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1992-1994 GRADUATE CATALOG

ENGINEERING TECHNOLOGY

Prairie View A&M University . PART OF THE TEXAS A&M NIVERSITY SYSTEM

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BULLETIN OF PRAIRIE VIEW A&M UNIVERSITY PRAIRIE VIEW, TEXAS

Established by the Texas State Legislature in the Year 1876

VOLUME 76

NO.1

THE ONE HUNDRED AND SEVENTH GENERAL CATALOG ISSUED WITH ANNOUNCEMENTS FOR THE ACADEMIC YEARS 1992 - 1994



GRADUATE CATALOG

PRAIRIE VIEW A&M UNIVERSITY IS PART OF THE TEXAS A&M UNIVERSITY SYSTEM AND IS ACCREDITED BY THE SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS.

College and University Bushees

Institutional Memberships

Accreditation Board for Engineering & Technology American Association of Colleges of Nursing (AACN) American Association of Colleges for Teacher Education American Association of Collegiate Registrars and Admissions Officers American College Theatre Festival American Council on Education American Home Economics Association (Agency Member Unit) American Society for Engineering Education American Theatre Association Association for Communication Administration Association for Education in Journalism and Mass Communication Association of Administrators of Home Economics Association of American Colleges Association of Colleges and Schools of Education in State Universities and Land-Grant Colleges and Affiliated Private Universities Association of Collegiate Schools of Architecture Association of NROTC Colleges Association of Social Science Teachers Association of State University and Land-Grant Colleges Association of Texas Colleges and Universities Association of Texas Graduate Schools Central Association of College and University Business Officers College and University Personnel Association **Conference of Southern Graduate Schools** Council for Advancement and Support of Education Council of 1890 Presidents Council of Presidents for the Public Senior Colleges and Universities of Texas Council on Social Work Education National Association of Broadcasters National Association of Collegiate Deans and Registrars National Association of Educational Buyers National Association of State Universities and Land-Grant Colleges National Association of Student Financial Aid Administrators National Association of Student Personnel Administrators National Black Media Coalition National Commission for Cooperative Education National Commission on Accrediting National Council for the Accreditation of Teacher Education National Council of Teachers of English National Forensic Association National League for Nursing Southern Association of Colleges and University Business Officers Southern Association of Colleges and Schools, Inc. Southern Association of Land-Grant Colleges and Universities Southern Council of Collegiate Education for Nursing (SCCEN) Southwest Theatre Conference Speech Communication Association Texas Association of Collegiate Registrars and Admission Officers Texas Association of State Senior College and University Business Officers Texas Association of Colleges for Teacher Education

Academic Year Calatnetnoo fo aldaT

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Emilio tor nonstatigni vitsa	Index	f Instruction October 22-24 Thursday-Se Cotober 26, Monday November 26-29, Thursday- November 30, Monday	141. Admissions WEP on MEP 161. Isomester Grades Due in Office Admissions and Records Thanksgiving (Holiday) Instruction Resumes
Semester BeginsDecember 7, Monday	Index	Calober 22-24 Thursday-Se October 25, Monday Noteber 26, Monday November 26-28, Thursday- November 30, Monday	141. Admissions WE. An Million Pariod Midsemester Grades Due in Office Admissions and Records. Thanksgiving (Holiday) Instruction Resumes Early Registration for Spring
Last Day to Withdraw from Any	Sunday	Detober 22-24. Thursday-Se of October 26. Mondey November 26-26. Thursday- November 26-26. Thursday- November 30. Monday	141. Admissions MEP or Media Midsemester Grades Due in Office Admissions and Records. Thanksgiving (Holiday) Instruction Resumes Early Registration for Spring Somester Begins.
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ACADEMIC CALENDAR SUBJECT TO CHANGE

Academic Year Calendars 1992-94

FALL SEMESTER 1992

Dining Hall OpensAugust 22, Saturday
Residence Halls Open
new studentsAugust 22, Saturday
returning studentsAugust 26, Wednesday
Orientation for New StudentsAugust 23-26, Sunday-Wednesday
Houston RegistrationAugust 24, Monday
Registration for New StudentsAugust 26, Wednesday
Regular RegistrationAugust 27-28, Thursday-Friday
Registration for Weekend and Off-
Campus ClassesAugust 29, Saturday
Instruction and Late Registration Fee
BeginAugust 31, Monday
Late Registration and Course Changes
EndSeptember 5, Saturday
Labor Day HolidaySeptember 7, Monday
Administrative Course Changes
EndSeptember 15, Tuesday
Withdrawal from Courses with
Automatic "W" BeginsSeptember 16, Wednesday
Application for Spring Graduation
BeginsSeptember 21, Monday
Withdrawal from Courses with an
Automatic Grade of "W" Ends.
After This Date Student Will
Receive "WP" or "WF"October 16, Friday
Midsemester Examination PeriodOctober 22-24, Thursday-Saturday
Midsemester Grades Due in Office of
Admissions and RecordsOctober 26, Monday
Thanksgiving (Holiday)November 26-29, Thursday-Sunday
Instruction ResumesNovember 30, Monday
Early Registration for Spring
Semester BeginsDecember 7, Monday
Last Day to Withdraw from Any
Course(s)December 11, Friday
Early Registration EndsDecember 11, Friday
Application for Spring Graduation
EndsDecember 11, Friday
Final Examination PeriodDecember 14-19, Monday-Saturday
Semester EndsDecember 19, Saturday
Final Grade Reports Due in Office of
Admissions and RecordsDecember 21, Monday
Christmas/New Year's Holiday
(University Closed)Dec. 24 - Jan. 1, Thursday-Saturday

*ACADEMIC CALENDAR SUBJECT TO CHANGE

SPRING SEMESTER 1993

Dining Hall OpensJanuary 3, Sunday Residence Halls Open new studentsJanuary 3, Sunday returning studentsJanuary 6, Wednesday Orientation for New StudentsJanuary 4-6, Monday-Wednesday Registration for New StudentsJanuary 6, Wednesday Regular Registration.....January 7-8, Thursday-Friday Registration for Weekend and Off-Campus ClassesJanuary 9, Saturday stration Contrast Changed Instruction Begins/Late Registration/ Adding and Dropping with Fee BeginJanuary 11, Monday Late Registration and Course Changes End.....January 16, Saturday Martin Luther King, Jr. Administrative Course Changes BeginJanuary 26, Tuesday Withdrawal from Courses with Automatic Grade of "W" Begins January 27, Wednesday Application for Summer Graduation Begins.....February 1, Monday Withdrawal from Courses with an Automatic Grade of "W" Ends. After This Date Student Will Receive "WP" or "WF".....February 26, Friday Midsemester Examination Period......March 4-6, Thursday-Saturday Midsemester Grade Reports Due in Office of Admissions and Records .. March 8, Monday Instruction ResumesMarch 15, Monday Honors ConvocationMarch 24, Wednesday Easter HolidayApril 9, Friday Instruction ResumesApril 12, Monday Early Registration for Summer I, Summer II, and Fall Semesters Begins.....April 19, Monday Early Registration Ends, Required Registration Fees Due for Summer I and II.....April 23, Friday Graduation Candidates Final Exam Begins.....April 29-May 1, Thursday-Saturday Last Day to Withdraw from Any Course(s)April 30, Friday Graduation Candidates Grades Due.....May 3, Monday Final Examination PeriodMay 3-8, Monday-Saturday Semester Ends......May 8, Saturday Commencement......May 9, Sunday Final Grade Reports Due in Office of Admissions and Records......May 11, Tuesday

*ACADEMIC CALENDAR SUBJECT TO CHANGE

FIRST SUMMER TERM 1993

Residence Hall OpensN Regular RegistrationN Memorial Day Holiday Instruction Begins/Late Registration/	Aay 28, Friday Aay 28-29, Friday-Saturday Aay 31, Monday
Adding & Dropping with Fee	Registration for New Students
BeginJ Late Registration and Course Changes	Regular Registration weekand and Off.
EndJ Administrative Course Changes	une 2, Wednesday assaiD augmeD
EndJ Withdrawal from Courses with	une 2, Wednesday of Das gribbA
Automatic Grade of "W" BeginsJ Early Registration for Fall Semester	une 3, Thursday as notistiated ats.
BeginsJ Application for Summer Graduation	une 10, Thursday ^{g did} red to J mittal A
EndsJ Withdrawal from Courses with an	une 11, Friday
Automatic Grade of "W" Ends.	Withdrawal from Courses with Automatic Grade of "W" Begins
Receive "WP" or "WF"J	une 16, Wendesday
Last Day to Withdraw from Any	Wilddrawal from Louises with an
Final Examination PeriodJ First Summer Term EndsJ Independence Day (University	une 29, Tuesday une 30-July 2, Wednesday-Friday uly 2, Friday
Closed)	uly 3, Friday
Admissions and Records	uly 5, Monday semurasi noitourten)
*ACADEMIC CALENDAR SUBJECT T	O CHANGE
SECOND SUMMER TERM 1993	
Residence Halls Open	July 1. Thursday
Regular Registration	July 1-2, Thursday-Friday
Adding & Dropping with Fee	
Begin	July 5, Monday
Late Registration and Course Changes	Course(s)
Administrative Course Changes	July 7, Wednesday bibms) nottenberg
End Withdrawal from Courses with	July 7, Wednesday notanimex3 (and
Automatic "W" Begins	July 9, Friday
Withdrawal from Courses with an	anal Grade Reports Due in Office of

Automatic Grade of "W" Ends. Veldander and and anotazimhA After This Date Student Will Boot Barbar and Andreas Andre

Early Registration for Fall Semester Early Registration
Fees DueAugust 2, Monday
Last Day to Withdraw from Any
Course(s)August 3, Tuesday
Graduation Candidates Final Exam
PeriodAugust 4, Wednesday
Final Examination PeriodAugust 5-7, Thursday-Saturday
Second Summer Term EndsAugust 7, Saturday
CommencementAugust 8, Sunday
Final Grade Reports Due in Office of
Admission and RecordsAugust 9, Monday
*ACADEMIC CALENDAR SUBJECT TO CHANGE
EIGHT WEEK SUMMER TERM 1993 deuberd reasons to acitabiling A
Early Registration for Fall Semester
Begins
Application for Summer Graduation
Ends
Residence Halls Open
Regular Registration
Instruction Begins/Late Registration/
Early Registration for Fall-Semester, and set
BeginJune 14, Monday berluped bas abod
Late Registration and Course Changes
EndJune 16, Wednesday
Administrative Course Changes
EndJune 16, Wednesday bas) notes bas)
Withdrawal from Courses with 2020A
Automatic Grade of "W" BeginsJune 17, Thursday
Independence Day (University JauguA abali must remmu 2 keeW neT
Closed)
Final Grade Reports Due in Office of a main and search more reader to the search of th
Automatic Grade of "W" Ends. 344 Automatic States and Englishing Automatic States and St
After This Date Student Will
Receive "WP" or "WF"July 9, Friday
Early Registration for Fall Semester
Ends and Required Registration
Fees DueAugust 2, Monday 3123M32 LIAT
Last Day to Withdraw from Any
Course(s)August 3, Tuesday
Graduation Candidates Final Exam
PeriodAugust 4, Wednesday
Final Examination PeriodAugust 5-7, Thursday-Saturday
Ten Week Summer Term EndsAugust 7, Saturday
CommencementAugust 8, Sunday
Final Grade Reports Due in Office of
Admissions and RecordsAugust 9, Monday
*ACADEMIC CALENDAR SUBJECT TO CHANGE

