 324.

**623. Physiology of Muscular Exercises. (P E 623 Musc Exer) (3-0) Credit 3. I or II.** Affects of physical education activities on individual; general affects of exercise upon bodily functions and affects of special types of exercise upon bodily function.

**633. Tests and Measurements. (P E 633 Test Meas) (2-1) Credit 3.** Tests available in the field for the various situations from elementary school to college. Use of various Anthropometric and strength tests instruments.

**653. Administrative Problems in Physical Education. (P E 653 Adm Prob) (3-0) Credit 3. I or II.** Coordination of the different phases of the program; administrative problems of physical education intramural and inter-collegiate athletics.

**PE 703. Seminar I—Techniques of Research in Physical Education. (P E 703 Research).** Techniques used in physical education research; historical, philosophical descriptive (observation, questionnaire, interview, job analysis), experimental and comparative methods; methods of preparing bibliographies, of selecting and defining thesis problems. This course must be taken during the first semester of graduate work. **(Credit 3).**

**PE 713. Seminar II—Thesis. (P E 713 Thesis).** Guidance in thesis writing, analysis of data, presentation of thesis topics in seminary groups for discussion and criticism. To be taken after thesis data have been gathered or with the consent of the instructor. **(Credit 3).**

**723. Kinesiology (P E 723) (2-1) Credit 3. I.** Musculature and bone structure of the body in relationship to the science of movement, joint mechanism, leverage and muscle action with special application to athletics and training.

**PE 733. Supervision in Physical Education. (PE 733 Supervision).** Study of principles and tools of educational supervision and their application to physical education. **(Credit 3).**

**753. Scientific Foundation of Physical Education. (P E 753 Foundatn) (3-0) Credit 3.** Principles taken from biology, sociology, psychology, anatomy and physiology basic to the teaching of physical education.

**763. Physical Education Curriculum. (P E 763 Curriculum) (3-0) Credit 3.** Study activities, aims, objectives and outcomes as they relate to courses of study and their construction; development of a course of study for the student's own particular situation.

### Requirements for a Graduate Minor in Health Education

A program of Health Education may be arranged for students seeking a graduate minor.

A prerequisite of six semester hours of undergraduate work in Health Education is required of all persons seeking a graduate minor in this field. Personal Hygiene and Community Hygiene are normally accepted for this requirement, however equivalent courses will be considered. In the case of students with unusual preparation or experience in specific areas related to the health field, an exception may be made with reference to the above requirement after consultation with the departmental adviser.

### 12 Semester Hours

A program totaling not less than 12 semester hours will be arranged in consultation with the departmental adviser. The following two courses will be required of all students. Other courses may be selected to meet the needs and interest of the student.

### REQUIRED COURSES

| | |
|---|---|
| Health Education 683. Community Planning for Health | 3 hrs. |
| Health Education 693. Teaching of Health | 3 hrs. |

The student may select any of the following courses to complete the requirement of 12 semester hours:

| | |
|---|---|
| Health Education 593. Rural Health Problems | 3 hrs. |
| Health Education 663. Health Care of Children | 3 hrs. |
| Health Education 673. Nutrition and Health | 3 hrs. |
| Health Education 901. Environmental Sanitation | 1 hr. |
| Health Education 903-6. Health Education Training Laboratory (or) Workshop in Health Education | 1 to 6 hrs. |
| Psy. 563. Mental Hygiene | 3 hrs. |

### SAFETY EDUCATION

| | |
|---|---|
| Education 543. Safety Education | 3 hrs. |
| Auto 503. Drivers Education and Training | 3 hrs. |

## DESCRIPTION OF COURSES

**Health Education 583. Rural Health Problems. (Hlth 583 Rural Hlth) (2-2) Credit 3.** Four areas of health-environmental sanitation and its relations to disease, good health habits and practices within the home, knowledge and use of existing health facilities and services, and community planning for better health, with particular emphasis on problems confronting rural people.

**Health Education 683. Community Planning for Health. (Hlth 683 Cmty Plng) (3-0) Credit 3.** Community structure, resources and organization in the promotion of healthy living; social, economic, political and educational aspects of community health problems.

**Health Education 693. Teaching of Health. (Hlth 693 Tchg Hlth) (3-0) Credit 3.** Principles, materials, methods and resources in teaching health in elementary and secondary schools.

**Health Education 663. Health Care of Children. (Hlth 663 Hlth Care) (3-0) Credit 3.** Essentials of growth and development of children—nutrition; purpose and scope of medical supervision; health inspection and observation; formation of desirable health habits, prevention and protection against common diseases; speech disorders, play habits and skills, first aid, and use of community resources.

**Health Education 901. Environmental Sanitation. (Hlth 901 Sanitation) (1-0) Credit 1.** One-week Institute on environmental sanitation offered as a part of the Training Laboratory in Health Education or can be taken separately. Sponsored jointly by the College and the Texas State Department of Health.

**Health Education 903. Health Education Training Laboratory or Workshop in Health Education. (Hlth 903-6 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.

**Health Education 673. Nutrition and Health. (Hlth 673 Nutrition) (3-0) Credit 3.** Essentials of an adequate diet; the food for persons of different ages, and the nutritive values of common food materials; special concern given regarding the relationship of nutrition and health education; materials from various agencies, diet surveys and projects.

**Health Education 563. Mental Hygiene. (HlEd 563 Mental Hyg) (3-0) Credit 3.** Examining and interpreting procedures for protecting and preserving the mental health of the individual through wholesome adjustment to the environment; attention is given to practicing mental hygiene in the classroom.

**Health Education 543. Safety Education. (HlEd 453 Safety Educ) (2-2) Credit 3.** 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. First aid, visual aids, safety projects, special programs, and the utilization of agencies outside of school.

### POLITICAL SCIENCE

Students who concentrate their graduate studies in political science 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 of the five fields listed below. 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 Municipl 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 Bibl Meth) (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.)

**593. International Organization. (PoSc 593 Intrnl Orgn) (3-0) Credit 3.** Development of international organization; major problems of United Nations.

**603. Ancient and Medieval Political Theory. (PoSc 603 Pol 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 Mod Thry) (3-0) Credit 3.** Political theories from the Reformation to the present; special attention to Machiavelli, Bodin, Hobbes, Montesquieu, Locke, Rousseau, Jefferson, the Mills, Hegel, Marx and the socialist theorists.

**623. International Law. (PoSc 623 Intl Law) (3-0) Credit 3.** The nature, content, development and operation of the law of the international community.

**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; governmental machinery and political processes in its formulation.

**653. The Constitution and Private Rights. (PoSc 653 Rights) (3-0) Credit 3.** Rights and duties of United States citizenship; crucial issues of individual freedom, subversion, loyalty and governmental authority as adjudicated by federal courts.

**673. American Constitutional Law. (PoSc 673 Const Law) (3-0) Credit 3.** Basic principles of the American constitutional system; judicial interpretation and application of those principles in construing powers of government and the rights of persons.

**693. Seminar in Areal Politics. (PoSc 693 Areal Pol) (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 adaptations 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.

**743. Problems in American Government. (PoSc 743 Govt Prob) (3-0) Credit 3.** Selected American governmental problems. Legislative reorganization; reapportionment; election problems; lobbying; intergovernmental relations; legislative process.

**753. Public Personnel Administration. (PoSc 753 Publ Persnl) (3-0) Credit 3.** Development and problems of the public service; recruitment, examination, placement, remuneration, 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.

Students who minor in Sociology should present a minimum of 9 undergraduate hours in any of the Social Sciences.

**503. Introduction to Social Welfare. (Soc 503 Soc Welf) (3-0) Credit 3. I or II.** Historical development of social work; fields of specialization; functions of agencies; job opportunities; and contributions of outstanding leaders.

**543. Urban Sociology. (Soc 543 Urban) (3-0) Credit 3. I.** 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. Social Statistics. (Soc 573 Soc Stat) (3-0) Credit 3. II.** Techniques of calculating values common to statistical analysis; simple measures of central tendencies through correlation and regression; speed and accuracy on calculating machine emphasized.

**583. Anthropology. (Soc 583 Anthropgy) (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 Seminar. (Soc 593 Seminar) (3-0) Credit 3. I or II.** For seniors and graduate students desiring to do independent research or study in fields not covered by current offerings. A staff member supervises the work of each student.

**603. Problems of Child Welfare. (Soc 603 Chld Welf) (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.

**643. Modern Social Problems (Soc 643 Problems) (3-0) Credit 3. II.** Analysis of processes of personal family, and community disorganization, methods and measures of social reform.

**663. Sociology for Extension Workers. (Soc 663 Extn Workers) Credit 3.** Analysis of the whole complex of social arrangements, group characteristics, traits and institutions that are concerned with rural living and go to make up rural society. Emphasis on techniques for analyzing special social problems and for utilizing social organization as a means of achieving program objectives.

**733. Criminology. (Soc 733 Criminlgy) (3-0) Credit 3. I.** Nature, extent and causes of crime; various schools of criminology, individualization of criminal treatment, and modern techniques of criminal investigation. Prerequsite: Sociology 213 and 223.

# School of Home Economics

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. (H E 513 Home Mgmt) (3-0) Credit 3. I and II.** A review of management studies, trends in the field and research related to management.

**533. Home Furnishings Workshop. (H E 533 Furnish Wkshp) (3-0) Credit 3. I and II.** Appropriate interior decorations, proper arrangement of furniture and equipment for all rooms according to their location in the house. Experience in making slip covers, draperies and lampshades.

**553. Family Life Problems. (H E 553 Fmly Prob) (3-0) Credit 3. I or II.** Ways different families achieve their purposes with resources available. Management procedures for families on various income levels. Individual problems according to needs of student enrolled.

**563. Consumer Economics. (H E 563 Consumn Econ) (3-0) Credit 3. I and II.** Family budgets, marketing, price control and other problems of the consumer.

**583. Methods and Techniques of Child Study. (H E 583 Child Study) (3-0) Credit 3. I or II.** Open to seniors and graduate students. Modern methods and suitable techniques for studying children. Experimentation by various methods of studying children.

**703. Seminar in Nutrition. (Fds 703 Nutr Semnr) (3-0) Credit 3. I and II.** Review and interpretation of the literature of field, emphasizing recent advances and involving individual assignments and reports.

**713. Problems in Costume Design. (Clo 713 Dsgn Prob) (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. I and II.** Reviews and interpretations in the field of foods and experimental food preparation, involving individual assignments and oral and written reports.

**753. Clothing Seminar. (Clo 753 Seminar) (3-0) Credit 3. I and II.** Aspects of clothing which directly affect the consumer.

**763. Problems in Home Economics. (H E 763 Problems) (3-0) Credit 3. I and II.** Work in the field of major interest. Reports, discussion and term papers.

**773. Advanced Clothing for Graduate Students. (Clo 773 Adv Cloth) (3-0) Credit 3.** Advanced problems in garment construction; selection, design and construction of suitable clothing for both children and adults. Lab fee: $2.00.

**803. Draping and Construction. (Clo 803 Draping) (0-6) Credit 3.** Principles of design; draping of fabric on dress form; interpretation of design in relation to different figures. Construction of one draped garment.

**813. Child Development Curriculum. (H E 813 Chld Dvlp) (3-0) Credit 3. I or II.** Designed to explain the modern curriculum of the nursery school, kindergarten and elementary school. Emphasis on methods and materials in various subject areas.

**883. Personal and Family Finance. (H E 883 Fmly Finance) (3-0) Credit 3. I and II.** General problems of individual and family handling of money. Especially planned students with limited background experience on the graduate level.

**900. Principles of Human Nutrition. (Fds 900 Nutr Prin) (3-0) Credit 3.** Application of nutrition to individual problems.

**903. Organization and Management. (H E 903 Orgzn Mgmt) (3-0) Credit 3.** Management for Institutional feeding—personnel, marketing, preparation, service and sanitation.

**913. Problems of Youth. (H E 913 Youth Prob) (3-0) Credit 3.** Problems concerned with youth during adolescent years. Some attention given to problem cases as found in Home and Family Life classes.

**993. Nutrition and Diet Therapy. (Fds 993 Diet Therpy) (3-0) Credit 3.** Planning diets for various diseases and conditions. Some experience in use of facilities and work with formula.

## HOME ECONOMICS EDUCATION

**503. Methods and Materials in Extension Programs. (HeEd 503 Extnd Prog) (3-0) Credit 3. I or II.** A study of aims and values of home and summer experiences and club work; consideration of special problems, present trends; methods of promotion; selection and organization of subject matter.

**523. Research Problems. (HeEd 523 Rsrch Prob) (3-0) Credit 3. I and II.** Methods used in collection, treatment and interpretation of data in the field of Home Economics.

**543. Advanced Methods. (HeEd 543 Adv Methods) (3-0) Credit 3. I and II.** Newer trends in teaching Home Economics.

**573. Research. (HeEd 573 Research) (3-0) Credit 0-3. I and II.** Thesis involving extensive study of chosen problems.

**593. Home Economics Curriculum. (HeEd 593 Curriculum) (3-0) Credit 3. I and II.** The objectives of home economics in high schools' recent surveys and other methods used in determining content of curricula.

**643. Adult Education. (HeEd 643 Adult Educ) (3-0) Credit 3. I and II.** Objectives of adult education planning program; teaching procedures; and discussion of special problems. Special reports and bibliographies.

**723. Measurement. (HeEd 743 Statistics) (3-0) Credit 3. I and II.** Home Economics subject matter tests, scales, construction and evaluation of objective devices.

**743. Statistical Techniques. (HeEd 743 Statistics) (3-0) Credit 3. I and II.** Methods of interpretation and utilization of data.

**793. Supervision. (HeEd 793 Supervision) (3-0) Credit 3. I and II.** Principles of supervision as applied to homemaking and Home Economics teaching and learning.

**843. Techniques in Educational Research. (HeEd 843 Research) (3-0) Credit 3.** Research in home economics education, sources of information and form in preparation of research reports.

**623. Extension Clothing Methods. (Clo 623 Extn Methods) Credit 3.** Methods for teaching clothing in home demonstration clubs and 4-H clubs. Methods chosen by class based on their county situations. Late developments in subject matter will bring the class up-to-date in the clothing field.

**673. Nutrition for Extension Workers. (Fds 673 Extn Nutr). Credit 3.** Practical course in nutrition and methods of teaching nutrition in extension. Discussion of various methods for putting across extension foods and nutrition programs in the country as well as how to keep up-to-date in the subject.

**753. Extension Supervision. (HeEd 753 Extn Supv) Credit 3.** Analysis of the role of the Extension Supervisor and presentation of best methods available for aiding in the effective operation of the extension program.

## Division of Industrial Education

In the Division of Industrial Education, 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-year curriculum from a College or University of recognized standing, substantially equivalent to that required of undergradautes in the Division of Industrial Education. 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 Director 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 Director of Industrial Education.

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. Utilization of Audio-Visual Materials. (Audo 503 Utilization) (2-3) 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, slides, film strips, apaque projectors, etc. Lab fee: $2.00.

**513. Administration and Supervision of Audio-Visual Education. (Audo 513 Adm Supv) (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. (Audo 523 Graph Mtrl) (1-6) Credit 3. II.** Emphasis on the construction of audio-visual materials for classroom teaching. Basic production techniques of audio-visual material for various teaching areas. Lab fee: $2.00.

**543. Laboratory in Audio-Visual Aids. (Audo 543 Audo Lab) (1-6) Credit 3. II.** Practical experience in the mechanical manipulation of the various audio-visual aids and devices. Includes mechanical theory of aids. Lab fee: $2.00.

## DRIVER EDUCATION

**503. Driver Education. (Auto 503 Driver Ed) (1-6) Credit 3. I, II.** Preparation for teaching driver education in workshops or secondary schools; state laws and regulations, safety practice, teaching methods, course construction, testing devices, psycho-physical traits and measurements; principles and methods of road skill testing; practice in training drivers using a dual control car. Lab fee: $2.00.

## INDUSTRIAL EDUCATION

**513. Curriculum Construction and Course Making in Industrial Education (IE 513 Curr Constr) (3-0) Credit 3. I.** Principles of curriculum construction and course making; study of curriculum concepts as they have prevailed in modern education; comparative study of Industrial Education curricula as used throughout leading high schools; analytical technique in curriculum construction; course making and syllabus construction.

**523. Tests and Measurements in Industrial Education. (IE 523 Test Measrm) (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.

**542-3. Trade and Job Analysis. (IE 542-3 Job Analysis) (2-0) (3-0) Credit 2 or 3. II.** Analysis technique as it has been developed by various leaders in Industrial Education; job analysis for the purpose of determining the content of training for an occupation; related content analysis for determining what should be taught as classroom material; analysis of a trade, industry or industrial plant for determining the general outline of a program of trade or industrial training.

**563. The General Shop. (IE 563 Gen 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.

**583. Industrial Arts for the Elementary School (IE 583 Elem Sch) (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.

**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 Adm Ind Arts) (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 educational authorities, correlating Industrial Arts with other phases of education.

**722-3. Administration and Supervision of Vocational-Industrial Education. (IE 722-3 Adm Voc Ed) (2-0) (3-0) Credit 2 or 3. II.** The administration and supervision of Vocational-Industrial Education in all day, part-time and evening programs, apprenticeship, school-industry programs, vocational rehabilitation; relation of federal to state, state to local, each to the other; study of the legal administrative and supervisory aspects of Vocational-Industrial Education as it operates under the Smith-Hughes and George Barden Act; also, the State Plan for Vocational Education.

**732-3. Philosophy of Industrial Education. (IE 732-3 Philosophy) (2-0) (3-0) Credit 2 or 3. I.** Fundamental concepts of progressive Industrial Education; principles, beliefs, and assumptions in regard to Industrial Education; its objectives and relationship to other phases of education; its 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 in Industrial Education. (IE 753 Practicum). Maximum credit 6 hours.** Development of current problems as 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.

**792-3-4. Thesis in Industrial Education. (IE 792-3-4 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. Prequisite: I. E. 763.

# Prairie View Agricultural and Mechanical College of Texas

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MRS. IRENE L. DAVIS, B.S., Recorder

MRS. MARY E. DAVIS, B.S., Tabulating Equipment Operator

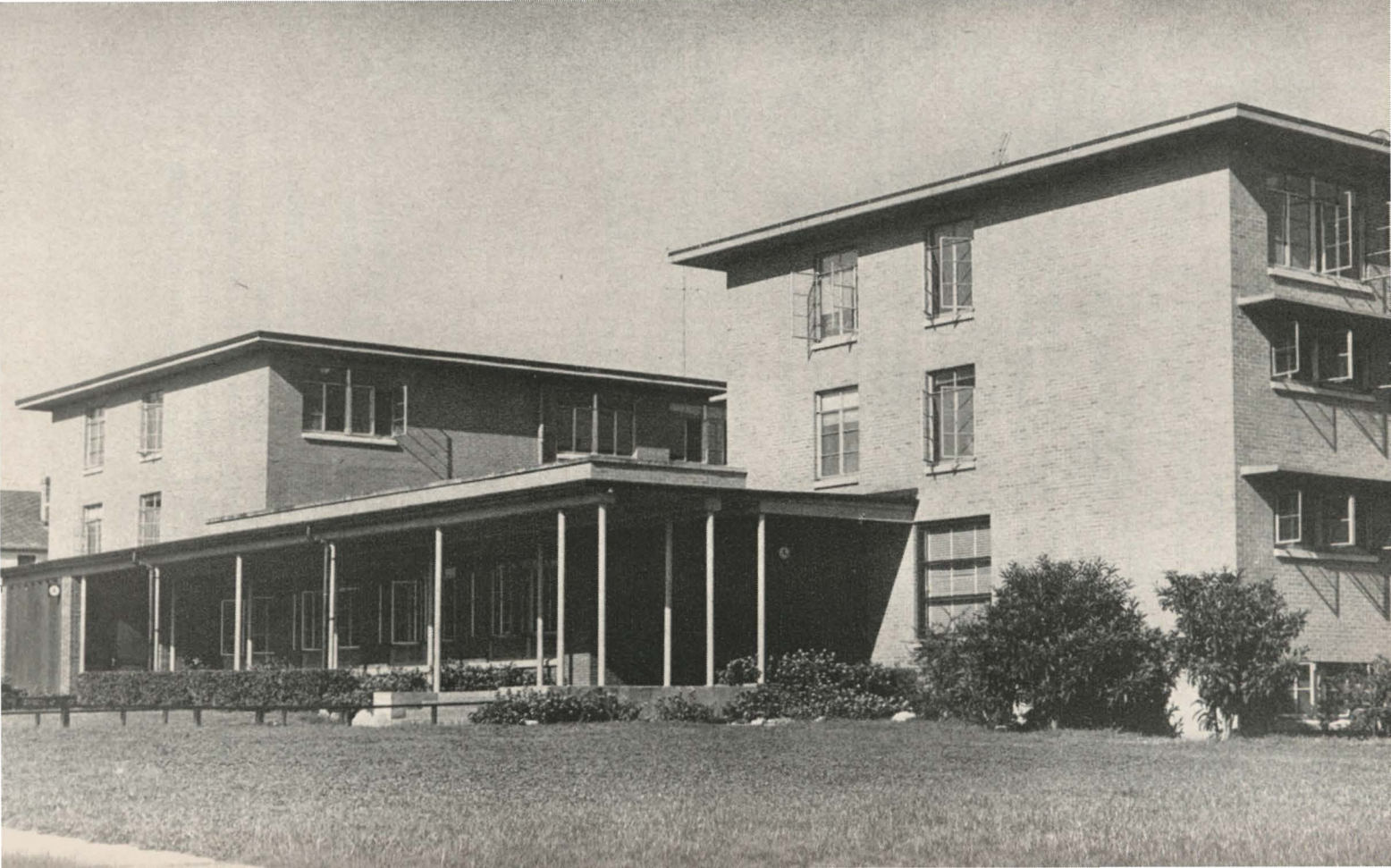
MISS WILMA E. GOODEN, B.S., Transcript Clerk