7

TEN WEEK SUMMER TERM 1993

Residence Halls Open	May 28. Friday
Regular Registration	May 28-29, Friday-Saturday
Instruction Begins/Late Registration	
Regins/Adding & Dropping with	
Eeo Bogin	May 31 Monday
Fee Degin	iviay 51, wonday
Late Registration and Course Changes	Iune 2 Wednesday
End.	Julie 2, Weallesday
Administrative Course Changes	Lune O Wednesday
End	June 2, wednesday
Withdrawal from Courses with	· · · · · · ·
Automatic Grade of "W" Begins	June 3, Thursday
Early Registration for Fall Semester	ACADEMIC CALLMDAR SHITECT D
Begins	June 10, Thursday
Application for Summer Graduation	LI WARL STRWIGS THE
Ends	June 11, Friday
Withdrawal from Courses with an	
Automatic Grade of "W" Ends.	
After This Date Student Will	
Receive "WP" or "WF"	July 2, Friday
Independence Day (University	
Closed)	July 5, Monday
Early Registration for Fall Semester	
Ends and Required Registration	
Fees Due	August 2, Monday
Last Day to Withdraw from Any	
Course(s)	August 3, Tuesday
Graduation Candidates Final Exam	
Period	August 4, Wednesday
Final Examination Period	August 5-7. Thursday-Saturday
Ten Week Summer Term Ends	August 7. Saturday
Commencement	.August 8. Sunday
Final Grade Reports Due in Office of	
Admissions and Records	August 9. Monday
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*ACADEMIC CALENDAR SUBJECT TO CHANGE

FALL SEMESTER 1993

Dining Hall Opens	.August 21, Saturday
Residence Halls Open	And the second sec
new students	August 21, Saturday
returning students	.August 25, Wednesday
Orientation for New Students	.August 22-25, Sunday-Wednesday
Houston Registration	.August 23, Monday
Registration for New Students	August 25, Wednesday
Regular Registration	August 26-27, Thursday-Friday
Registration for Weekend and Off-	A STATE AND A STAT
Campus Classes	August 28, Saturday

Instruction and Late Registration Fee
BeginAugust 30, Monday
Late Registration and Course Changes
EndSeptember 4, Saturday
Labor Day HolidaySeptember 6, Monday
Administrative Course Changes
EndSeptember 14, Tuesday
Withdrawal from Courses with
Automatic "W" BeginsSeptember 15, Wednesday
Application for Spring Graduation
BeginsSeptember 20, Monday
Withdrawal from Courses with an
Automatic Grade of "W" Ends.
After This Date Student Will
Receive "WP" or "WF"October 15, Friday
Midsemester Examination PeriodOctober 21-23, Thursday-Saturday
Midsemester Grades Due in Office of
Admissions and RegistrarOctober 25, Monday
Thanksgiving (Holiday)November 25-28, Thursday-Sunday
Instruction ResumesNovember 29, Monday
Early Registration for Spring
Semester BeginsDecember 6, Monday
Last Day to Withdraw from Any
Course(s)December 10, Friday
Early Registration EndsDecember 10, Friday
Application for Spring Graduation
EndsDecember 10, Friday
Final Examination PeriodDecember 13-18, Monday-Saturday
Semester EndsDecember 18, Saturday
Final Grade Reports Due in Office of
Admissions and RecordsDecember 20, Monday
Christmas/New Year's Holiday
(University Closed)Dec. 24-Jan. 1, Friday-Saturday

*ACADEMIC CALENDAR SUBJECT TO CHANGE

SPRING SEMESTER 1994

Dining Hall Opens	.January 2, Sunday
Residence Halls Open	NUTRING CALIFORNESSINGS IN
new students	.January 2, Sunday
returning students	.January 5, Wednesday
Orientation for New Students	January 3-5, Monday-Wednesday
Registration for New Students	January 5, Wednesday
Regular Registration	January 6-7, Thursday-Friday
Registration for Weekend and Off-	truction Begins Cale Registration/
Campus Classes	.January 8, Saturday
Instruction Begins/Late Registration/	Longust A.R. Threedow & the I gips
Adding & Dropping with Fee	
Begin	January 10, Monday

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Late Registration and Course Changes and nother signal but nother
EndJanuary 15, Saturday
Martin Luther King, Jr. (Holiday) January 17, Monday nortestates at
Administrative Course Changes
EndJanuary 25, Tuesday
Withdrawal from Courses with
Automatic Grade of "W" Begins January 26, Wednesday
Application for Summer Graduation
BeginsIanuary 31. Monday
Withdrawal from Courses with an
Automatic Grade of "W" Ends/
After This Date Student Will
Receive "WP" or "WF"
Midsemester Examination Period March 3-5 Thursday-Saturday
Midsemester Grade Renorts Due in
Office of Admissions and
Records March 7 Monday
Spring Recess
Instruction Resumes March 14 Monday
Honors Convection March 22 Wednesday
Factor Holiday
Laster Honday
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Early Registration for Summer I, ynA mort warbdifW of ysel Jas.
Summer II, and Fall Semesters obel
BeginsApril 18, Monday & notistizigest vites
Early Registration Ends, Required and and analy gained and and and and and and and and and an
Registration Fees Due for Summer 1
and IIApril 22, Friday of notanimex I lanis
Graduation Candidates Final Exam of
PeriodApril 28-30, Thursday-Saturday
Last Day to Withdraw from any model
Course(s)April 29, Friday a use Y well as maintained
Graduate Candidates Grades DueMay 2, Monday. (becol) vierovin(U)
Final Examination PeriodMay 2-7, Monday-Saturday
Semester Ends
CommencementMay 8, Sunday
Final Grade Reports Due in Office of
Admissions and RecordsMay 10, Tuesday
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*ACADEMIC CALENDAR SUBJECT TO CHANGE and alleH epidemice
FIRST SUMMER TERM 1994
Residence Halls Open May 27 Friday
Regular Registration and Annual May 27, 111 May Bridge Saturday
Memorial Day Holiday
Instruction Begins/Late Registration/
Adding & Dronning with Fee
Begin Nor Of Story of The Story of St
Nay 51, Tuesday, Dariged notourla

Late Registration and Course Changes and diw paigood & gaibbA End.....June 1, Wednesday

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EndJune 1, Wednesday bno znoizzimbA
Withdrawal from Courses with
Automatic Grade of "W" BeginsJune 2, Thursday
Early Registration for Fall Semester
BeginsJune 9, Thursday O's Alaw Thola
Application for Summer Graduation
EndsJune 10, Friday
Automatic Crade of "IN" Endo
Atten this Date Student Will
Receive "WP" or "WF"
Last Day to Withdraw from Any
Course(c) June 28. Tuesday
Final Examination Period
First Summer Term Ends
Independence Day (University
Closed)
Final Grade Reports Due in Office of
Admissions & RecordsJuly 5, Tuesday
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*ACADEMIC CALENDAR SUBJECT TO CHANGE avial D voll apprehended
Closed)
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Regular RegistrationJuly 6-7, Thursday-Friday
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Ends and Required Registration
Last Day to Withdraw from Any
Course(s) August 2 Tuesday
Craduation Candidates Final Exam
Period August 3 Wedneeday
Final Examination Period August 4-6 Thursday-Saturday
Second Summer Term Ends
Commencement

F	inal Grade Reports Due in Office of		
	Admissions and RecordsAugust	8, Monday	

*ACADEMIC CALENDAR SUBJECT TO CHANGE

EIGHT WEEK SUMMER TERM 1994

Early Registration for Fall Semester
BeginsJune 9, Thursday
Application for Summer Graduation
EndsJune 10, Friday
Residence Halls OpenJune 10, Friday
Regular RegistrationJune 10, Friday
Instruction Begins/Late Registration/
Adding & Dropping with Fee
BeginJune 13, Monday
Late Registration and Course Changes
EndJune 15, Wednesday
Administrative Course Changes
EndJune 15, Wednesday
Withdrawal from Courses with
Automatic Grade of "W" BeginsJune 16, Thursday
Independence Day (University
Closed)July 4, Monday
Withdrawal from Courses with an
Automatic Grade of "W" Ends.
After This Date Student Will
Receive "WP" or "WF"July 8, Friday
Early Registration for Fall Semester
Ends and Required Registration
Fees DueAugust 1, Monday
Last Day to Withdraw from Any
Course(s)August 2, Tuesday
Graduation Candidates Final Exam
PeriodAugust 3, Wednesday
Final Examination PeriodAugust 4-6, Thursday-Saturday
Ten Week Summer Term EndsAugust 6, Saturday
CommencementAugust 7, Sunday
Final Grade Reports Due in Office of
Admissions and RecordsAugust 8, Monday

*ACADEMIC CALENDAR SUBJECT TO CHANGE

TEN WEEK SUMMER TERM 1994

Residence Halls OpenMay 27, Friday
Regular RegistrationMay 27-28, Friday-Saturday
Instruction Begins/Late Registration/ Adding & Dropping with Fee
Begin
Late Registration and Course Changes
EndJune 1, Wednesday
Administrative Course Changes
EndJune 1, Wednesday
Withdrawal from Courses with
Automatic Grade of "W" BeginsJune 2, Thursday
Early Registration for Fall Semester
BeginsJune 9, Thursday
Application for Summer Graduation
EndsJune 10, Friday
Withdrawal from Courses with an
Automatic Grade of "W" Ends.
After This Date Student Will
Receive "WP" or "WF"July 1, Friday
Independence Day (University
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Early Registration for Fall Semester
Ends and Required Registration
Fees DueAugust 1, Monday
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Admissions and Pasanda August 9 Monday
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*ACADEMIC CALENDAR SUBJECT TO CHANGE

Prairie View A&M University

EXECUTIVE OFFICERS

President	Julius W. Becton, Jr.
Vice President for Academic Affairs	
Vice President for Finance and Admin	istration Harold S. Bonner
Director of Development and	
Assistant to the President	Harvey G. Dickerson
Vice President for Student Affairs	
sJune 2, Thursday	Automatic Grade of "W" Bagin
ACADEMIC DEANS	
Benjamin Banneker Honors College	Jewel Prestage
College of Applied Sciences and	Application for Summer Graduat
Engineering Technology	
College of Arts and Sciences	Edward W. Martin
College of Business	Barbara A.P. Jones
College of Education	M. Paul Mehta
College of Engineering and	Independence Day (University
Architecture	John Foster
College of Nursing	Darimell Waugh (Interim)
Graduate School	Willie F. Trotty
	Fores Divo i

ACADEMIC CALENDAR SUBJECT TO CHANGE

The Texas A&M University System

BOARD OF REGENTS

Ross D. Margraves, Jr., Chairman	Houston
Douglas R. DeCluitt, Vice Chairman	Waco
Bill Clayton	Austin
Raul D. Fernandez	San Antonio
Alison Leland	Houston
William A. McKenzie	Dallas
Wayne A. Showers	McAllen
Mary Nan West	Batesville
Royce E. Wisenbaker	Tyler

SYSTEM ADMINISTRATION

Chancellor	Herbert H. Richardson
Executive Deputy Chancellor	Eddie J. Davis
Deputy Chancellor and Dean and	ist shows - The second second
Interim Director of the Texas	
Agricultural Experiment Station	Charles Lee
Deputy Chancellor for Academic Programs	
and Research	Edward A. Hiler

General Information

Prairie View A&M University is a comprehensive public institution of higher education. Part of the Texas A&M University System, it is a land-grant university authorized under the Morrill Acts of 1862 and 1890. The main campus is located in Waller County approximately 40 miles northwest of Houston and one mile north of Texas Highway 290 on Farm Road 1098. A College of Nursing branch facility is located at 6436 Fannin Street in the Texas Medical Center in Houston.

The university offers a broad range of academic programs through eight major divisions:

The College of Applied Sciences and Engineering Technology The College of Arts and Sciences The College of Business The College of Education The College of Engineering & Architecture The College of Nursing

Two additional colleges, the Benjamin Banneker Honors College and the Graduate School, offer programs through the colleges listed above.

MISSION AND PURPOSE

The modern mission of Prairie View A&M University was redefined by the people of Texas through an amendment to the Constitution in 1984. Through that amendment, Prairie View A&M University joined the University of Texas at Austin and Texas A&M University as the only constitutionally designated "institutions of the first class."

In support of that designation, in January 1985 the Board of Regents of The Texas A&M University System stated its intention that Prairie View A&M University become "an institution nationally recognized in its areas of education and research." Prairie View A&M University is a land-grant institution by federal statute. It is also a "state-wide special purpose institution" providing special services to students of "diverse ethnic and socio-economic backgrounds."

Prairie View A&M University is dedicated to fulfilling these missions by achieving excellence in education, research, and service. The university is committed to offering the highest quality programs and instruction for courses or degrees in agriculture, arts and sciences, business, education, engineering, engineering technology, architecture, home economics, and nursing.

While striving to maintain excellent instruction and a strong curriculum, the university understands its role to include the nurture of students' academic development and intellectual curiosity by providing stimulating and healthy physical and cultural environments and services. As a "special purpose" institution, the university recognizes the necessity to develop unique programming to identify and assist talented students. The university is committed to the total development of the person, and, to this end, the university must provide the best possible support services in academic and nonacademic areas. The university is committed to fostering research on campus. Quality research is a critical thread that weaves together a strong faculty, state-of-the-art facilities, learning opportunities for students, and relevant service to the community beyond the campus.

HISTORY

Prairie View A&M University has an uncommon and intriguing political and cultural history. It is a study in survival under difficult and changing circumstances chronicling the struggle of blacks in Texas for opportunities in higher education. We have included this extended treatment of that history so that our young people can more fully appreciate the changes brought about by those years of struggle.

Prairie View A&M University is the second oldest institution of higher education in the state of Texas. It had its beginnings in the Texas Constitution of 1876, which, in separate articles, established an "agricultural and mechanical college" and pledged that "separate schools shall be provided for the white and colored children, and impartial provisions shall be made for both." As a consequence of these constitutional provisions, the Fifteenth Legislature, on August 14, 1876, established the Agricultural and Mechanical College of Texas for Colored Youths and placed responsibility for its management with the Board of Directors of the Agricultural and Mechanical College at Bryan.

A three-man commission appointed to build the new college used the \$20,000 appropriated for this purpose to purchase the Alta Vista Plantation located in Waller County to the east of Hempstead. The Honorable Edwin Waller managed the property at a salary of \$100 per month. His representative, Ashbel Smith, turned the affairs of the school over to the Board of Directors of Texas A&M College in 1878. The board, authorized to appoint a principal teacher to administer the college under the direction of the president of Texas A&M College, selected Mr. L. W. Minor, who served in that capacity for only one year. On March 11, 1878, eight young Negro men became the first of their race to enroll in a state-supported college in Texas. Among the instructors were two brothers, E. H. and L. C. Anderson, who became the second and third principals of the young and struggling college.

E. H. Anderson became principal in 1879, when the enrollment grew to 60 students. The A&M College Board of Directors, meeting in Hempstead on August 28 of that year, authorized the teaching of 13 subjects on the elementary and secondary levels.

L. C. Anderson became principal of Prairie View A&M in 1885 and served for 12 years. He was also the founder of the dynamic and politically active Colored Teachers Association of Texas. He managed a college budget of \$39,000 and a staff of 11 instructors in what was essentially a normal school program. The grey stone administration building was erected in 1890, and Prairie View became embroiled in an intense and sometimes bitter legislative and political debate over the status and future of the college. The Twentieth Legislature agreed to the attachment of an Agricultural and Mechanical Department to the Normal School, and the Hatch Act brought the college a branch of the Experiment Station. Other facilities erected included an academic hall, six cottages for teachers, a brick mechanics shop, and artesian wells.

In 1895, Edward L. Blackshear was elected principal of the college, and he served until 1915. During his tenure, the curriculum and the physical plant grew significantly. In 1889, the Twenty-Sixth Legislature changed the name of the school to Prairie View State Normal and Industrial College, and the new name reflected the expansion of the curriculum. The Twenty-Seventh Legislature, in

1901, authorized the school to offer a four-year course of study that included the Academy and Normal School in four divisions: education, agriculture, home economics and mechanical arts. A diploma and bachelor of science degree were given upon completion of any curriculum. The first three degrees were granted in 1903. New additions to the physical plant during this period included two dormitories for men, Foster Hall and Luckie Hall (1909), Crawford Hall for women (1912), and a combination auditorium/dining hall (1911).

I. M. Terrell, the fifth principal, held the position during the war years of 1915-1918. Despite the world conflict, the school plant expanded significantly. A household arts building, a power and ice plant, and a laundry building were erected in 1916. Spence Hall was erected in 1918 to house the Division of Agriculture. The close of World War I brought the first 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. The nursing division was established in 1918, and six buildings were added to the campus in 1924 and 1925: a veterinary hospital, science building, college exchange, elementary training school, home economics practice cottage, and music conservatory. The four-year senior college program was begun in 1919 and included training in vocational home economics, vocational agriculture, liberal arts, and mechanical arts.

W. R. Banks became principal in 1926 and served until his retirement in August of 1947, when he was named principal emeritus. During this period, the physical plant doubled in size with the addition of a dining hall, a hospital, three apartment buildings for male teachers, three dormitories for women, a greenhouse, an incubator house, a classroom building, an NYA resident center, a library, and more than 60 cottages for faculty families.

The Senior Academy was discontinued in 1930 and the Division of Education was renamed the College of Arts and Sciences with a major department in teachertraining. The Division of Graduate Study was organized in 1937, offering Master of Science degrees in agricultural economics, rural education, agricultural education, school administration and supervision, and rural sociology.

The name Prairie View Normal and Industrial College was changed by the Forty-Ninth Legislature in 1945 to Prairie View University, and the school was authorized to offer, "as the need arises," all courses offered at the University of Texas.

Dr. Edward B. Evans became the eighth principal on September 1, 1947. That same year, the Fiftieth Legislature changed the name of the institution to Prairie View Agricultural and Mechanical College of Texas. The act provided 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 passage of this Act, all of which shall be equivalent to those offered at the Agricultural and Mechanical College of Texas."

In March of 1947, the Old Administration Building was destroyed by fire. The Fiftieth Legislature, then in session, made an emergency appropriation of \$300,000 for the erection of the present administration building, which was completed in March of 1949.

The title of principal of the college was changed to dean by the Board of Directors effective during the 1947-48 school year. However, on September 1, 1948, the title was changed to president, and on December 3, 1948, Dr. E. B. Evans, the

eighth principal, was inaugurated as the first president of Prairie View Agricultural and Mechanical College of Texas. The divisions of the college became schools, and the directors of the respective schools became deans.

A new women's dormitory completed in September of 1950 was named for the late Dean of Women, Miss M. E. Suarez. A similar building for men, completed in 1952, was named for former teacher J. M. Alexander. The E. B. Evans Animal Industries Building was completed in 1951, and the Gibb Gilchrist Engineering Building was completed in 1952. Two additional dormitories, one for men and one for women, were completed in 1955, along with a dairy barn and utility warehouses. A home economics building, May Hall, was added in 1957, and the old home arts building was converted to a modern music building. The Memorial Student Center and Harrington Science Building were completed in 1960 and 1961, respectively, followed by the health and physical education building in 1964 and two air-conditioned dormitories in 1965.

Prairie View A&M was accepted for membership in the Southern Association of Colleges and Schools in December of 1958 and later received full accreditation by the National Council for Accreditation of Teacher Education.

Following the retirement of Dr. E. B. Evans as president emeritus in 1966, Dr. J. M. Drew was appointed to the position. Dr. Drew became ill shortly after taking office and was replaced by Dr. Evans who served briefly as acting president.

Dr. Alvin I. Thomas, elected as the third president of Prairie View Agricultural and Mechanical College in November 1966, introduced the residential college concept.

As Prairie View A&M's centennial approached, the Board of Regents of the newly-titled Texas A&M University System, at the request of President Thomas, appointed 79 persons to a Centennial Planning Council and charged them with formulating a new master plan for Prairie View A&M for the 1970s. After 16 months of serious study, the council's recommendations were published in a document entitled A Developmental Plan, 1970-80, Prairie View A&M College of Texas.

As an outgrowth of this plan and recommendations to the state legislature, the name of the institution was again changed to Prairie View A&M University, and its status as an independent unit of the Texas A&M University System was reconfirmed. The System Board of Regents, in the fall of 1970, sold in excess of \$13 million in bonds for the construction of two new residence halls and a dining facility. The residence halls, accommodating 1,500 students, were opened for occupancy in August of 1972. The dining facility, now known as Alumni Hall, was opened in the second semester of the 1972-73 academic year. Other major construction completed during the following decade included the fire and security building, Farrell Hall Laundry, Burleson-Ware ROTC Building, Hobart Taylor Hall, the engineering building, and the Owens-Franklin Health Center. In 1980-81, the state of Texas purchased and renovated a building in the Texas Medical Center complex to be used as clinical nursing center for the College of Nursing. In 1981-82, broadcasting began from newly constructed facilities of FCC-approved KPVU-FM at Prairie View, an instructional laboratory of the Department of Communications.

In 1981, the Texas legislature officially recognized Prairie View as not only a general purpose university but also as "special purpose institution" providing

services to students of "diverse ethnic and socio-economic backgrounds." The physical plant, valued at approximately \$12 million in 1966, was valued at more than \$50 million at this time. Curricula offerings, research and Cooperative Extension activities had been greatly enhanced. Upon Dr. Thomas' resignation in June 1982, Dr. Ivory Nelson took office as acting president.