MISS NAOMI M. HASKINS, Admissions and Current Records Clerk

MRS. UNEEDA M. TURNER, B.S., Receptionist and Secretary

MRS. IRMA KENDRICKS, B.S., Clerk-Typist, Alumni Records

*On Leave



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WILLIAM H. BELL, JR., B.S., Tabulating Equipment Supervisor
ULYSSES R. BELL, B.S., Inventory Clerk
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ELMER L. HARRISON, B.A., Accounting Assistant
MISS LEATRICE J. HASKINS, Clerk-Typist
CLEOTIS B. HOLLOWAY, B.A., Purchase Order Clerk
MISS THELMA L. HOLMES, B.S., Secretary
GRIFF W. KENDRICK, B.S., Accountant
LaVAUGHN C. MOSLEY, B.S., Cashier
OLLIE C. POLK, B.A., Accounting Assistant
MRS. ANGIE R. RICHARDS, B.S., Clerk-Typist
HERMAN L. SELMAN, B.S., Accounting Assistant
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MISS GRACIE B. TWINE, B.S., Clerk-Typist
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MRS. TOMMIE M. ALLEN, M.A.L.S., Instructor, Library Science
MRS. GAZELLE W. BOOTHE, M.S., Reference Assistant
MISS WILLIE MAE HUDGINS, B.S., Assistant in Acquisitions
MRS. NOVA C. JEFFERSON, M.Ed., Assistant Circulation Librarian
MISS MARY E. LAW, B.A., Teacher's Reserve's Librarian
MRS. ROSA M. LITTLE, B.S., Assistant in Serials
MISS CLARA B. MOSLEY, M.S. in L.S., Circulation Librarian
MRS. JOHNANNA DIGGS OVERSTREET, B.S., Circulation Assistant
ELMER C. PARISH, B.S., Circulation Assistant
SAM PETERS, B.A., Assistant in Reference
MISS HELEN RUTH SHELBY, B.S., Secretary
MRS. JIMMIZINE B. TAYLOR, B.S., in L.S., Reference Librarian
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HARRY E. FULLER, Acting Director of Student Life and Dean of Men
JAMES P. BROWN, Veteran's Counselor
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MISS THELMA REEVES, R.N., Night Nurse
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MISS CLARA ROBERSON, B.S., Nursing Arts Instructor

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MISS VEIDA N. WILLIAMSON, Secretary to Director of Division of Industrial Education

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DURIA L. HENDERSON, Head Baker

PERCY CAMBRIC, Meat Cutter II

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ESAU D. BROWN, Cook II

WILLIE B. HAYNES, Cook III

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THOMAS SNELL, Cook I

JOHNNIE C. DEESE, Cook I

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MRS. GEORGIA M. ROGERS, Cook II

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JAMAS OSBY, Baker II

BOBBY KEMP, Baker I

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RICHARD THOMPSON, JR., Food Service Worker
HOWARD L. ABBS, Food Service Worker
HARRY MANUEL, Food Service Worker
MACAROY McDONALD, Meat Cutter I
SHERMAN McDONALD, Food Service Worker
VERNELL G. PRICE, Food Service Worker
WILLIE McGOWAN, Custodial Worker
DEWITT RUTLEDGE, Food Service Worker
JAMES BRANDYBURG, Baker I
JOHN MORRISON, Food Service Worker
ERSKIN WHITE, Food Service Supervisor I
ELIJAH H. ANDERSON, Food Service Worker
MRS. MOZELL BENNETT, Food Service Worker
GARFIELD JESSE, Food Service Worker
CHRIS STEWART, Food Service Worker
JAMES OAKS, Food Service Worker
EDDIE PHILLIPS, Food Service Worker
JAMES WHITE, Food Service Worker
RENELDA JORDAN, Food Service Worker
AMOS ABRAM, Food Service Worker
MRS. ANNIE F. WHITEHEAD, Food Service Worker
JAMES A. THOMPSON, Food Service Worker

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MISS LOVIE HAYNES, Telephone Operator
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ELI THOMPSON, Fireman, Steam Plant
CURTIS ANDERSON, SR., Fireman, Steam Plant
CECIL RICHARDS. Repairman, Steam Plant
JOE JACKSON, Repairman, Steam Plant

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PRINTLE BOGGESS, Repairman, Steam Plant
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CURLEY GREEN, Power Plant Helper, Steam Plant
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CLAUDE MATHIS, B.S., Laborer
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HOWARD LEE, Utility Worker
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WILLIE LEE JACKSON, Laborer
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ROOSEVELT MAYES, Custodial Worker I
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MISS LORINE SIBLEY, Stenographer
IRA THOMPKINS, Maintenance Supervisor
RICHARD L. WILLIAMS, Utility Worker
ANDREW C. TOLER, Utility Worker
CLAUDE B. WAIR, Utility Worker
R. C. HUDSPETH, Utility Worker
FLOYD E. RAGSTON, Utility Worker
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JOHN H. LENO, Maintenance Worker
CURLEY GREEN, Maintenance Worker
ROY C. THOMPSON, Painter
GRANERSON DAVIS, Carpenter

ERNEST H. SALIENS, Carpenter
TIERY E. GAINES, Sewage and Plant Transportation Foreman
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WILLIAM S. KIDD, Plumber
LEON WASHINGTON, Plumber
TRAVIS J. WASHINGTON, Utility Worker
WILLIE L. WATSON, Automotive Mechanic
ANDREW J. WYNN, Storekeeper II
JESSE RICHARDS, Utility Worker
HAMMOND SLATER, Laborer
TOMMIE WHITE, Laborer
CLEOPHUS WHITE, Utility Worker

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SANDERS STREDICK, Night Watchman
VERNON FREEMAN, Night Watchman
A. C. BEAN, Night Watchman
FRANK HOOD, Night Watchman
ED KEMP, Night Watchman
WILLIE ELLIS, Fire Chief

# Officers of Instruction, 1959-60

(Dates immediately following names indicate when persons were appointed to faculty)

DREW, JESSE MONROE (1943).....Dean of College, Dean of Graduate School
B.S., Lincoln University, 1929; M.S., Kansas University, 1939; Ed.D., Harvard University, 1944.

ALFRED, MISS L. JEAN (1959).....Nursing Education
B.S. in N.E., Prairie View A & M College, 1959.

ALLEN, MRS. TOMMIE M. (1959).....Library Service Education
B.S., Tennessee A&I State University, 1951; M.A.L.S., George Peabody College, 1955

ANDERSON, EDISON HOLMES, SR. (1958).....Music
B.A., Prairie View A & M College, 1938; M.A., University of Iowa, 1941; Specialist Diploma, Columbia University, 1947; Ph.D., University of Iowa, 1957.

BARBER, MARION M. (1959).....Carpentry
B.S., Langston University, 1939; M.S., Oklahoma State University, 1956.

BECTON, JULIUS W., JR., Capt., Armor (1957).....Military Science & Tactics
The Infantry School, OCS, 1945; Muhlenberg College, 1948; The Infantry School Off Basic Course, 1949; Pennsylvania State University, 1952; The Infantry School Off Communications Course, 1952; Temple University, Summer 1953; The Infantry School Infantry Off Advance Course, 1954.

BELL, WILLIE JAMES (1949).....Printing
Certificate in Printing, Prairie View A & M College, 1947; Certificate in Mechanism of the Linotype Machine, Mergenthaler Linotype School, 1951; B.S.Ind.Ed., Prairie View A & M College, 1959.

BENNETT, MISS EMILY MARY LOUISE (1959).....English
A.B., Spelman College, 1931; M.A., University of Missouri, 1954; University of Colorado, 1955-56.

BERRY, JEWEL E. (1956).....Biology
A.B., Fisk University, 1951; M.A., ibid., 1953; Ph.D., Notre Dame University, 1956.

BLACKMAN, NEELY (1959).....Radio Technology
B.S., Texas Southern University, 1953; M.Ed., ibid., 1956.

BOND, HORACE J. (1958).....English
B.A., Indiana University, 1953; M.A., ibid., 1954.

BOOTH, ARTHUR H., Lieutenant Colonel, Artillery (1960).....
.....Commandant, Military Science & Tactics
B.S., Lincoln University, 1939; Chemical Warfare, OCS., 1942; Anti-aircraft and Guided Missile Br., The Artillery School, 1951; Air-Ground Operations School, 1952; Associate Command and General Staff College, 1958.

BOSEMAN, MOSES (1958).....Mathematics
B.S., Morris Brown College, 1951; M.S., Atlanta University, 1958.

BOYDEN, LLOYD R. (1957).....Plumbing
Certificate in Plumbing and Heating, Hampton Institute, 1950; B.S., ibid., 1952; New York University, Summers 1956, 1957; Hampton Institute, Fall 1956-57; New York University, Summers 1958, 1959.

BOYER, JACOB L. (1954).....Cooking and Baking
B.S., Prairie View College, 1943; M.S., ibid., 1947; M.A., ibid., 1957.

BRANNON, MRS. MAIDA S. (1928-1937; 1953).....Director, Division of Nursing Education
Diploma in Nursing, Tuskegee Institute School of Nursing, 1923; Diploma in Education, Tuskegee Institute, 1925; B.S. in N.E., University of Minnesota, 1949; M.A. in N.E. & Adm., Columbia University Teachers' College, 1956.

BROUSSARD, MISS MAMIE J. (1957).....Romance Languages
A.B., Xavier University, 1943; M.A., Atlanta University, 1945; University of California, Summer 1948; Louisiana State University, Summer 1952; University of Texas, 1956-57.

BROWN, HERBERT J. (1953-1956; 1957)....Psychology
B.A., University of Connecticut, 1950; M.A., ibid., 1953; New York University, 1952-53; New York School of Social Research, Summer 1954; University of Texas, 1956-57.

BROWN, JONEL LEONARD (1943)....Head, Department of Economics
B.A., Morehouse College, 1930; M.A., University of Wisconsin, 1942; Ph.D., ibid., 1946; Ll.D., Paul Quinn College, 1951.

BURDINE, MISS DOROTHY I. (1933, 1938)....Education
A.B., Colorado State College of Education, 1927; A.M., ibid., 1933; University of Denver, Summers 1936, 1942, 1947, 1951, 1958.

BYRD, L. L. (1956)....Science Education
B.S., Tuskegee Institute, 1949; M.A., New York University, 1955; University of Denver, Summer 1958.

CAMPBELL, MISS ANNE LUCILLE (1932)....Head, Department of English
B.A., Bradley University, 1930; M.A., Northwestern University, 1935; Ph.D., New York University, 1956.

CARTER, PURVIS M. (1956)....History
A.B., Tillotson College, 1948; M.A., Howard University, 1950; University of Denver, Summers, 1954, 1955.