On January 27, 1983, Dr. Percy A. Pierre was appointed the fourth president of Prairie View A&M University. Two new public policy imperatives were extant at that time: The Texas A&M University System's commitment to academic excellence and the state's commitment to the enhancement of Prairie View A&M University to spur greater integration. These two imperatives resulted in the Target 2000 Report published in May of 1983 and the Texas Plan published in August of 1983. They outlined short-term and long-term courses of development that have and will significantly change Prairie View A&M. The goals outlined were given credibility in November of 1984 by an amendment to the State Constitution that names Prairie View A&M University as an "institution of the first class" and gives it an equitable share of the proceeds of the Permanent University Fund. For the first time in the 106-year history of the university, the state of Texas agreed to fund Prairie View on the same basis as Texas A&M and the University of Texas.

New educational directions were taken in the pursuit of academic excellence through the establishment of the new College of Engineering Technology and the Benjamin Banneker Honors College. The College of Engineering Technology developed out of the old College of Industrial Education through the elimination of most vocational and industrial technology programs; the upgrading of existing programs; and the introduction of three new programs in computer engineering technology and electrical and mechanical engineering technology. The Benjamin Banneker Honors College serves the university by providing honors level programs.

In a move to reduce administrative costs, increase efficiency and improve educational effectiveness, the university merged the colleges of Agriculture and Home Economics with the College of Engineering Technology, which was renamed the College of Applied Sciences and Engineering Technology, beginning September 1987. The colleges of Agriculture and Home Economics became departments in the new college. The Computer Science program was transferred from the Department of Mathematics and Computer Science to the Department of Engineering Technology.

The physical development of the campus proceeded according to the Master Plan of August 1984, which sought to enhance the historic part of the campus through new building construction, renovations, and exterior construction and landscaping. Among new buildings constructed were the five-story John B. Coleman Library, the Agricultural Research Building, the Chemical Engineering Laboratory Building, the Education and Classroom Building, the Engineering Technology Building, the Johnson-Phillip All Faiths Chapel, the Central Receiving and Warehouse buildings, the new Gymnasium, and the Intramural Athletic Complex. Buildings renovated include the Field House, the Home Economics Building, the Harrington Science Building, the President's House, the Physical Plant Building, the Power Plant, and the Gilchrist Engineering Building. Exterior construction converted the campus to a pedestrian campus with the construction of several

major malls and broad walkways between them. Major renovations under construction or design include the Old Education Building and the W.R. Banks Building.

Since 1983, PVAMU's enrollment increased more than 25 percent, and the university's endowment jumped from \$300,000 to over \$3 million.

On December 15, 1989, Julius W. Becton, Jr. LT General, U.S. Army (Retired) was appointed the fifth president of Prairie View A&M University, his alma mater. With nearly 40 years of active commissioned service in the U.S. Army, President Becton was the first graduate of Prairie View A&M University to attain star rank in the military.

In the first year of his administration, President Becton took steps to improve fiscal operations. In addition, he oversaw the reaffirmation team visit by the Southern Association of Colleges and Schools, and the College of Nursing received a full eight-year accreditation from the National League of Nursing.



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Student Services

CAMPUS LIFE

Prairie View A&M University aims to aid students not only in their academic growth, but also in their aesthetic, physical, spiritual, interpersonal and cultural development. The staff of the Student Affairs Division of the University and other campus service units are committed to enriching the university environment to enable students to become mature and responsible members of society who will engage in life-long self-improvement.

Administrative responsibility for the organization, direction, and governance of student life at Prairie View A&M University is assigned to the Division of Student Affairs. Headed by the vice-president for student affairs, the division consists of the offices of Financial Aid, Counseling and Career Development, School Relations (Pre-College Programs), Student Activities, and Student Life (Disciplinary Management and Residential Life).

At Prairie View A&M University students work closely with the Student Affairs professionals to create a supportive climate for independent thinking and group cooperation. A notable feature of the campus is the easy access to administrators, faculty and staff who are sensitive to student needs and can respond in a personal way. The residential character of the campus also brings students closer together and promotes a strong university spirit of camaraderie.

TUITION AND FEES

Registration and Student Fees

Registration at the university consists of enrolling in classes and paying required fees. Registration cannot be completed and no student can be formally enrolled in a class until all required fees are paid to the Bursar's Office.

Explanation of Fees

Fee amounts are subject to change without notice. The amounts listed below are in effect for Fall 1991. Current fee schedules may be obtained from the bursar.

Tuition. Texas resident students pay \$20.00 per semester credit hour but not less than \$100 per academic semester and not less than \$50 per five week summer term. Non-Texas residents pay \$128.00 per semester credit hour.

Student Services. All students attending the university are required to pay \$8.25 per credit hour not to exceed \$99.00 per academic semester and \$49.50 per summer session. This fee assists the university in providing recreational activities, intramural athletics, artists and lecturers, cultural entertainment, debating and oratorial activities, student publications, student government services, and other student activities and services authorized by the board.

Building Use. All students are required to pay \$7.00 per credit hour for retirement of indebtedness on certain university buildings and facilities.

STUDENT SERVICES

Computer Access. All students are required to pay \$3.00 per credit hour to defray the cost of establishing and maintaining a centralized academic computing laboratory for all students. The laboratory will provide word processing, spread sheet and microcomputer-based data base capabilities. Services will include typical laboratory activities (preliminary training, assistance, supplies, etc.)

Student Health. All students are required to pay \$15 per regular semester and 7.50 per summer term. This fee entitles the student to receive six (6) out-patient doctor's visits during the Fall and Spring Semesters and three (3) out patient doctor's visits per each summer term.

Registration. All students are required to pay a non-refundable \$6.00 per semester and each summer session registered for. The Registration Fee provides an equitable means of recovering costs incurred by the Office of Admissions & Records. It replaces the former Add/Drop and the Change of Grade fees.

Room Rent. All students who live in university residence halls must pay the rent amount charged for the dormitory occupied.

Board. Students who live in the university residence halls must select the cafeteria meal plan A. (3 meals, 7 days a week) or the cafeteria-style meal plan B (3 meals, 5 days a week). All students may purchase PV Express points in ten dollar increments. Flex points can be used in either board or cash-sale-operations.

Laundry. Students residing in university residence halls must participate in the University Laundry Plan, which provides a pre-determined amount of flex points each semester and summer term. Students will have the option of using their laundry flex points to pay for laundered and/or dry cleaned items or use their flex points at the central laundromat.

Identification Card. Students will be assessed an I.D. Card services fee of \$16 per academic year. Fall Semester \$4/Spring Semester, \$4/Summer I, \$4/ and Summer II, \$4. The Prairie View I.D. Card is designed to be issued when a student initially enrolls in the university. This same I.D. is revalidated each semester to encode the services that each student is entitled to receive. Failure to have the I.D. revalidated may result in services not being rendered, i.e. meals library, laundry, health care.

Sales Tax. Students who participate in the food service plan are required to pay state sales tax.

Non Refundable Fees

1.	Application	\$10 per form
2.	Applied Music	\$12 per course
3.	Auditing	\$10 per course
4.	Bad Check	\$15.50 per check
5.	Certificate	\$ 6
6.	Diploma, Graduate	\$25
7.	Diploma, Undergraduate	\$15
8.	Financial Aid Form (FAF)Electronic	
	Processing	\$20.00
9.	I.D. Card	\$ 4 per semester
		\$ 4 per summer term
		\$10 duplicate*
10.	Installment Carrying Fee	\$12

11.	Installment Late Fee	\$12
12.	Laboratory	\$ 2 to \$8 per course
13.	Late Admission Processing	\$15
14.	Late Registration	\$25 per semester
		\$12.50 per summer term
15.	Reinstatement	\$50.00
16.	Registration in Absentia	\$15 resident
		\$17.50 nonresident
17.	Transcript (After the first request)	\$ 3 (money order or cashiers check)
18.	Vehicle registration	\$25 per semester
		\$15 per summer term

*If the lost I.D. Card is found prior to the student taking the picture for the duplicate card, the \$10 fee will be refunded.

REFUNDABLE DEPOSITS

- 2. Room Damage......\$100 Covers possible damage to university dormitory property. Refunded upon request within six months after graduation or permanent withdrawal from the university if there are no charges against the student. The damage deposit will be forfeited if not claimed within four years after graduation or permanent withdrawal from the university.

The following example uses the fee schedule above to show fees for a Texas resident enrolled for 12 semester hours during a semester or 6 semester hours during a summer term.

25

STUDENT SERVICES

Fees	Semester	Summer Term
Tuition	\$240.00	\$120.00
Student Services	\$ 99.00	\$ 49.50
Student Health	\$ 15.00	\$ 7.50
Building Use	\$ 84.00	\$ 42.00
Computer Access	\$ 36.00	\$ 18.00
Room Rent	\$650.00	\$270.00
Board		
21 Meal Plan	\$839.00	\$339.00
Sales Tax on 21 Meal Plan	\$ 60.82	\$ 24.57
15 Meal Plan	\$799.00	n/a
Sales tax on 15 Meal Plan	\$ 57.92	n/a
Laundry	\$ 60.00	\$ 23.00
I D. Card	\$ 4.00	\$ 4.00
Registration	\$ 6.00	\$ 6.00

Statutory Provisions

Students may qualify for legislative exemption from the payment of tuition and certain fees and charges based on the following exemption criteria:

A. Exempted from Tuition:

- highest ranking graduates of accredited Texas high school exempt for two semesters immediately following their graduation;
- persons who have resided in Texas for at least the period of 12 months before the date of registration and are: (a) veterans of certain wars who were citizens of Texas at the time they entered service or (b) citizens of Texas who are children of certain members of the armed forces of the United States or Texas National Guards who were killed or died in the line of duty;
- eligible children of firemen and peace officers disabled or killed in the line of duty;
- 4. eligible blind and deaf students;
- students who are citizens of other nations of the American hemisphere, based on allocations by the Coordinating Board, Texas College and University Systems;
- firemen enrolled in fire sciences courses offered as part of a fire science curriculum;
- 7. dependent children of prisoners of war or persons missing in action; and
- 8. senior citizens if space is available to audit any course offered.
- B. Exempted from Laboratory Fees:
 - persons who have resided in Texas for at least the period of 12 months before the date of registration and are: (a) veterans of certain wars who were citizens of Texas at the time they entered service, or (b) citizens of Texas who are children of certain members of the armed forces of the United States or Texas National Guards who were killed or died while in the line of duty;

- eligible children of firemen and peace officers disabled or killed in the line of duty;
- 3. eligible blind and deaf students;
- students who are citizens of other nations of the American hemisphere, based on allocations by the Coordinating Board, Texas College and University Systems;
- 5. firemen enrolled in fire sciences courses offered as part of a fire science curriculum;
- dependent children of prisoners of war or persons missing in action; and
- 7. senior citizens if space is available to audit any course offered.
- C. Exempted from Student Services Fee:
 - 1. eligible children of firemen and peace officers disabled or killed in the line of duty;
 - 2. eligible blind and deaf students;
 - students who are citizens of other nations of the American hemisphere, based on allocations by the Coordinating Board, Texas College and University Systems;
 - dependent children of prisoners of war or persons missing in action; and
 - 5. senior citizens if space is available to audit any course offered.