CASH, WILLIAM LEVI, JR. (1953)....Psychology
A.B., Fisk University, 1937; A.M., University of Michigan, 1952; Ph.D., ibid., 1954.

CHARLESTON, CUBE (1953)....Printing
Certificate in Printing, Prairie View A & M College, 1951; Certificate in Linotype Operation, Mergenthaler Linotype School, 1953; Prairie View A & M College, 1956.

CLARKSON, MISS AMELIA L. (1958)....Nursing Education
B.S., Meharry Medical College, 1953; University of Texas, 1956-57.

CLARKSON, MRS. Melba C. (1958)....Business Education
A.A., St. Philip's Junior College, 1947; B.A., Texas Southern University, 1949; M.A., ibid., 1958.

COLEMAN, ALVIN E. (1956)....Biology
B.S., West Virginia State College, 1948; M.S., Michigan State University, 1955.

COLEMAN, MRS. ZELIA S. (1947)....Household Economics
B.S., Bishop College, 1930; B.A., Prairie View College, 1938; M.S., Kansas State College, 1943; University of Wisconsin, Summers 1948; 1949, 1950; University of California, Summer 1952; M.A., Prairie View A & M College, 1954; University of Pennsylvania, 1955; Ohio State University, Summers 1956, 1957, 1958, 1959.

CONTEE, CLARENCE G. (1958)....History
B.A., Morgan State College, 1951; M.A., Howard University, 1953; John Hopkins University, 1955-56.

CORUTHERS, JOHN M. (1937)....Agricultural Economics
B.S., Hampton Institute, 1925; M.S., University of Wisconsin, 1928; Ph.D., Cornell University, 1934; University of California, Summer 1954.

COSS, MRS. CARRIE BELL (1946)....Psychology
A.B., Howard University, 1926; B.E., University of Cincinnati, 1927; University of Pennsylvania, Summer 1928; University of Cincinnati, Summer 1931; M.A., Columbia University, 1940; ibid., Summer 1951; University of Texas, Summer 1955; Denver University, Summer 1959.

CULLINS, MISS ELLA W. (1942)....Music
B.A. in Mus., Philander Smith College, 1940; M.A. in Mus., Boston University, 1942; University of Michigan, Summers 1945, 1948, 1949; Boston University, 1953; University of Michigan, Summer 1959.

DAUGHERTY, PERRY C. (1957)....Economics
A.B., Clark College, 1949; M.A., Atlanta University, 1957.

DAVIS, SAMUEL WALTER (1948)....Education
B.S., Southern Illinois Normal University, 1941; M.S., Loyola University, 1948; University of Chicago, Summers 1948, 1949, 1950, 1951-52, Summer 1956.

DOOLEY, THOMAS P. (1934)....Dean, School of Arts and Sciences
B.A., Morehouse College, 1927; M.S., University of Iowa, 1931; Ph.D., ibid., 1939.

DOUGLAS, SAMUEL H. (1959)....Mathematics
B.S., Bishop College, 1948; M.S., Oklahoma State University, 1959.

DUNSON, ALVIS A. (1954)....Head, Department of Modern Foreign Language
A.B., Morehouse College, 1929; M.A., Columbia University, 1934; Certificate, University of Berlin, 1937; Ph.D., Ohio State University, 1954.

ECHOLS, JACK W. (1954).....Head, Department of Education
B.S., Prairie View College, 1934; M.S., ibid., 1951; Ed.D., University of Denver, 1954.

EDWARDS, CHARLES T., JR. (1957).....Masonry
Certificate in Trowel Trades, Hampton Institute, 1952; B.S., ibid., 1954; Kansas State College, Summers 1958, 1959.

EMERY, SYLVIA SEDELIA (1957).....Foods and Nutrition
B.S.H.E., Langston University, 1939; M.S.H.Ec.Ed., Oklahoma State University, 1955; ibid., Summer 1958; University of Oklahoma, Summer 1959.

ENGRAM, LEWIS W. (1948).....Dairy Husbandry
B.S., Hampton Institute, 1940; M.S., Michigan State University, 1946; University of Minnesota, Summer 1956.

EWALT, ROBERT C. (1959).....Business Administration
B.S. in Ed., Central State College, 1933; M.A., Western Reserve University, 1949; Professional Diploma, Columbia Teachers College, 1958; ibid., Summer 1959.

FERGUSON, WILLIAM C. (1958).....Head, Department of Business Education and Administration
B.S.C., University of Iowa, 1932; M.A., ibid., 1942; Ph.D., ibid., 1955.

FINLEY, SETH D., Major, Infantry (1956).....Military Science & Tactics
B.S., Western Michigan University, 1942; The Infantry School, OCS, 1943; ibid., Motor Off Course, 1943; Ft. Bragg PT School, Physical Training and Athletic Off, 1948; Carlisle Barracks Armed Forces Information School, 1948; The Infantry School, Company Officer Refresher Course, 1953; ibid., Associate Infantry Off Advance Course, 1956; Ohio State University,1957.

FONTENOT, DEWEY (1958).....Automobile Mechanics
B.S., Southern University, 1954; Certificate, Sun Electric Corporation, 1954; Certificates General Motors Corporation, 1955, 1956, 1957, 1959.

FRANCIS, LUTHER V. (1950).....General Engineering
B.S., Prairie View A & M College, 1950; M.S., ibid., 1952.

GALLOWAY, MRS. ELIZABETH C. MAY (1923).....Dean, School of Home Economics
B.S., Kansas State College, Summer 1919; M.S., ibid., 1933; University of Chicago, 1930; University of Minnesota, 1938-39; University of California at Berkeley, 1946; Iowa State College, 1949.

GARNETT, MISS LILLIAN B. (1951).....Business Education
B.S., Emporia Teachers College, 1936; M.S., ibid., 1951.

GARRETT, CONNALLY SHELTON (1948).....Music
B.A., Prairie View College, 1943; M.Mus., New England Conservatory of Music, 1948; Harvard University, Summers 1949, 1950, 1951, 1952; Eastman School of Music, Summer 1954; Private Piano Study with Albert Hirsh, 1958-59, 1959-60.

JONES, MISS ANNIE M. (1957).....Physical Education
B.S., West Virginia State College, 1951; M.A., Columbia University, 1958.

JONES, EARL K. (1954).....Chemistry
B.S., Knoxville College, 1937; M.S., Virginia State College, 1949; Ohio State University, Summers 1952, 1953.

JONES, HARDING L. (1957).....Industrial Arts
B.S., Tennessee A & I University, 1951.

JONES, HERMAN T. (1947).....Education
A.B., Univeristy of Kansas, 1931; A.M., ibid., 1933; ibid., 1946, Summer 1951; University of Oklahoma, Summer 1956.

JONES, JULIUS BERTRAM (1951).....Music
B.S., Ithaca College, 1931; Kansas University, 1948; ibid., Summer 1955; M.A., Prairie View A & M College, 1957.

JORDAN, MISS KATHRYN NELL (1951).....Music
B.A., Langston University, 1945; Northwestern University, Summers 1946, 1947; M.A., State University of Iowa, 1949; ibid., Summer 1956.

KELLY, GEORGE E., JR. (1955)..... Electrical Engineering
B.S.E.E., Prairie View A & M College, 1953; M.S.E.E., University of Texas, 1955. (Reg. Prof. Engr.)

KEMP, HENRY P. (1959)..... Industrial Education
B.S., Hampton Institute, 1947; ibid., Summer 1948.

KYNARD, ALFRED T. (1953)..... Teacher Trainer, Trade and Industrial Education
B.S., Hampton Institute, 1950; M.A., New York University, 1951; University of California, 1957-1959.

LAW, MISS MARY EARLE (1948)..... Library Service Education
B.A., Prairie View A & M College, 1947.

LEDBETTER, MRS. FRANKIE B. (1952)..... English
A.B., Bishop College, 1934; M.A., University of Colorado, 1952; ibid., Spring 1951-52, Summers 1953, 1958, 1959.

HOUSTON, HASKELL S. (1942)..... General Engineering
B.S., Prairie View College, 1933; Brooklyn Polytechnic Institute, Summer 1948; Illinois Institute of Technology, Summers 1950, 1951, 1952, 1953; Iowa State University of Science and Technology, Summer 1959.

HUBBARD, MISS VIVIAN E. (1955)..... Cooking and Baking
B.S., Prairie View A & M College, 1952; M.S., Michigan State University, 1959.

HUNT, MRS. DELIA M. (1947)..... Clothing and Home Economics Education
B.S., Prairie View College, 1935; Kansas State College, Summers 1936, 1937; M.S., Prairie View College, 1945; University of California, Spring and Summer 1946; Traphagen School of Fashion, 1951; Colorado A & M College, Summers 1954, 1957; Prairie View A & M College, Summer 1959.

HYMAN, MISS LADELLE MARIE (1957)..... Business Education
B.S., Arkansas A. M. & N. College, 1957; M.B.A., Marquette University, 1958.

INGRUM, MATT I. (1958)..... Cooking and Baking
B.S., Tuskegee Institute, 1950; A.D.A. Internship, Michael Reese Hospital, Chicago, Illinois, 1952-53.

JACKSON, SAMUEL C. (1959)..... English
B.A. in Ed., Howard University, 1939; M.A., Columbia University, 1947; ibid., 1948-1951.

JOHNSON, ERRIC J. (1957)..... Agricultural Engineering
B.S., Prairie View A & M College, 1947; M.S., Iowa State College, 1955.

JOHNSON, NORMAN J. (1956)..... Physical Education
A.B., Kentucky State College, 1941; M.A., University of Michigan, 1947; ibid., Summers 1948, 1949, Spring 1949; Summers 1950, 1951, 1952, 1953, 1954, 1958, 1959.

JOHNSON, WINFRED V. (1958)..... Sociology
A.B., Livingstone College, 1949; B.D., Capital University, 1958.

GIBSON, MRS. KATHRYN SNELL (1953)..... Education
Modern Kindergarten Training School, 1935; B.A., Wiley College, 1941; M.A., Columbia Teachers College, 1947; ibid., 1951, 1956-57.

GLENN, MILTON A. (1952)..... Woodwork
B.S., Kansas State Teachers College, 1950.

GLOVER, ISRAEL E. (1955)..... Head, Department of Mathematics
B.S., Johnson C. Smith University, 1935; M.A., University of Michigan, 1937; Ph.D., Oklahoma State University, 1959.

GRAY, BRUCY C. (1958)..... Mathematics
B.S., Prairie View A & M College, 1956; M.S., North Texas State College, 1958.

GREAUX, AUSTIN E. (1951)..... Architectural Engineering
B.Arch., The Catholic University of America, 1950; ibid., 1950, 1951.

HENRY, MARION (1956)..... Audio-Visual Education
B.S., Southern University, 1952; M.S., Bradley University, 1953.

HIGGS, MRS. OLIVETTE JACKSON (1956)..... Romance Languages
B.A., Arkansas A.M.&N. College, 1954; M.A., Atlanta University, 1956; E.S.P.P.P.F.E. de la Sorbonne, Summer 1959.