D. Exempted from Building use fee, Student Health Fee and Computer Access Fee:

- persons who have resided in Texas for at least the period of 12 months before the date of registration and are: (a) veterans of certain wars who were citizens of Texas at the time they entered service or (b) citizens of Texas who are children of certain members of the armed forces of the United States or Texas National Guards who were killed or died in the line of duty;
- 2. eligible children of firemen and peace officers disabled or killed in the line of duty;
- 3. eligible deaf and blind students;
- students who are citizens of other nations of the American hemisphere, based on allocations by the Coordinating Board, Texas College and University Systems;
- dependent children of prisoners of war or persons missing in action; and
- 6. senior citizens if space is available to audit any course offered.
- E. Exempted from General Property Deposit:
 - 1. eligible deaf and blind students;
 - students who are citizens of other nations of the American Hemisphere based on allocations by the Coordinating Board, Texas Colleges and University Sytems; and
 - 3. senior citizens if space is available to audit any course offered.

STUDENT SERVICES

F. Exempted from room, board, and laundry fees:

Students who are not housed in University Residence Halls.

Note:

Students concurrently enrolled in more than one public institution of higher education will pay tuition and student service feeas specified in the Texas Education Code 54.062 and 54.503.

Board of Regents' Provisions

The Board of Regents has provided certain exemptions from student fees in addition to those provided in the statutes. Exceptions currently authorized at Prairie View A&M University follow:

A. Student Service Fee:

- 1. full-time employees of The Texas A&M University System;
- 2. students registered in absentia; and
- military personnel assigned to full-time ROTC duty in the military science department of any general academic institution of The Texas A&M University System.

B. Building Use Fee, Student Health Fee, and Computer Access Fee:

- 1. full-time employees of The Texas A&M University System;
- 2. students registered in absentia; and
- military personnel assigned to full-time ROTC duty in the military science department of any general academic institution of the Texas A&M University System.

Fee Payment Plans

Prairie View A&M University offers the following fee payment plans for the payment of tuition and fees during the fall and spring semester:

- 1. Full payment of tuition and fees in advance of the beginning of the semester
- 2. One-half payment of tuition and fees in advance of the beginning of the semester, one-quarter payment prior to the start of the sixth class week, and the final one-quarter payment before the beginning of the eleventh class week.

Unpaid Obligations (Administrative Withdrawal)

Students who do not fulfill their financial obligations when due are subject to administrative withdrawal from the university. Administrative Withdrawal will result in loss of room and board privileges and loss of classroom admittance for the semester. Administrative withdrawal does not eliminate outstanding debt(s) including tuition, fees, room and board, and other incidental charges. The student who has been administratively withdrawn can be reinstated to student status upon the payment of the reinstatement fee and all tuition, fees and incidental charges. Students who have been administratively withdrawn and who do not become reinstated to a student status will be responsible for all debts, including tuition, fees, room and board, and other incidental charges for the full semester unless they officially withdraw from the university. All checks accepted by the university must clear the bank on which they are drawn. Students who write checks that do not clear the bank will be denied further check writing privileges. The university will not accept personal checks for past due balances.

Fee Refunds

Fee refunds will be given for courses dropped and for withdrawal from the university within the time constraints described below.

A full refund of applicable tuition and fees will be given for courses dropped within the first 12 class days of the fall or spring semester, or within the first four days of summer term, provided the student remains enrolled at the institution for that semester or term. Students who wish to withdraw from the university after registering must follow prescribed procedures for withdrawal or risk substantial penalties and difficulty in registering for future semesters. Withdrawal forms are available from the registrar.

Students who have question or concerns regarding the calculations of their refund may appeal by letter to the following individuals:

Financial Aid Recipients

Director of Student Financial Aid Prairie View A&M University P.O. Box 2967 Prairie View, Texas 77446-2967

Non-Financial Aid Recipients

Bursar Prairie View A&M University P.O. Box 248 Prairie View, Texas 77446

Students and parents should state in their appeal letter the portion of the refund which is being questioned. Each appeal will be reviewed by the respective office in charge of calculating the refund. Please allow thirty (30 days for response).

Refund Schedules (Voluntary Withdrawal)

The following schedule applies to tuition, student service fees, building use fee, laboratory fees, student health fee and computer access fee:

Fall or Spring Semester Prior to the first class days During the first five class days During the second five class days During the third five class days During the fourth five class days After the fourth five class days

Five- or six-week Summer Session Prior to the first class day During the first, second, or third class day During the fourth, fifth, or sixth class day Seventh class day and thereafter 100 percent 80 percent 70 percent 50 percent 25 percent None

100 percent 80 percent 50 percent None

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Room Damage and Reservation: Deposits will be refunded in full if the reservation is cancelled by July 15 for the Fall Semester, December 15 for the Spring Semester, May 10 for the first Summer Session or June 20 for the second Summer Session. No refunds will be made if room reservations are canceled after these dates.

Room Rent. Students who withdraw after registration begins will receive a prorated refund of unused room rent less early withdrawal fee of ten (10) percent of the semester rate.

Laundry Fee. Laundry fee refunds will be prorated on a weekly basis.

Food Service Refund. Payments made for board will be refunded in full to students who officially withdraw before the first day of official registration for that term. Refunds of actual payments on or after the first day of official registration for actual payments will be proprated on a daily basis less an early withdrawal fee of ten (10) percent of the semester rate.

SCHOLARSHIPS AND FINANCIAL AID

Ethnic Recruitment Scholarships

To encourage ethnic diversity, the state of Texas and the university provide a limited number of scholarships to qualified non-black students who enroll at the university. Grades earned in high school and college course work, as well as SAT or ACT test scores, are considered in making these awards. Awards are made to both undergraduate and graduate students.

Applications for ethnic scholarships may be obtained from the Office of Admissions and Records, P.O. Box 2610, Prairie View A&M University, Prairie View, Texas 77446-2610.

Loans

The university offers long-term loan programs. Long-term loan programs include Perkins Student Loans and Stafford Student Loans. For graduate studies, the total amount is \$54,750 depending on the guidelines of the particular program. Long-term loan repayment begins six months after the student graduates, withdraws from the university, or ceases to carry at least a half-time course load during a fall or spring semester. Repayment of the loan and its interest may be extended over a 10-year period.

Inquiries about loan programs should be directed to the Office of Financial Aid, Prairie View A&M University, P.O. Box 2967, Prairie View, Texas 77446-2967.

Student Employment

Need-based College Work-Study Program funds are provided by the U.S. Department of Education and Prairie View A&M University for on-campus employment. Undergraduate and graduate students who are enrolled at least half-time, are citizens or permanent residents of the United States, and are in need of earnings from such employment to pursue a course of study are eligible to apply. Appicants must submit a Financial Aid Form and a Prairie View A&M University Application for Financial Assistance. Work-Study students may be employed during the semester for an average of 20 hours a week with approval from the Office of Financial Aid, and up to 40 hours a week during the periods when classes are not in session.

The university also provides limited funds to employ students in a non-needbased work-study program. To qualify, students must be enrolled for at least six credit hours per semester and meet the university's satisfactory academic progress standards.

Students interested in employment at the university should contact the Student Employment Administrator, Office of Financial Aid, P.O. Box 2967, Prairie View, Texas 77446-2967.

Application Deadlines

	Fall	Spring	Summer
	Semester	Semester	Sessions
Scholarships	April 1	November 1	Not Available
Perkins Loan	June 1	November 1	April 1
Stafford Loan	June 1	November 1	April 1
College Work-Study	June 1	November 1	April 1

MAJOR FACILITIES AND SERVICES

Cooperative Education Programs

Cooperative Education (Co-Op) programs are available to students who wish to combine their academic programs with on-the-job training. Programs involve alternating semesters of on-campus instruction with similar periods of paid temporary employment in business, industry or government. Students participating in the program must be registered students in good standing.

The primary objectives of the Co-Op program are: to provide students with meaningful professional experience and education; to better prepare students for immediate employment upon graduation; and to assist students in the development of attitudes and skills conducive to effective performance in the academic, employment, and interpersonal arenas.

Students are eligible to participate in a Co-Op program after successful completion of 30 credit hours of college course work with a minimum 2.5 grade point average. To earn academic credit, students must have the Co-Op experience approved and supervised by their major department. Departments reserve the right to approve Co-Op student participation according to academic performance criteria set within each major.

Students may apply at least one semester in advance of the semester they wish to be employed. Applications are available from the Career Education, Placement and Outreach Center. Each academic department will establish the number of elective semester hours in a major that may be satisfied through approved Co-Op program participation. To receive credit for the Co-Op experience, a student must register with the university each semester. Students who fail to register will **not** receive academic credit for the experience.

Career Planning and Placement

The Career Planning and Placement Office provides academic and career counseling services to help students develop and maintain positive attitudes and skills essential for success in the classroom and in life. Both programs are available to help students set goals and attain them. The primary goals and objectives of the Placement Center staff are to:

- Familiarize students with university programs, services, and activities and prepare them to use both campus and community resources effectively;
- Design and operate programs that emphasize the total development and productivity of each student as a unique individual;
- Provide students with information on educational resources and career options;
- Assist students who wish to seek advanced degrees and additional graduate training;
- 5. Enhance students' employment skills and opportunities for career explorations, and
- 6. Help students understand and maintain the motivation required to attain high standards of achievement, make choices according to their interests and abilities, and assume responsibility for their own behavior.

Services offered by the Placement Center staff include educational counseling, postive growth seminars, career explorations, cooperative education coordination, and placement services. The office also provides a computerized job search service (JobLink), career-oriented workshops, liaison between academic departments and corporations; sponsor a Co-Op and Placement student advisory group; and the recruitment of corporation, government agencies, and cluster representatives to employ students in Co-Op, internships and permanent positions.

Outreach and Precollege Programs

The University Outreach Office offers exceptional pre-college programs each summer. The Institute for Pre-College Enrichment provides a series of two-week, on-campus career development workshops for academically talented high school students. Students who attend enhance their basic academic skill, meet challenging professionals, learn about career opportunities, and share cultural experiences.

For more information on opportunities at Prairie View A&M University, write to the University Outreach Office, P.O. Box 66, Prairie View, Texas 77446-0066.

Dining Services

A centrally located dining facility, Alumni Hall provides contract meal services for students living in the residence halls. Cash and special event dining services are also provided. Large lounge and lobby spaces available for receptions and other special events are also housed in this facility. Additional food service facilities in Memorial Student Center offer light meals such as hamburgers and pizza for students seeking a change of pace. The game arcade is also in the Alumni Hall.

Disciplinary Management

Students are responsible for being fully acquainted with and complying with the rules and regulations published annually in the *University Student Handbook*. Students who fail to conform to these rules and regulations are subject to appropriate disciplinary action. An administrative summons may be used to request a student to report to an administrative office for a conference or other direct communication. The summons may be transmitted by messenger, letter, telephone, bulletin board, or other means. A student who receives such a summons must report immediately to the requesting office and in preference to any and all other scheduled activity.

Absolutely no form of malicious treatment or hazing of a student or other person by another student or students will be tolerated on the Prairie View A&M University campus. Violators are subject to suspension or more serious action. State law requires that organizations as well as individual members engaging in hazing be assessed severe penalties.

Abuse of controlled substances is not tolerated on the campus. Severe penalties will be imposed on individuals found guilty of consuming or distributing such substance on the campus. The university penalties are in addition to any punishment derived from criminal prosecution.