HILL, JESSE LEON (1945)..... Tailoring
B.S., Prairie View A&M College, 1940; Colorado A & M College, Summer 1948; M.S., Prairie View A & M College, 1959.

HOLMES, JOHN D. (1958)..... Economics
B.A., West Virginia State College, 1950; M.S., University of Illinois, 1955; Ph.D., ibid., 1959.

HOOD, MISS WILLA (1954)..... Romance Languages
A.B., Tillotson College, 1939; M.A., National University of Mexico, 1949; Columbia Teachers College, 1953-54; ibid., Summers 1954, 1955, 1955; Institut D'Etudes Francaises, Summer 1959.

LEWIS, EARL M. (1953)..... Head, Department of Political Science
A.B., Tougaloo College, 1942; A.M., Loyola University, 1948; Ph.D., University of Chicago, 1951.

LEWIS, MISS IOLA E. (1959)..... English
A.B., Allen University, 1942; M.A., Howard University, 1945; New York University, Spring 1950.

LEWIS, ROSCOE W. (1955)..... Poultry Husbandry
B.S., Prairie View College, 1939; M.S., Kansas State College, 1952; Ph.D., ibid., 1955.

LINTON, WALTER L., Master Sergeant (1957)..... Military Science & Tactics
B.S., Wilberforce University, 1933; The Infantry School Off Heavy Weapons Course, 1941; The Armor School, Off Basic Tank Destroyer Course, 1942; ibid., Off Advanced Tank Destroyer Course, 1944; ibid., Associate Advanced Course, 1950.

LOGAN, WILLIAM M. (1957)..... Physics
B.S., Howard University, 1949; M.S., ibid., 1953; Union College, Summer 1955.

McCANN, PRINCE V. (1959)..... Chemistry
B.S., Prairie View A & M College, 1956; ibid., 1958-59.

McGHEE, LARRY C. (1956)..... Mechanical Drawing
B.S.Ind.Ed., Southern University, 1955.

McKNIGHT, MISS GLENDA LEE (1958)..... Physical Education
B.S., Prairie View A & M College, 1950; M.S., ibid., 1956.

McMILLAN, LEMMON C. (1946)..... Registrar
B.A., Prairie View, 1939; M.A., ibid, 1951; University of Texas, Summer 1951 and 1952, 1953-54, and Summer 1954.

MATTHEW, ANDREW (1959)..... Electricity
B.S., Tuskegee Institute, 1958; RCA Institute, 1958.

MILLER, THOMAS W. (1958)..... Industrial Education
B.S., Lincoln University, 1950; M.Ed., University of Missouri, 1957; Ed.D., ibid., 1958.

MOORE, MRS. HARRIET L. (1956)..... Political Science
A.B., Spelman College, 1949; M.A., Atlanta University, 1952; Columbia University, Summer 1952; Johns Hopkins University, Summer 1954.

MOORE, LEROY G., JR. (1956)..... Physical Education
B.S., Langston University, 1948; M.S., Colorado State College of Education, 1949; ibid., Summers 1950, 1951.

MOSLEY, CLARA B. (1957)..... Library Service Education
B.S. in Sec. Ed., Alabama State College, 1954; M.S., in L.S., Atlanta University, 1957.

MOSLEY, STACY T., JR. (1959)..... Driver Education
B.S., Prairie View A & M College, 1959.

MUCKELROY, MRS. MARLENE J. (1955)..... Business Education
B.S., Hampton Institute, 1954; M.A., Columbia University, 1955.

MURPHY, JOHN B. (1959)..... Education
B.S., Prairie View College, 1943; M.S., Kansas State College, 1946; Ph.D., University of Texas, 1959.

NICHOLAS, CHARLES HAWKINS (1943)..... Chairman, Biology Section, Natural Science Department
A.B., Talladega College, 1930; M.S., University of Michigan, 1939; Columbia University, Summer 1934; Atlanta University Workshop, Summer 1941; Chicago University, Summer 1947, 1947-48, Summers 1948, 1949.

NICKS, WILLIAM JAMES (1945)..... Head, Department of Physical Education and Director of Athletics
B.S., Morris Brown College, 1928; M.A., Columbia University, 1941.

NORRIS, ERNEST MISHAEL (1927-1929; 1937)..... Agricultural Education
B.S., Prairie View State College, 1927; M.S., Cornell University, 1931; Ph.D., ibid., 1934.

O'BANION, ELMER E. (1939)..... Head, Department of Natural Sciences, Chairman, Chemistry Section
A.B., Indiana University, 1934; M.A., ibid., 1935; Ph.D., ibid., 1942; Oakridge Institute of Nuclear Studies, 1950.

OUTLY, MRS. ERNESTINE L. (1957)..... Child Development
A.B., Tillotson College, 1947; M.S., Texas Southern University, 1953; ibid., 1954; Merrill-Palmer School, Summer 1957; University of Wisconsin, Summer 1958; Colorado State University, Summer 1959.

OWENS, EMIEL W. (1948, 1952)..... Agriculture
B.S., Prairie View A & M College, 1947; M.S., ibid., 1948; Ph.D., Ohio State University, 1952; Case Institute of Technology, Summer 1955.

PALMORE, MISS SYLVIA (1957, 1959)..... Music
B.S., Juilliard School of Music, 1956; M.Mus., University of Michigan, 1957; Private piano study with Ferguson Webster, 1958-59.

PAYNE, JAMES S. (1958)..... History
B.A., Prairie View A & M College, 1952; M.A., University of Denver, 1957.

PERRY, ERVIN S. (1959)..... Civil Engineering
B.S., Prairie View A & M College, 1956; University of Texas, Summer 1959.

PETERSON, ALANDRUS A. (1956)..... Dry Cleaning
B.S., Prairie View A & M College, 1952.

PHILLIP, LEE C. (1932)..... Education, College Chaplain
B.S., Prairie View State College, 1928; B.D., Howard University, 1931; Union Theological Seminary, 1931-32; M.A., Howard University, 1939; Educational Seminar (European travel), 1952 and 1955.

POINDEXTER, ALFRED N. (1945)..... Veterinary Science
D.V.M., Kansas State College, 1945.

POWELL, JOHN R. (1951)..... Agricultural Education
B.S., Prairie View College, 1937; M.S., ibid., 1948.

PRESTON, MRS. ANNE C. (1934-1944, 1945)..... Education
B.S. in Elem. Ed., Virginia State College, 1931; M.A., Columbia University, 1932; Certificate in Curriculum and Teaching, 1939; Denver University, Summer 1946; Temple University, 1951; University of Puerto Rico, Summer 1958; Temple University (Reading Clinic), 1959.

PRICE, RICHARD L. (1956)..... Mathematics
B.S., Prairie View A & M College, 1955; M.S., University of Texas, 1958.

RAGLAND, GEORGE R. (1955)..... Head, Department of Sociology
B.S., Langston University, 1938; M.A., State University of Iowa, 1939; Ph.D., ibid., 1953; ibid., Snmmer 1958.

RANDALL, ALBERT W. (1923)..... Mathematics
B.S., Alcorn A&M College, 1916; A.M., University of Colorado, 1929; ibid., Summers 1929, 1937, 1940; State University of Iowa, Summer 1934; Ohio State University, Summer 1945.

REDD, WALTER W., Captain, Infantry (1959)..... Military Science & Tactics
B.S., Prairie View A & M College, 1948; The Ground General School Off Basic Course, 1948; The Infantry School Basic Infantry Off Course, 1954; ibid., Infantry Off Advance Course, 1954; USAREUR Signal School, 1954; USAREUR Intelligence School, 1956; Embarkation Off Course, 1958; Air-Ground Operations School, 1952.

REID, WILLIAM E. (1954)..... Chemistry
B.S., North Carolina A&T College, 1944; M.S., North Carolina College, 1953.

RETTIG, EOLUS V. (1953)..... Physical Erucation
B.S., Wilberforce University, 1934; M.S., Prairie View A & M College, 1953.

RICHARDSON, LEE VAN (1958)..... Chemistry
B.S., Prairie View A & M College, 1953; M.S., ibid., 1958; University of Texas, Summer 1959.

ROBERSON, CLARA B. (1959)..... Nursing Education
B.S. in N.E., Prairie View A & M College, 1959.

ROUSSEVE, RONALD JOSEPH (1958)..... Education
B.S., Xavier University, 1953; M.A., ibid., 1954; Ph.D., University of Notre Dame, 1958.

SEWARD, JOSEPH N. (1959)..... Economics
A.B., Rutgers University, 1956; A.M., ibid., 1957; University of California in Berkeley, 1957-1959.

SIMMONS, MISS BILLIE J. (1957)..... Nursing Education
B.S. in N.E., Prairie View A & M College, 1957.

SINKLER, GEORGE (1955)..... History
A.B., Augustant College, 1953; M.A., Columbia Teachers College, 1954; ibid., 1957-1959.

SMITH, GEORGE L. (1931)..... Dean, School of Agriculture
B.S., Hampton Institute, 1929; M.S., Kansas State College, 1941; ibid., 1940-41; E.Ed., (**Honoris Causa**), University of Liberia, 1958.

SMITH, HUBERT D., (1952)..... English
B.A., Texas Southern University, 1948; M.A., New York University, 1952; Columbia University, Summer 1959.

SMITH, LaVON E., Major, Artillery, (1956)..... Military Science & Tactics
B.S., Sam Houston College, 1939; The Artillery School, OCS., 1942; ibid., Motor Off Course, 1943; ibid., Survey Off Course, 1944; ibid., Associate Advance Off Course, 1952.

SMITH, LEVESTER (1958)..... Chemistry
B.S., Prairie View A & M College, 1948; University of Texas, Summer 1959.

SMITH, OLIVER EMMIT (1949)..... Agronomy
B.S., Prairie View A & M College, 1947; M.S., University of Nebraska, 1949.

SMITH, PAUL (1959)..... Mechanical Engineering
B.S.M.E., Prairie View A & M College, 1958.

SMITH, MRS. VIVIENNE H. (1958)..... English
A.B., Wiley College, 1934; M.A., Atlanta University, 1937; Columbia University, 1946-47, Summers 1947, 1949, 1956, 1959.

*SOLOMON, THOMAS R. (1939)..... Political Science
A.B., Wayne University, 1929; M.S., ibid., 1933; Ph.D., University of Michigan, 1939.

SPALDING, SYDNEY W. (1944)..... English
A.B., Eureka College, 1929; A.M., University of Illinois, 1930; University of Michigan, 1933-34, 1937-38, 1938-39, 1951; University of Colorado, Summer 1955; Columbia University, Summer 1959.

SPENCER, Willie J. (1960)..... Driver Education
B.S., Prairie View A & M College, 1959.

*STAFFORD, GEORGE H. (1954)..... Agricultural Education
B.S., Prairie View A & M College, 1948; M.A., ibid., 1952; Ed.D., Cornell University, 1957.

STEWART, A. D. (1954)..... Mathematics
A.B., Howard University, 1940; M.S., ibid., 1949; University of Wisconsin, 1951-52, 1952-53, 1953-54.