Health Services

The Owens-Franklin Health Center, located on the main campus, coordinates health care services for the student body. The Health Center is open from 8:00 am to 6:00 pm Monday through Friday with nurses and/or physicians on duty to attend to basic health care needs and to provide a limited amount of out-patient health care. The Health Center is not equipped or staffed to provide in-patient and emergency room services. Emergency Medical Services are provided, however, by the Waller-Hempstead EMS with on call (24 hour) Para-Medics, stationed within a mile of the Prairie View Campus. The Para-Medics are backed up by an on call (24 Hour) Ambulance Service to transport patients to full service hospitals in the area, if required. The university further enhances its urgent care services by stationing on campus (for campus calls only), Emergency Medical Technicians (State Certified), between the hours of 6:00 pm-8:00 am Monday-Friday and for 24 hours on Saturdays and Sundays. The 911 Emergency Service is also available.

Since the Student Health fee does not cover ambulance transportation or services rendered at a full service hospital, it is imperative that all students have personal Health Insurance Coverage. For a minimal charge, a *Student Health Insurance Policy* can be obtained to cover emergencies and hospital care not covered by the Student Health Fee. Information about Student Health Insurance is available from the Owens-Franklin Health Center.

Library

The new five-story John B. Coleman Library was constructed at a cost of approximately \$16 million.

The library's fast-growing collection contains 235,193 volumes, 259,823 microforms, a Texas State Documents Collection of more than 15,487 items, an Afro-American Collection, a Master's Thesis Collection, curriculum materials, and a Prairie View A&M University Archival Collection. The library currently receives more than 1600 periodicals and other serials.

The Reference Department staff provides assistance in using the reference collection located on the first floor. Also located on the first floor are the microtext area, the Afro-American Collection, the Archives, a group study room, interlibrary loan service, and on-line computer literature searching. The second floor houses

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the circulating collections and seating space for users. The Learning Resources Center and Current Periodicals Department are located on the basement level.

With the exception of periodicals, reference books, books from the Afro-American Collection, and some reserved books, most books are loaned for a period of two weeks. An open-stack arrangement allows free access to all materials except those in the University Archives and some current periodicals. Library hours are Monday through Thursday from 7:30 a.m. to 11:30 p.m., Fridays from 7:30 a.m. to 5 p.m., Saturdays from 8 a.m. to 5 p.m., and Sundays from 3 p.m. to 11 p.m. Special hours for other areas and any exceptions to regular hours are posted in the library.

Memorial Student Center

The nucleus of extracurricular activity on campus, Memorial Student Center (MSC) has facilities for leisure, recreation, meetings, receptions, dances, and other student activities. The MSC holds active membership in the Association of College Unions International and sponsors competitive events in video games, board games, billiards, and the "college bowls."

Also located in the MSC are the college exchange and bookstore, a ballroom, beauty and barber salons, a coffee shop, and an academic computing center. A number of offices are located in the MSC, including management offices of the MSC and the Department of Student Activities, as well as offices for student groups such as the Student Government Association, the Pan-Hellenic Council, and the Coucil of Student Organizations.

Recruitment and Precollege Programs

The Office of School Relations provides a central point of contact for admission and enrollment information. The staff schedules and participates in off-campus meetings with prospective students, their parents, and school counselors as a major part of the university's recruitment effort. The staff also arranges campus visits for students and their parents that include appointments with selected faculty members, class visits, an admission and financial aid interview and a guided tour of the campus.

The Office of School Relations offers exceptional pre-college programs each summer. The Institute for Pre-college Enrichment provides a series of two-week, on-campus career development workshops to academically talented high school students. Students who attend enhance their basic academic skill, meet challenging professionals, learn about career opportunities, and share cultural experiences.

For more information on opportunities at PVA&MU, write to the Office of School Relations, Prairie View A&M University, P. O. Box 66, Prairie View, Texas 77446-0066.

Religious Activities

The recently constructed Johnson-Phillip All Faiths Chapel is the center of campus religious activities. Designed for both solitary meditation and interdominational group worship, the chapel caters to the needs and interests of students through programming that addresses the major issues confronting the university community as well as the community at large. The All Faiths Chapel Advisory
Board composed of students, faculty, staff and community members conceptualizes and presents programs with the support of the Dean of Chapel.

The United Ministries, housed in the chapel, provide opportunities for students to maintain voluntary association with religious groups representing their personal preferences. The ministries work with students through the All Faiths Chapel and through local community churches.

Residential Life

Nine residence halls provide living/learning centers for students. Each residence hall is staffed with personnel charged with general responsibility for the welfare of the student occupants and care of the facility. Students assist in planning residence hall programs and related activities. They also help develop standards of conduct, determine social regulations, and create an atomosphere that promotes wholesome living and productive study in the residence halls.

Services provided in the residence halls include study areas, telephones (optional), limited mail service, laundry areas, lounge areas, kitchenettes, vending areas, and storage spaces. The University reserves the right to approve campus housing assignments, and at any time to transfer students from one residence hall to another or require any student considered an undesirable tenant to vacate a residence hall.

Because Prairie View A&M University is a residential campus, undergraduate students are encouraged to live in university residence halls where they can benefit from the living/learning environment. Regularly enrolled students who do not live in university residence halls are classified as commuter students. Undergraduate students who fall into one or more of the following categories are eligible to apply for commuter student status:

- 1. Students living at home with their parents or legal guardians
- 2. Married students
- 3. Veterans of military service
- 4. Students who are 21 years of age or older
- 5. Students engaged in off-campus assignments or affiliations
- 6. Students enrolled for less than 12 hours for the semester

Student Activities

Student activities at Prairie View A&M University are based on a concept in student advisement and programming that encourages teamwork and networking. Activities are planned to provide for the personal development of leadership skills, with the recognition that being a positive supporter or follower also has merit. A variety of social and cultural events are sponsored by the Campus Activities Board, the Student Government Association and various independent organizations.

More than 30 academic honor societies, eight national Greek fraternities and sororities, and numerous academic, service, hometown, special interest, and social clubs are represented on campus. The university music ensembles, majorettes, cheerleaders, and the Charles Gilpin Players, a theatrical ensemble, build school spirit and provide cultural enrichment. Outstanding speakers from the public and

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private sectors lecture frequently on the campus and performing artists make scheduled appearances.

The Prairie View Panthers varsity sports teams for men and women compete in the Southwestern Athletic Conference and in NCAA football, golf, basketball, tennis, track, baseball, and volleyball. An active intramural sports program for all students is coordinated by the Department of Health and Human Performance.

Traffic and Security

The Department of Traffic and Security operates 24 hours daily and provides police, fire, civil defense, and other emergency services to the university. Officers enforce university regulations as well as county and municipal ordinances, and state and federal laws. As peace officers, they are vested with all powers, privileges, and immunities of peace officers while in the performance of their duties.

The Department of Traffic and Security enforces university traffic regulations in addition to patrolling the campus community to maximize the protection of life and property. Automobiles operated on the campus must be operated in full compliance with federal, state and local laws. Traffic control and speed limit signals and signs are posted throughout the campus. Failure to comply with traffic and parking regulations may result in fines and/or cancellation of operating permits.

All full-time and part-time students, faculty, and staff are required to register and obtain a permit (decal) for each vehicle operated or parked on the campus. Visitor permits will be issued free of charge for periods of up to 72 hours by the University Traffic and Security Department. Unregistered or illegally parked vehicles are subject to impoundment and fines.

Graduate School

ADMINISTRATIVE OFFICERS

Willie F. Trotty, B.S., M.S., Ph.D. Dean, Graduate School

Hakumat Israni, B.S., M.S., Ph.D. Dean, College of Applied Sciences and Engineering Technology

Edward W. Martin, B.A., M.A., Ph.D. Dean, College of Arts and Sciences

Barbara A. P. Jones, A.B., A.M., Ph.D. Dean, College of Business

M. Paul Mehta, B.A., M.A., M.A.T., Ed.D. Dean, College of Education

John Foster, B.S.E.E., M.S.E.E., Ph.D. Dean, College of Engineering and Architecture

The Graduate School provides opportunities for advanced study to qualified students seeking additional graduate education and/or degrees. Programs are offered under the joint supervision of the Graduate School and associated colleges within the university.

Colleges in the Graduate School offer programs leading to the Master of Arts degree, the Master of Science degree, the Master of Business Administration degree, the Master of Education Degree, Professional Certification, and Certificate Endorsements.

Prairie View A&M University offers most of its graduate courses on the maincampus at Prairie View. However, each semester a limited number of courses are offered at off-campus sites. Off-campus sites are currently located in the Klein, Cypress-Fairbanks, Aldine and Rosenberg school systems, the campus of the Prairie View College of Nursing near downtown Houston, the campus of Paul Quinn College, and in the Beaumont-Port Arthur area.

Prairie View A&M University is accredited by the Southern Association of Colleges and Schools.

ADMISSION REGULATIONS

Admission Requirements

- Submission of a completed application for admission to the Graduate School.
- 2. A Bachelor degree from an accredited college or university.
- 3. An official transcript of all college work (undergraduate and graduate) from the registrar of each college previously attended.
- 4. A minimum undergraduate cumulative Grade Point Average of 2.75 on a 4.00 grading scale for regular graduate degree status.
- Less than 2.75 but a minimum of a 2.45 Grade Point Average on a 4.00 grading scale for provisional graduate student status. Departments may use the last 60 semester hours of undergraduate credit for admitting students in this category.

- 6. Three letters of recommendation from persons in the field of the applicant's academic major.
- 7. Official scores on the Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT)-College of Business.
- 8. Recommendation of admission by the department head and dean of the college in which the graduate program applied for is offered and formal acceptance by the dean of the Graduate School.

Students Whose Primary Language is not English

Graduate students whose first language is not English must present a score of 550 on the Test of English as a Foreign Language administered by the Educational Testing Service, Princeton, New Jersey, in addition to passing additional instruments required by their departmental major, as a part of the application process for unconditional admission to the University.

Students presenting a score of less than 550 will be evaluated and admitted provisionally on a case-by-case basis. Students admitted provisionally are required to participate in the ESL Institute and to demonstrate oral and written proficiency in English by the end of two semesters of attendance at the University or be dismissed from the University.

Additional assistance will be available in the Accelerated Learning Resource Center for students needing or wishing to improve their English language usage, comprehension, and speech patterns.

For submission of the application and all credentials, the following deadline dates apply:

April 1, for 1st Summer Session May 1, for 2nd Summer Session July 1, for Fall Semester November 1, for Spring Semester Applications should be submitted to: Graduate Admissions Office Prairie View A&M University Prairie View, Texas 77446

Types of Admission

Graduate Degree Status. Students admitted as regular graduate students are called degree status students.

Provisional Graduate Status. Students admitted to this category may enroll for a maximum of 12 semester credit hours of graduate courses. In order to continue, the student must have achieved a grade point average of 3.0 and be recommended by the department and college for graduate degree status or non-degree status.

Non-Degree (Transient) Status. Students who have a bachelor's degree (minimum GPA of 2.45) and wish to take graduate courses without qualifying for a degree have this status. Students must meet all course prerequisites in order to be admitted to advanced courses. Elevation to degree status must be recommended by the appropriate department and college and approved by the dean of the Graduate School.