STICKNEY, WILLIAM H. (1945)..... Printing
Diploma and Certificate in Printing, Alabama A&M Institute, 1924; Mergenthaler Linotype School, Summer 1925; Colorado State College, Summer 1931; Carnegie Institute of Technology, Summer 1933; Regular Session 1934-35.

STOKES, MISS CARRIE D. (1956)..... Business Education
A.B., Morris Brown College, 1955; M.A., New York University, 1956.

STUBBLEFIELD, CEDRIC T. (1954)..... Chemistry
B.S., Texas Southern University, 1942; M.S., Prairie View A & M College, 1947; Ph.D., State University of Iowa, 1954.

TALBOT, THEODORE A. (1957)..... English
B.A., Syracuse University, 1949; M.A., ibid., 1951.

*On Leave

TATUM, CHARLES E. (1953-53; 1957-58; 1959).....Economics
B.A., Prairie View A & M College, 1952; M.Ed., ibid., 1953; University of Maryland, Fall 1958; M.S., Indiana University, 1959.

TAYLOR, MRS. JIMMIZINE B. (1945).....Library Service Education
B.A., Arkansas State College, 1940; B.L.S., Atlanta University, 1943.

THOMAS, ALVIN IGNACE (1949).....Director, Industrial Education Division
B.S., Kansas State College, Pittsburg, 1948; M.S., ibid., 1949; Pennsylvania State University, Summer 1951; Ph.D., Ohio State University, 1957.

THOMAS, MRS. ESTHER NAOMI P. (1954).....Library Service Education
B.A., North Carolina College, 1948; B.S.L.S., Simmons College, 1949.

THOMPSON, CHARLES E. (1953).....Shoe Repair and Leather work
Diploma, Tuskegee Institute, 1948; B.S., ibid., 1953; National Orthopedic Registry, 1957; Prairie View A & M College, 1957, 1958, 1959.

THORNTON, MRS. EVELYN E. (1958).....Mathematics
B.S., Texas Southern University, 1954; M.S., ibid., 1957; Iowa State University, Summer 1959.

TILLMAN, NATHANIEL P., JR. (1959).....Political Science
A.B., Morehouse College, 1948; M.S., University of Wisconsin, 1951; ibid., Summer 1951; 1951-52, 1955-1957, Fall 1957-58.

TINKER, WARREN HARDING (1953).....Electrical Engineering
B.S.E.E., Kansas State College, 1953; Iowa State, Summer 1954; University of Texas, Summer 1958.

VENTERS, MRS. MARGARET N. (1958).....Library Service Education
B.A., North Carolina College, 1945; B.S.L.S., ibid., 1951; M.S.L.S., ibid., 1953.

VINCENT, CLIFTON F. (1959).....Political Science
B.A., Prairie View A & M College, 1948; M.A., Atlanta University, 1958.

VON CHARLTON, RUDOLPH EVERETT (1942).....Head, Department of Music
B.S., Hampton Institute, 1931; M.Mus., University of Michigan, 1939; Ph.D., Columbia University, 1948.

WADDY, MISS ERMA (1959).....English
B.A., Talladega College, 1954; M.A., University of Southern California, 1958; ibid., Summer 19[illegible].

WARD, CLIFFORD LOUDIN (1951).....Biology
B.S., Ohio State University, 1935; M.S., ibid., 1936; 1936-37, 1937-38, Summers 1948, 1949, 1951; Cornell University, Summer 1956.

WEATHERSPOON, LINDSEY (1953).....Animal Husbandry
B.S., Georgia State College, 1948; M.S., Kansas State College, 1953.

WEAVER, LEROY C. (1952).....Art Education
B.A., Morehouse College, 1943; B.F.A., Art Institute of Chicago, 1947; M.A., State University of Iowa, 1957.

WELLS, MRS. DOROTHY L. J. (1957).....Related Art & Clothing
B.S. in Ed., Kansas State Teachers College, 1951; M.S. in Home Ec., Kansas State College, 1957; Kansas State University, Summer 1959.

WESTON, LEON G., Major, Quartermaster (1957)..Military Science & Tactics
South Carolina State College, 1940; Australia QM School, OCS, 1944; Fort Lee, Va Associate Advance QM Off Course, 1953.

WILLIAMS, EDWARD W., Captain, Armor, (1959).....Military Science & Tactics
The Armor School, Ft. Knox, Ky., Off Course, 1952; University of Maryland, 1958.

WILLIAMS, ERNEST P. (1953).....English
A.B., Morehouse College, 1950; M.A., State University of Iowa, 1952; University of Texas, Summer 1958.

WILLIAMS, JOHN CALVIN (1940).....Animal Husbandry
B.S., Hampton Institute, 1932; M.S., Kansas State College, 1940; ibid., 1948-49, Summer 1949.

WILLIAMS, WELDON (1958)..... Physics
B.S., Prairie View A & M College, 1954; M.S., Howard University, 1958.

WILLIAMS, MISS WILLIE ANN (1956)..... Nursing Education
Diploma, Meharry Medical College, 1944; B.S. in P.H.N., University of Michigan, 1954.

WILSON, CLAUDE L. (1925)..... Dean, School of Engineering
B.S. in M.E., Kansas State University, 1925; M.E., ibid., 1929; M.S., ibid., 1933; Michigan State University, Summer 1951; University of Minnesota, Summer 1956. (Reg. Prof. Engr.)

WILSON, JESSE M. (1931)..... Tailoring
Certificate, Tuskegee Institute, 1927; Certificate, Master Designer's School of Designing, 1934; B.S., Kansas State Teachers College, 1941.

WILSON, MISS SEDALIA (1954)..... Nursing Education
Certificate in Public Health, Medical College of Virginia, 1940; B.S., Prairie View A & M College, 1954; M.N., University of Washington, 1957.

WILSON, URAL (1958)..... Mathematics
B.S., Huston-Tillotson College, 1948; M.S., North Texas State College, 1958.

WOOD, CURTIS A. (1947, 1954)..... Health Education
A.B., Knoxville College, 1938; M.A., Columbia University, 1946; Ed.D., ibid., 1956.

WOODS, JOHNNIE J. (1945)..... Poultry Husbandry
B.S., Prairie View State College, 1938; ibid., 1944; M.S., Kansas State College, 1948; Ohio State University, Summer 1956.

WOOLFOLK, GEORGE RUBLE (1943)..... Head, Department of History
B.A., Louisville Municipal College, 1937; M.A., Ohio State University, 1938; Ph.D., University of Wisconsin, 1947.

WRIGHT, MRS. LOIS M. (1957)..... Sociology
B.A., Prairie View A & M College, 1949; M.A., Fisk University, 1951; Cornell University, 1955-56; University of California (Berkeley), Summer 1957.

WRIGHT, WILLIAM H. (1958)..... Physical Education
B.S., Virginia State College, 1949; M.A., Columbia University Teachers College, 1956; ibid., Summers 1957, 1958, 1959.

## LABORATORY SCHOOL

JONES, HERMAN T. (1951)..... Principal, High School & Science
A.B., University of Kansas, 1931; A.M., ibid., 1933; ibid., 1946, Summer 1951; University of Oklahoma, Summer 1956.

THOMAS, MRS. BESSIE A. (1942)..... Principal, Elementary School and Fourth Grade
B.S., Prairie View College, 1938; M.S., ibid., 1942; Denver University, Summer 1950; Chicago University, Summer 1954; Prairie View A & M College, 1956.

BROWN, MRS. CLAUDIA O. (1956)..... Social Studies and Typing
B.A., Wayne University, 1946; M.Ed., University of Wisconsin, 1950; ibid., Summers 1952, 1953, 1954 and 1956.

BROWN, MRS. LAURA (1956)..... School Nurse
Diploma, Prairie View College, 1921; B.S., ibid., 1927; University of Michigan, Summers 1929, 1938; Texas Southern University, Summer 1950.

BROWN, MRS. LIBBIE N..... First and Second Grades
B.S., Prairie View College, 1939; M.Ed., ibid., 1952; ibid., Summer, 1958.

CLEAVER, MRS. DOROTHY J..... Third Grade
B.S., Prairie View College, 1952; M.Ed., ibid., 1956.

FULLER, MRS. RUBY G. (1943)..... Homemaking
B.S., Prairie View College, 1934; M.S., ibid., 1942; McDowell School of Dress Design, Summer, 1957.

GERALD, WILLIAM R. (1956)..... Science and Mathematics
B.S., Prairie View A & M College, 1949; M.S., ibid., 1958.

KILPATRICK, MRS. ALICE J. (1952)..... Seventh and Eighth Grades
B.S., Prairie View A & M College, 1947; M.S., ibid., 1949; ibid., Summers 1949, 1957.

MARTIN, MRS. PEARL S. (1957).....Art
B.S., Howard University, 1951; M.A., Howard University, 1953; Prairie View A & M College, Summer 1958.

MOSLEY, MRS. CANZETTA R. (1953).....Second and Third Grade
B.S., Prairie View A & M College, 1942; M.Ed., ibid., 1953; ibid., Summer 1958.

NICHOLAS, MRS. JOSEPHINE N. (1951).....Fifth Grade
B.S., Florida A. and M. College, 1935; M.S., Prairie View A & M College, 1945; ibid., Summers 1947, 1956.

O'BANION, MRS. LORRAINE (1953).....Sixth Grade
A.B., Howard University, 1933; M.Ed., Prairie View A & M College, 1957.

RANDALL, MRS. BEATRICE H.....English and Music
B.S., Prairie View A & M College, 1927; M.A., ibid., 1945; ibid., Summer 1958.

WOODS, MRS. THEOLA P.....First Grade
B.S., Prairie View A & M College, 1939; M.Ed., ibid., 1952; ibid., Summer 1958.

WOOLFOLK, MRS. DOUGLASS G. (1951).....County Supervisor
B.S., Prairie View College, 1943; M.A., ibid., 1945; University of California at Berkeley, 1955.

WRIGHT, MRS. LILLIAN P. (1959).....Secretary
B.S., Virginia State College, 1952; Columbia University, Summers 1956, 1959.

## RETIRED FACULTY MEMBERS

ANDERSON, PIERCE (1931-1951).....Metal Work

BANKS, WILLETTE R. (1926-1946).....History and Education
A.B., Atlanta University, 1909; A.M., ibid., 1927.

BUCHANAN, G. W. (1930-1946).....Mathematics and Science
Diploma, Prairie View Normal and Industrial College, 1914.

CARPENTER, CHARLES E. (1925-1946).....French
B.L., University of California, 1901; M.L., ibid., 1908; Kansas State Teachers College, Summers 1923, 1925; University of Kansas, Summer 1932; University of Iowa, Summers 1935, 1937, Fall Semester 1940-1941.

CLEAVER, ARTHUR G. (1926-1957).....Broom and Mattress Making
Diploma, Prairie View State College, 1911; Certificate in Broom and Mattress Making and Agriculture, ibid., 1911; Tuskegee Institute, Summer 1924.

HOLLEY, THOMAS L. (1923-1957).....Trade and Industrial Education
B.S., Prairie View A & M College, 1930; B.S., ibid., 1931; M.E., Colorado A and M., 1947; University of Texas, 1949.

JOHNSON, EDWARD J. (1927-1958).....Automobile Mechanic
Certificate in Automobile Mechanics, Prairie View College, 1919.

JONES, N. A. (1920-1945).....Machine Shop Practice
Langston University, 1910, 1918, 1920, 1929; Kansas State Teachers College, 1933.

MARTIN, DANIEL W. (1919-1959).....Electricity
B.S., Prairie View College, 1928; Kansas State Teachers College, Summer 1933; Prairie View College, Summers 1940, 1941.

SMITH, MRS. LUCILLE B. (1953-1959).....Cooking and Baking
Certificate, Prairie View College, 1939; Colorado State College, Summer 1939; Frank Wiggins Trade School, 1956.

## COOPERATIVE EXTENSION SERVICE

Prairie View A. and M. College has as one of its divisions, Agricultural Extension Service. The headquarters of this division is located on the campus of the College. At the present time 102 county agents are working in 61 counties. The function of this department is to give agricultural and home-making information to rural people who are not attending college and to encourage application of this information.

## HEADQUARTERS STAFF

MARSHALL V. BROWN.....State Leader
B.S. in Agriculture, Prairie View College, 1931; ibid., Summers 1941-43, 1952, 1958.

ALTON E. ADAMS.....Assistant State Leader
B.S. in Agriculture, Prairie View College, 1931.

D. H. SEASTRUNK.....State Agent in Farm & Home Development
B.S. in Agriculture, Prairie View, 1948; Summers 1949-1952, 1955.

MRS. PAULINE R. BROWN.....Supervisor of Negro Home Demonstration Work and District Home Demonstration Agent
B.S. Home Economics, Prairie View College, 1938; M.S., ibid., 1955; Summer 1958.

W. B. CLARK, JR.....District Agent
B.S. in Agriculture, Prairie View College, 1934; Summers 1938-39, 1949, 1954, 1958.

MISS MYRTLE E. GARRETT.....District Agent
B.S., Home Economics, Prairie View College, 1938; M.S., ibid., 1955; Summer 1958.

RUBEN A. SANDERS.....District Agent
B.S. in Agriculture, Prairie View College, 1952; Summers 1954, 1958, 1959.

MRS. PARRYE L. WASHINGTON ROUTT.....Extension Secretary
Tillotson College, 1944-1947; Texas College, Summer 1950; Prairie View College, 1958, 1959.

MISS BARBARA JEAN JEFFERSON.....Extension Secretary
B.S. Business Education, Prairie View College, 1959.

MISS CECILE JEAN NEALY.....Extension Secretary
B.S. Business Education, Texas Southern, 1959.

## DEPARTMENT OF MILITARY SCIENCE AND TACTICS

### Office of the Professor of Military Science and Tactics

ARTHUR H. BOOTH, B. S., Lieutenant Colonel, Artillery, U.S.A.; PMST and Commandant, Reserve Officers' Training Corps

LAVON E. SMITH, B.A., Major, Artillery, U.S.A.; Assistant PMST and Executicve Officer

SETH D. FINLEY, B.S., Major, Infantry, U.S.A.; Assistant PMST

LEON G. WESTON, Major, QMC, U.S.A.; Assistant PMST

WALTER W. REDD, B.S., Captain, Infantry, U.S.A.; Assistant PMST

EDWARD W. WILLIAMS, Captain, Armor, U.S.A.; Assistant PMST

ARTHUR L. CRUTCHFIELD, Master Sergeant, U.S.A.; Infantry Operations Instructor

JOHN L. LEWIS, Master Sergeant, U.S.A.; Supply Sergeant, Instructor

WALTER L. LINTON, B.S., Master Sergeant, U.S.A.; Infantry Operations Instructor

HARRISON O'NEAL, Master Sergeant, U.S.A.; Infantry Operations Instructor

ROBERT L. CALHOUN, Sergeant First Class, U.S.A.; Maintenance NCO, Instructor

HUBERT H. EDISON, Sergeant First Class, U.S.A.; Chief Administrative Clerk

ARTHUR NICHOLSON, Sergeant First Class, U.S.A.; Administrative Specialist, Instructor

CURTIS L. WRENN, Sergeant First Class, U.S.A.; Administrative Specialist, Instructor

## ICA—LIBERIA PROJECT

The College has recently moved forward in a new area. Under a contract with the United States International Cooperation Administration, effective for seven years beginning November 1, 1954, the College accepted the bold challenge of helping to develop and expand vocational education in Liberia, West Africa.

Under this agreement, the College will help to strengthen the vocational education program of the Booker Washington Institute, a Liberian Government supported trades school, located at Kakata, Liberia.

In order to implement the Liberian Project, Prairie View A. and M. College has sent a team of outstanding technicians to Liberia, each of whom has been chosen on the basis of demonstrated professional competence. During their two-year tours of duty, members of the Project's field staff will supervise activities in the area of vocational education, including: (1) building construction trades; (2) metal trades and motor mechanics; (3) arts, handicrafts, and crafts; (4) agricultural education; (5) clerical and secretarial sciences; (6) special services; (7) home economics; (8) tailoring; and (9) refrigeration and air conditioning.

### CAMPUS PERSONNEL

GEORGE L. SMITH.....Campus Coordinator
B.S., Hampton Institute, 1929; M.S., Kansas State College, 1941; ibid., 1940-41 D. Ed. (Honoris Causa)

WILLIAM FRANKS, JR.....Assistant Project Manager
B.S., Business Education, Prairie View A & M College, 1956; ibid., Summer 1957.

JULIA A. BENNETT.....Secretary
B.A., Music, Prairie View A & M College, 1939.

### FIELD STAFF

T. R. SOLOMON.....Chief-of-Party
A.B., Wayne University, 1929; M.S., ibid., 1933; Ph.D., University of Michigan, 1939.

BERRY, MRS. VEOLA C.....Technician-Home Economics
B.S., Houston College, 1936; M.S., Kansas State College, 1952.

BURWELL, WADDELL.....Technician-Carpenter
B.S., Mechanical Arts, West Virginia State College, 1949.

CULLINS, MED D.....Technician-Brickmasonry
B.A., Talladega College, 1948.

CULLINS, SILAS W.....Technician-Auto Mechanics
B.S., Tuskegee Institute, 1949.

EVANS, GLENN L.....Technician-Arts, Handicrafts and Crafts
B.S., University of Wisconsin, 1939; M.S., ibid., 1940; University of Southern California, Summer 1948.

FIELDS, MRS. JIMMIE D.....Technician-Secretarial Science
B.S., Prairie View College, 1941; M.A., University of Denver, 1955.

FOREMAN, PEARL E.....Technician-Home Economics
A.B., Howard University, 1935; B.S., Teachers College Columbia University, 1938; M.A., ibid., 1939; University of California, Summer 1946; Columbia University, Summer 1951; Michigan State University, Summers 1955, 1956.

FRY, FRANCES G., SR.....Technician-Communications
B.S. in E.E., Kansas State College, 1929.

GRIFFIN, FRANCIS E.....Technician-Draftsman
B.S., University of Michngan, 1935; Howard University, 1941.

HALL, CLYDE W.....Technician-Trades and Industries
B.S., Georgia State College, 1948; M.S., Iowa State College, 1949; Ed.D., Bradley University, 1953.

HOSKINS, WILLIAM M.....Technician-Cabinetmaker
Prairie View A & M College, 1932-1935.

JACKSON, THOMAS C.....Technician-Distributive Education
B.A., Huston-Tillotson, 1936; Ll.B., Texas Southern University, 1953.

KROUSE, JOHN P.....Technician-Tailoring
B.S., Tuskegee Institute, 1938; M.A., New York University, 1953; Prairie View A & M College, 1955-1957.

LAMB, ERNEST L.....Technician-Electrician
B.S., Tuskegee Institute, 1950.

PALMER, GEORGE W., JR.....Technician-Air Conditioning and Refrigeration
B.S., Tuskegee Institute, 1950.

RUTLEDGE, JOHN T.....Technician-Plumbing
B.S., Tuskegee Institute, 1949.

SHAW, ERNEST K.....Technician-Agriculture
B.S., Tuskegee Institute, 1950; M.S., Rutgers University, 1955; ibid., Summer 1955.

STAFFORD, GEORGE H.....Technician-Agriculture
B.S., Prairie View A & M College, 1948; M.A., ibid., 1952; Ed.D., Cornell University, 1957.

STAMPS, JAMES E., JR.....Administrative Assistant
B.S., Hampton Institute, 1947; New York University, 1949-1950.

THOMAS, ELTON R.....Technician-Machine Shop
B.S., Tuskegee Institute, 1941.

## ALUMNI OFFICERS

### OFFICERS OF THE ASSOCIATION

#### EXECUTIVE COMMITTEE

G. W. ADAMS '32, Port Lavaca
President

MRS. EMMA G. HARRELL '33, Crockett, First-Vice President

GEORGE LACEY '40, Port Arthur
Second-Vice President

MRS. HATTIE FLOWERS '32, Brenham, Secretary

JOHN R. POWELL '37, Prairie View
Executive Secretary

FLETCHER MORGAN, JR. '43, Thompson, Treasurer

SAMUEL MONTGOMERY '51, Prairie View, Editor

#### BOARD OF DIRECTORS

I. T. HUNTER '26, Chairman, Tyler, Dentist

E. M. NORRIS '27, Prairie View
Educator

MISS MABEL KILPATRICK '31, Houston, Educator

O. J. THOMAS '26, Prairie View
Educator

R. H. HESTER '44, Tyler
Soil Conservationist

L. G. JOLLEY '26, Austin
Business Executive

E. E. CLEAVER '38, Prairie View
Educator

A. G. HILLIARD '35, Tyler
Educator

TOMMIE S. CLAY '49, Houston
Educator

The Alumni and Ex-students Association is functioning under the constitution which was revised in May 1950 and a state Charter issued in November 1950. The association was organized in 1901 and includes in its membership both graduates and former students. It is a member of the National Alumni Association, and the American Alumni Council. The voting privilege is restricted to those who have paid their dues and are classified as active members. Two meetings are held each year—one in the fall and one the day before Commencement in the spring. Election of officers is held in May by ballot. The association has as its main objective a program of cooperation with the College Administration for the constant improvement of Prairie View A. and M. College.

The Association sponsors, and has encouraged, the organization of local clubs throughout the state and in many of the large cities throughout the country. The office of the Alumni Association located in the Memorial Center acts as a central clearing agency for all alumni business.