Special Student Status.

- Students who wish to take graduate courses but do not meet the minimum GPA for admission as degree, provisional or non-degree status are considered special students. These students must have been highly recommended as potential graduate students. Students in this category may enroll for not more than 12 graduate semester credits covering a maximum of two consecutive terms. A student in this category may be admitted to degree status if a GPA of 3.0 is maintained during this period and if the student is recommended by the department head and dean of the college.
- Students who are removed from degree status because of a low GPA may become special students. Students in this category may petition the department and college for re-admission to degree status after earning a 3.0 GPA. A petition will be allowed only once within a period of two years (24 months).
- 3. Students whose academic records were not received before the deadline period relating to the time in which the students wish to be admitted are designated as special students. If a student's records are received within a period of eight weeks after enrollment in courses, his/her record will be evaluated. The student will then be notified of his or her admission status. If the student's records are not received prior to the end of the grading period, no credit will be awarded for the course(s) taken.

Re-admission

A student or applicant who falls into one of the following categories must reapply for admission to the Graduate School:

- 1. An applicant who has previously been admitted to the university but did not enroll for the term stated in the acceptance letter.
- 2. A graduate student at Prairie View A&M University who was accepted into one degree program and wishes to enter another degree program.
- 3. Degree candidates and non-degree students who have not enrolled in courses for two consecutive years.

Graduate Work by Seniors

A senior in this university who is within six semester hours of completing the requirements for an undergraduate degree may, upon being recommended by the department head and college dean, be approved to register for up to six semester hours of graduate courses while completing undergraduate degree requirements. The combined load of the graduate and the undergraduate courses must not exceed 15 semester hours.

Second Master's Degree

Persons holding a previously earned master's degree may pursue an additional master's degree at Prairie View A&M University only with the specific approval of the Dean of Graduate School. Such approval will be given only when the following conditions are judged to be met:

1. The proposed second master's degree must be in a distinct and different major field of study than the previous degree;

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2. Courses counted toward a previously earned master's degree may not be applied to the second master's degree unless they constitute specific course requirements for the major concentration in the second master's degree program. In such cases, not more than 12 semester hours of such courses may be counted toward the second degree. (Not more than 6 semester hours may be transferred from another institution).

UNIVERSITY POLICY ON ACADEMIC DISHONESTY

Course credit, degrees, and certificates are to be earned by students and may not be obtained through acts of dishonesty. Students are prohibited from participation in acts of academic dishonesty including tampering with records or falsifying admissions or other information. Disciplinary action will be taken against any student who alone or with others engages in any act of academic fraud or deceit. The University's policy on academic dishonesty is stated below:

It is the responsibility of students and faculty members to maintain academic integrity at the University by refusing to participate in or tolerate academic dishonesty.

Each instance of academic dishonesty should be reported to the department in which the student has declared a major so that it can become a part of that student's file; to the department head of the instructor of the course in which the alleged infraction occurred; and to the Office for Academic Affairs as deemed necessary.

OFFENSES AND DISCIPLINARY ACTIONS

Offenses:

Acquiring Information Providing Information Plagiarism and Dual Submissions Conspiracy Fabrication of Information Misrepresentations, alterations of documents, forgery, *et cetera*

Disciplinary Actions:

Letter of Reprimand Probation Suspension Dismissal Expulsion

Below are definitions of sanctions that can be enforced for breaches of the University Academic Dishonesty Policy.

- 1. Probation. In addition to the penalty for the first offense, a student on academic conduct probation is subject to the following restrictions:
 - a) Ineligibility to hold an office in any student organization recognized by the University or to hold any elected or appointed office of the University.

- b) Ineligibility to represent the University outside the University community in any way, including representing the University at any official functions, intercollegiate athletics, or any other form of intercollegiate competition or representation.
- c) Ineligibility to receive University-administered financial aid, such as scholarships.
- 2. Suspension. Separation of the student from the University for no less than one regular semester. The student is not guaranteed readmission at the end of such period of time, but is guaranteed a review of the case and the student's entire record by the student's dean.
 - Dismissal. Separation of the student from the University for an indefinite period of time. Readmission to the University may be possible at some time, but no specific time for a decision is established. The student is not automatically eligible for readmission.
 - 4. Expulsion. Separation of the student from the University whereby the student is not eligible for readmission to the University.

Following the review, the dean's decision regarding eligibility for readmission will be communicated in writing to the student who has the right to appeal that decision to the University Academic Dishonesty Disciplinary Committee.

The standard of review to be used in all proceedings under this section shall be fundamental fairness. Strict rules of evidence and procedures are not required so long as the proceedings are conducted in such a manner as to allow both sides to fairly and fully explain the circumstances. Decisions regarding admissibility of evidence and the weight to be given to same shall be made by the party who is conducting the hearing.

OFFENSES AND APPROPRIATE DISCIPLINARY ACTIONS

Commission of any of the following acts shall constitute academic dishonesty. This listing is not exclusive of any other acts that may reasonably be determined to constitute academic dishonesty. The penalty for an offense, whether first or later, will generally range from a letter of reprimand to expulsion, depending upon the severity of the offense. If an offense leads to course credit or the acquisition of a degree or certificate and it is revealed after following appropriate procedures that the offense was indeed committed, the University has the right to rescind course credit, degrees, and/or certificates awarded.

Offense: Acquiring information

- Acquiring answers for an assigned work or examination from unauthorized source.
- 2. Working with another person or persons on an assignment or examination when not specifically permitted by the instructor.
- 3. Copying the work of other students during an examination.

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Offense: Providing information

- 1. Providing answers for an assigned work or examination when not specifically authorized to do so.
 - Informing a person of the contents of an examination prior to the time the examination is given.

Offense: Plagiarism and Dual Submissions

- 1. Failing to credit sources used in a work or product in an attempt to pass off the work as one's own.
- 2. Attempting to receive credit for work performed by another, including papers obtained in whole or in part from individuals or other sources.
- 3. Attempting to receive credit in one or more classes for the same paper or project without written approval of instructors involved.

Offense: Conspiracy

Agreeing with one or more persons to commit an act of scholastic dishonesty.

Offense: Acquisition of examinations, answers to examinations or assignments.

Offense: Fabrication of Information

- 1. The falsification of the results obtained from a research or laboratory experiment.
- 2. The written or oral presentation or results of research or laboratory experiments without the research or laboratory experiments having been performed.

Offense: Misrepresentations, alterations of documents and forgery

- 1. Taking an examination for another person or allowing someone to take an examination for you.
- 2. Signing an attendance sheet for another student or committing similar acts of impersonation.
 - 3. The changing of admissions data, test results, transcripts, grade reports, or other documents.

PROCEDURES IN ACADEMIC DISHONESTY CASES*

- 1. The instructor of record shall be the instructor of the course in which the claim of academic dishonesty is being made or the appropriate committee chair for a graduate student taking examinations required by the department or college.
- 2. At the point of discovery, the instructor shall:
 - a) inform the student of the alleged academic dishonesty and explain the sanction(s);
 - b) hear the student's explanation of circumstances and judge the student to be guilty or not guilty of academic dishonesty;
 - c) if he/she judges him/her to be guilty, he/she will make a written report to the head of the department offering the course, with a copy to the student, the department head for the program in which the student has declared a major and the Office of Student Affairs, outlining the incident and including a recommendation of disciplinary action(s) to be imposed; and

- d) inform the student, in writing, of his/her right to appeal to the head of the department offering the course regarding either the question of guilt or the sanction(s) and explain the procedures the department head will follow if his/her decision is appealed to that level.
- 3. The instructor's recommendation may be dismissed, reduced, upheld or increased by the department head. Prior to reaching a final decision regarding any sanction to be imposed, the department head shall check the student's record in the office of Student Affairs and/or the department in which the student has a declared major to determine the appropriate disciplinary action for a person with his/her previous offenses.

*NOTE: Where there is no department, responsibility assigned to department head will go to the dean of the college.

- 4. If the student chooses not to appeal and the department head concurs with the instructor's recommendation, the department head will implement the sanction. A copy of the report is forwarded to the dean of the college in which the alleged offense occurred and the dean of the college in which the student has declared a major.
- 5. If the department head proposes to change the instructor's recommendation, the department head shall conduct a hearing. The student and the instructor shall be allowed to present witnesses and provide evidence relating to the charges. The recommendations resulting from this hearing shall be forwarded in writing to the dean of the college offering the course and to the student. The student may appeal to the dean.
- 6. If the student chooses not to appeal the recommendation of the department head, the dean of the college offering the course will implement the sanction.
- 7. Should the student appeal to the dean, an appeal at this level may be based on written summaries only. However, should be dean choose to hear witnesses or hold an informal hearing, it should be done within five working days of receipt of the recommendation from the department head. Within five working days of the hearing, if one is to be held, or five working days of receipt of the recommendation, if there is to be no hearing, the dean shall review the charges and render a written notification.
- 8. A student who wishes to appeal the decision of the dean, in whole or in part, shall appeal to the University Academic Dishonesty Disciplinary Committee which will be appointed jointly by the Vice President for Academic Affairs and the Vice President for Student Affairs. The Committee is to be comprised of one-third faculty, one-third Student Affairs professional staff and one-third students.
- 9. Once a charge of academic dishonesty has been finally resolved, notice of the same shall be provided in writing to the student, the instructor, the head of the department offering the course, the dean of the college offering the course, the head of the department in which the student has declared a major, the dean of the college in which the student has declared a major the office of Student Affairs.

GRADUATE SCHOOL

10. Following a first offense, the student must be given a copy of the University Academic Dishonesty Policy by the department head of the college in which the offense occurred and the said policy should be discussed with the student.

STUDENT RIGHTS AND RESPONSIBILITIES IN ACADEMIC DISHONESTY CASES

Students have the right to accept the decision of the Instructor for a particular offense. This does not preclude review of record for past offenses and imposition of penalty for accumulated violations.

Students shall be afforded the following rights in the hearing conducted by the department head. The dean's appeal shall not be considered a hearing covered by these regulations:

- 1. Right to a written notice of the charges at least three working days before the hearing may proceed.
- 2. Right to waive the three-day notice of charges.
- 3. Right to reasonable access to the case file.
- 4. Right to review all evidence and question any witness against the student.
- 5. Right to present evidence and/or witnesses in his/her own behalf.
- 6. Right to have an observer present during the hearing. The observer cannot be a witness in the hearing or represent the student in the hearing.
- Right to appeal the disciplinary recommendation to the dean of the college offering the course and, finally, to the University Academic Dishonesty Disciplinary Committee.

If student wishes to have an attorney present at a hearing before the department head or dean, the department head or dean will be afforded the same opportunity to have equal representation present.

If the student wishes to appeal a recommendation made by the instructor, department head or dean, he/she must provide written notice to the proper level within five working days of receiving notice of the recommendation. Only in unusual circumstances may this deadline be extended by the entity conducting the hearing.

FURTHER NOTES RELATED TO DISCIPLINARY ACTION IN ACADEMIC DISHONESTY CASES

Offenses punishable by probation, suspension, dismissal, expulsion or other penalties must be reported in writing to the University Academic Dishonesty Disciplinary Committee within three working days of the decision even if the student waives his/her right to an appeal.