## SUMMARY OF DEGREES, DIPLOMAS AND CERTIFICATES

### January 1959

| | Male | Female | Total |
|---|---|---|---|
| Bachelor of Science in Agriculture | 2 | — | 2 |
| Bachelor of Arts | 4 | — | 4 |
| Bachelor of Arts in Music | — | 1 | 1 |
| Bachelor of Science | 5 | 2 | 7 |
| Bachelor of Science in Education | — | 4 | 4 |
| Bachelor of Science in Electrical Engineering | 1 | — | 1 |
| Bachelor of Science in Mechanical Engineering | 2 | — | 2 |
| Bachelor of Science in Home Economics | — | 5 | 5 |
| Bachelor of Science in Industrial Education | 2 | — | 2 |
| Master of Arts | 1 | — | 1 |
| Master of Education | — | 9 | 9 |
| Diploma in Nursing | — | 9 | 9 |
| Certificate of Proficiency | 7 | 2 | 9 |
| Total | 24 | 32 | 56 |

### May 1959

| | Male | Female | Total |
|---|---|---|---|
| Bachelor of Science in Agriculture | 9 | — | 9 |
| Bachelor of Arts | 16 | 11 | 27 |
| Bachelor of Arts in Music | 1 | 7 | 8 |
| Bachelor of Science | 30 | 41 | 71 |
| Bachelor of Science in Education | 4 | 25 | 29 |
| Bachelor of Science in Architectural Engineering | 3 | 1 | 4 |
| Bachelor of Science in Civil Engineering | 1 | — | 1 |
| Bachelor of Science in Mechanical Engineering | 2 | — | 2 |
| Bachelor of Science in Home Economics | — | 12 | 12 |
| Bachelor of Science in Dietetics | — | 6 | 6 |
| Bachelor of Science in Industrial Education | 19 | 1 | 20 |
| Bachelor of Science in Nursing Education | — | 3 | 3 |
| Master of Arts | — | 2 | 2 |
| Master of Education | 1 | 4 | 5 |
| Master of Science | 1 | 3 | 4 |
| Certificate of Proficiency | 23 | 11 | 34 |
| Certificate of Apprenticeship | 3 | — | 3 |
| Total | 113 | 127 | 240 |

## SUMMARY OF GRADUATES

### August 1959

| | Male | Female | Total |
|---|---|---|---|
| Bachelor of Science in Agriculture | 4 | — | 4 |
| Bachelor of Arts | 9 | 3 | 12 |
| Bachelor of Arts in Music | 4 | 4 | 8 |
| Bachelor of Science | 23 | 14 | 37 |
| Bachelor of Science in Education | — | 8 | 8 |
| Bachelor of Science in Electrical Engineering | 3 | — | 3 |
| Bachelor of Science in Mechanical Engineering | 1 | — | 1 |
| Bachelor of Science in Home Economics | — | 1 | 1 |
| Bachelor of Science in Dietetics | — | 2 | 2 |
| Bachelor of Science in Industrial Education | 11 | 1 | 12 |
| Bachelor of Science in Nursing Education | — | 21 | 21 |
| Master of Arts | 3 | 9 | 12 |
| Master of Education | 10 | 60 | 70 |
| Master of Science | 24 | 9 | 33 |
| Diploma in Nursing | — | 18 | 18 |
| Certificate of Proficiency | 7 | 3 | 10 |
| Certificate of Apprenticeship | 1 | — | 1 |
| Total | 100 | 153 | 253 |

# SUMMARY OF ENROLLMENT

## First Term, Summer 1959

| Classes | Agri M | Agri F | A & S M | A & S F | Engr M | Engr F | H.E. M | H.E. F | I.E. M | I.E. F | N.E. M | N.E. F | Total M | Total F | Combined Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 75 | — | 191 | 525 | — | — | — | 62 | 30 | 7 | — | — | 296 | 594 | 890 |
| Seniors | 14 | — | 87 | 137 | 27 | — | — | 23 | 33 | 3 | — | 54 | 161 | 217 | 378 |
| Juniors | 3 | — | 42 | 59 | 11 | — | — | 10 | 22 | 2 | — | 19 | 78 | 90 | 168 |
| Sophomores | 6 | — | 27 | 60 | 11 | — | — | 9 | 21 | 5 | — | 48 | 65 | 122 | 187 |
| Freshmen | 4 | — | 17 | 26 | 8 | — | — | 4 | 6 | 2 | — | 6 | 35 | 38 | 73 |
| Special | — | — | 8 | 8 | 1 | — | — | — | 2 | — | — | — | 11 | 8 | 19 |
| Total | 102 | — | 372 | 815 | 59 | — | — | 108 | 114 | 19 | — | 127 | 646 | 1069 | 1715 |

## Second Term, Summer 1959

| Classes | Agri M | Agri F | A & S M | A & S F | Engr M | Engr F | H.E. M | H.E. F | I.E. M | I.E. F | N.E. M | N.E. F | Total M | Total F | Combined Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 29 | — | 114 | 279 | — | — | — | 31 | 20 | 5 | — | 1 | 163 | 316 | 479 |
| Seniors | 15 | — | 80 | 113 | 24 | 2 | — | 17 | 24 | 3 | — | 47 | 143 | 182 | 325 |
| Juniors | 3 | — | 35 | 56 | 7 | 1 | — | 9 | 19 | 1 | — | 20 | 64 | 87 | 151 |
| Sophomores | 5 | — | 22 | 42 | 8 | — | — | 4 | 12 | 3 | — | 46 | 47 | 95 | 142 |
| Freshmen | 3 | — | 11 | 19 | 5 | — | — | 3 | 7 | — | — | 7 | 26 | 29 | 55 |
| Special | — | — | 3 | 5 | 1 | — | — | — | 4 | 42 | — | 2 | 8 | 49 | 57 |
| Total | 55 | — | 265 | 514 | 45 | 3 | — | 64 | 86 | 54 | — | 123 | 451 | 758 | 1209 |

# ENROLLMENT WITHOUT DUPLICATION, Summer 1959

| Classes | Agri M | Agri F | A & S M | A & S F | Engr M | Engr F | H.E. M | H.E. F | I.E. M | I.E. F | N.E. M | N.E. F | Total M | Total F | Combined Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 88 | — | 223 | 597 | — | — | — | 77 | 34 | 8 | — | — | 345 | 682 | 1027 |
| Seniors | 20 | — | 101 | 160 | 31 | 2 | — | 24 | 34 | 3 | — | 54 | 186 | 243 | 429 |
| Juniors | 5 | — | 42 | 71 | 13 | 1 | — | 11 | 22 | 2 | — | 21 | 82 | 106 | 188 |
| Sophomores | 6 | — | 29 | 62 | 11 | — | — | 9 | 22 | 6 | — | 49 | 68 | 126 | 194 |
| Freshmen | 4 | — | 20 | 28 | 9 | — | — | 4 | 7 | 2 | — | 7 | 40 | 41 | 81 |
| Special | — | — | 10 | 11 | 1 | — | — | — | 4 | 43 | — | 3 | 15 | 57 | 72 |
| Total | 123 | — | 425 | 929 | 65 | 3 | — | 125 | 123 | 64 | — | 134 | 736 | 1255 | 1991 |

# FIRST SEMESTER 1959-60

| Classes | Agri M | Agri F | A & S M | A & S F | Engr M | Engr F | H.E. M | H.E. F | I.E. M | I.E. F | N.E. M | N.E. F | Total M | Total F | Combined Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 11 | — | 79 | 62 | — | — | — | 6 | 3 | — | — | — | 93 | 68 | 161 |
| Seniors | 32 | — | 124 | 195 | 46 | 1 | — | 34 | 62 | 5 | — | 19 | 264 | 254 | 518 |
| Juniors | 20 | — | 85 | 160 | 36 | 1 | — | 31 | 49 | 4 | — | 27 | 190 | 223 | 413 |
| Sophomores | 14 | — | 105 | 200 | 46 | 1 | — | 41 | 101 | 11 | — | 48 | 266 | 301 | 567 |
| Freshmen | 23 | — | 175 | 300 | 77 | 1 | — | 55 | 88 | 4 | — | 47 | 363 | 407 | 770 |
| Special | 2 | — | 4 | 8 | 1 | — | — | — | 20 | 4 | — | — | 27 | 12 | 39 |
| Total | 102 | — | 572 | 925 | 206 | 4 | — | 167 | 323 | 28 | — | 141 | 1203 | 1265 | 2468 |

# SECOND SEMESTER 1959-60

| Classes | Agri M | Agri F | A & S M | A & S F | Engr M | Engr F | H.E. M | H.E. F | I.E. M | I.E. F | N.E. M | N.E. F | Total M | Total F | Combined Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 9 | — | 54 | 45 | — | — | — | 3 | 3 | — | — | — | 66 | 48 | 114 |
| Seniors | 32 | — | 123 | 175 | 48 | 1 | — | 44 | 74 | 4 | — | 21 | 277 | 245 | 522 |
| Juniors | 18 | — | 75 | 162 | 35 | 1 | — | 30 | 66 | 5 | — | 24 | 194 | 222 | 416 |
| Sophomores | 12 | — | 101 | 183 | 42 | 1 | — | 42 | 80 | 11 | — | 36 | 235 | 274 | 509 |
| Freshmen | 22 | — | 177 | 279 | 67 | 2 | — | 50 | 83 | 7 | — | 36 | 349 | 374 | 723 |
| Special | 3 | — | 6 | 12 | 2 | — | — | — | 10 | 3 | — | — | 21 | 15 | 36 |
| Total | 96 | — | 536 | 856 | 194 | 5 | — | 169 | 316 | 30 | — | 117 | 1142 | 1178 | 2320 |

# ENROLLMENT WITHOUT DUPLICATION 1959-60

| Classes | Agri M | Agri F | A & S M | A & S F | Engr M | Engr F | H.E. M | H.E. F | I.E. M | I.E. F | N.E. M | N.E. F | Total M | Total F | Combined Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Graduates | 12 | — | 100 | 83 | — | — | — | 8 | 3 | — | — | — | 115 | 91 | 206 |
| Seniors | 33 | — | 126 | 198 | 46 | 1 | — | 35 | 63 | 5 | — | 19 | 268 | 258 | 526 |
| Juniors | 20 | — | 86 | 162 | 36 | 1 | — | 31 | 50 | 4 | — | 27 | 192 | 225 | 417 |
| Sophomores | 14 | — | 105 | 201 | 46 | 1 | — | 42 | 103 | 11 | — | 48 | 268 | 303 | 571 |
| Freshmen | 27 | — | 202 | 319 | 84 | 2 | — | 56 | 102 | 4 | — | 49 | 415 | 430 | 845 |
| Special | 2 | — | 6 | 13 | 2 | — | — | — | 21 | 4 | — | — | 31 | 17 | 48 |
| Total | 108 | — | 625 | 976 | 214 | 5 | — | 172 | 342 | 28 | — | 143 | 1289 | 1324 | 2613 |

# SUMMARY OF R.O.T.C. ENROLLMENT AND COMMISSIONS GRANTED

| | |
|---|---|
| Freshmen | 313 |
| Sophomores | 205 |
| Juniors | 29 |
| Seniors | 21 |
| Total | 568 |
| Summer Camp Attendance | 21 |
| Commissions Granted | 25 |

# Index

## GRADUATE STUDY