Advisement and Academic Counseling

Each student is assigned a departmental major advisor upon admission to the Graduate School. The student should consult the advisor at least once during each semester and receive approval of courses to be taken for the degree. Consultation on all academic concerns should begin with the major advisor.

Tentative Degree Plan

The student should file a degree plan within the first semester of matriculation in the university. Degree plan forms may be obtained from the major advisor. The major advisor, department head, dean of the college and graduate dean review and approve the degree plan.

DEGREE REQUIREMENTS

Master of Arts and Master of Science

A minimum of 30 semester hours exclusive of thesis, with an average grade of "B" or better in courses approved for graduate credit, is required for the Master of Arts and Master of Science dégrees. Up to six semester hours of thesis credit may be counted toward a degree.

In addition to the thirty semester hours in graduate courses, all candidates for the degree 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 Graduate Faculty in the department offering the degree. The thesis subject must be approved by the Thesis Committee Chairman at least six months before the date of intended graduation. The thesis must have the approval of each member of the student's Thesis Committee and must be acceptable with respect to both scholarship and literary quality. One copy of the approved bond thesis must be filed in the Graduate Office.

After the thesis has been completed, the candidate is required to pass an oral examination which shall be a test of the candidate's knowledge of the study pursued. This examination is conducted by the student's Thesis Committee, of which the representative of the major field shall act as Chair. Any member of the Graduate Faculty may attend the examination as a visitor. A candidate who fails the oral examination must register in the Graduate School for an additional semester or summer term before an opportunity will be given for a second examination, unless special permission for an earlier examination is requested by the department and college concerned.

The Master of Arts degree is an applied science and arts degree. A thesis is optional. However, a form of Art, approved by the specific department, college dean and dean of the Graduate School, must be presented as the option to the thesis requirement for the Master of Arts degree.

Master of Education and Master of Business Administration

A minimum of 36 semester hours of course work, with an average grade of "B" or better in courses approved for graduate credit, is required for the Master of Education and Master of Busines's Administration degrees.

Master of Science in Engineering

The Master of Science in Engineering (M.S.E.), with thesis option, requires 30 semester hours. The M.S.E. with non-thesis option requires 33 semester hours. Both options require 12 credit hours of graduate core courses in engineering and science plus a minimum of 12 hours in a chosen area of concentration.

General Requirements

The following requirements apply to all graduate degree programs. Specific degree requirements may be found in the appropriate college sections of this catalog.

All candidates expecting to graduate must file an application for the degree. The deadline for filing an application for the degree is published each semester by the registrar.

Upon completion of all requirements for the Master's degree, candidates are certified for graduation by the dean of the Graduate School. Degrees are publicly conferred at the close of the spring and the final summer sessions.

Admission to Candidacy

A graduate student admitted to full degree status does not automatically become a candidate for the Master's degree. To become a candidate, the student must complete the following minimum requirements:

- 1. Achieve a satisfactory score on the GRE or GMAT as stipulated by the department and college;
- 2. Prepare and submit an official Application For Candidacy Form showing the applicant's successful completion of 12 semester hours of required graduate courses with an average of "B" or better. This Candidacy Form must list all courses to be completed as well as those completed. Individual departments or colleges may have additional requirements for admission to candidacy. The application, when approved by the department head and college dean, must be submitted to the Graduate Dean for final approval.

Transfer of Credit

Graduate credit earned in another accredited institution, not exceeding six semester hours, may be transferred and credited to the Master's degree. Graduate credit for which the student received lower than a "B" grade cannot be transferred to this university. An "A" grade from another institution or earned in extension courses may not be used to validate a grade of "C" earned in this university.

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: (a) graduate credit will be given only for such courses approved by the Graduate Council; (b) the courses must be accepted by the college as part of the degree program; and (c) graduate credit for extension courses shall not exceed six semester hours. 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 undergraduate training. Not more than nine semester hours of extension and transferred credits combined may be counted toward the Master's degree.

Grading System for Graduate Students

Course work for graduate students is reported as "A" (95-100); "B" (85-94); "C" (75-84); "D" (65-74); "F" (below 65); "I" (incomplete); "W" (Withdrew officially or withdrew passing).

In order to show satisfactory progress toward an advanced degree, a student must maintain an average grade of "B." A student who, in any two consecutive semesters or summer terms, has a cumulative grade point average below 3.00 is subject to academic dismissal upon recommendation of the department and college to the dean of the Graduate School.

A graduate student can receive a grade of "I," incomplete, in a course with the privilege of finishing the work before the end of one calendar year from the close of the term in which the grade was earned. This regulation does not apply to thesis and research credit courses but does apply to terminal project credit courses. A fee, payable to the Registrar, is required for the change of grades.

The work of a graduate student performed in connection with the thesis problem is reported as a regular grade.

Time Limit on Work for Master's Degree

A student must complete requirements for the degree within six consecutive years after the first date of enrollment in the Graduate School. Credit for individual courses completed in residence between six and seven years before all requirements for the Master's degree are completed may be validated by special examination given by the department concerned. Courses completed in extension or at another institution beyond the time limit cannot be validated. A course in which a grade of "C" was earned cannot be validated. A validated course is valid as credit toward the Master's degree only during the term in which it is validated.

Student Petitions and Appeals

A student who has problems arising from course evaluations, advancement to candidacy, degree requirements or general regulations should discuss them first with the advisor. If a student wishes to appeal a decision, the department chairman, the college dean and the Graduate School dean should be consulted, in that order.

Course Load

The following limitations on course load are in effect:

- 1. During a regular session, a graduate student may not enroll for more than 15 hours.
- 2. During a five- or six-week summer term, a graduate student may not enroll for more than six semester hours, except when one course is a four-hour course, in which case the student may enroll for seven hours. The total credit hours earned for the two summer sessions may not exceed fourteen.
- 3. A graduate student may not enroll for more than three semester credit hours during a three-week summer term.
- 4. A graduate student enrolled in a three-week term may not enroll for more than one three-hour course in the six week term being conducted concurrently.
- 5. This university defines full time enrollment for a graduate student as a minimum of 9 semester credit hours during the regular terms and a minimum of 4 semester credit hours during each summer term.

FINANCIAL ASSISTANCE

Graduate teaching and research assistantships are available to qualified students. Applications for graduate teaching and research assistantships should be submitted to the dean of the Graduate School.

Applications for federal and state loan programs and all other requests for financial assistance should be submitted to the financial aid officer.

The deadline for applying for teaching and research assistantships is the same as for applying for admission to the Graduate School. The deadline for applying for other financial assistance can be obtained from the financial aid officer.

College of Applied Sciences and Engineering Technology

ADMINISTRATIVE OFFICER

Hakumat Israni, Dean

PURPOSE AND GOALS

The graduate programs offered by the College of Applied Sciences and Engineering Technology prepare students for teaching, research, doctoral programs, and for positions in business, industry and government. The programs are designed to meet the individual needs and goals of the students.

DEGREE PROGRAMS

The College of Applied Sciences and Engineering Technology offers the master's degree programs as given below:

Departments	Programs	Degrees Offered
Agriculture	Agricultural Economics	M.S.
	Animal Science	M.S.
	Soil Science	M.S.
Home Economics	Home Economics	M.S.

The college also provides graduate coursework which may be applied to master's degree programs with concentrations in the areas of Industrial Education, Home Economics Education, and Agriculture Education. Students seeking these concentrations should apply for admission to the College of Education. The Department of Industrial Education also offers courses required for endorsement as a vocational counselor and certification as a vocational supervisor and vocationalindustrial teacher/coordinator.

Students admitted to the graduate programs in the College of Applied Sciences and Engineering Technology must follow a degree program designed according to the student's academic background, needs and interests.

ADMISSION TO PROGRAM

The student seeking admission to the graduate program should follow the admission regulations and procedure outlined in the Graduate School section of this catalog. A student admitted to the Graduate School must also be admitted to the college and department in which the student plans to pursue a degree. The student should consult the catalog section covering the specific discipline for departmental requirements for admission.

ADVANCEMENT TO CANDIDACY

A student must meet all the general requirements given in the Graduate School section of this catalog.

COLLEGE OF APPLIED SCIENCES AND ENGINEERING TECHNOLOGY

PROGRAM REQUIREMENTS

Specific program requirements for the master's degrees are given in the catalog section of each department offering the degree.

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Department of Industrial Education

FACULTY

Charles T. Edwards, Jr., Head, Industrial Education

DEGREE AND CERTIFICATE PROGRAMS

The Department of Industrial Education offers graduate coursework which may be applied to a master's degree program in education with a concentration in Industrial Education. Students seeking this option should apply for admission to the Graduate School. The department also offers courses required for endorsement as a vocational counselor and certification as a vocational supervisor and vocational-industrial teacher/coordinator.

VOCATIONAL COUNSELOR ENDORSEMENT

For the Professional Vocational Education Counselor Endorsement issued by the Texas Education Agency, requirements are: a bachelor's degree, a valid Professional Counselor Certificate, 12 semester hours of specified vocational guidance courses, and three years of experience.

Required Courses (12 semester hours of vocational guidance courses)

VOED 5103	Placement and Follow-up
VOED 5403	Occupational and Vocational Education
VOED 5903	Planning and Organization
VOED 5983	History and Principles

VOCATIONAL SUPERVISOR CERTIFICATE (30 Semester Hours)

For the Professional Vocational Supervisor Certificate, the requirements are: a bachelor's degree, a valid Texas Teacher Certificate, three years of teaching experience in an approved vocational education program, and the courses listed below:

Vocational Education (18 semester hours)

VOED 5133	Vocational Analysis
VOED 5603	Organization and Administration
VOED 5703	Vocational-Technical Curriculum Development
VOED 5803	Supervision of Vocational Programs
VOED 5903	Planning and Organizing Vocational Programs
VOED 5983	History and Principles of Vocational Education

General Supervision and Supportive Courses (9 Semester Hours)

SUPV 5213	The School Supervisor
SUPV 5513	Supervision Practicum
SUPV 5113	Principles of Supervision

Resource Area (3 Semester Hours - Elective)

VOCATIONAL INDUSTRIAL TEACHER-COORDINATORS

This program is designed to meet the Texas Education Agency (TEA) requirements for Vocational Industrial Teacher-Coordinators. Persons seeking their certification must have an earned degree from an approved college or university, two years of experience in industry, and must have been selected as a teacher coordinator in a secondary school program.

Courses required for Certification as a Vocational Industrial Teacher-Coordinator are listed below:

Courses

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VOED 4103	Instructional Materials	3
VOED 4203	Instructional Methods	3
VOED 5753	Selection, Placement and Follow-up	3
VOED 4803	Human Relations	3
VOED 4603	Aims and Objectives	3
VOED 5933	Problems	3
al Hours R	equired: " of the sense of a sense of a sense of a	18

Total Hours Required:

COURSE DESCRIPTIONS

Industrial Education (INED)

- 5103. Test and Measurements. (3-0) Credit 3. Sources of instructional testing and evaluative materials; construction and use of tests and evaluative devices; administering, scoring, recording and interpreting tests; progress charts; and diagnosis of difficulties and analysis of teaching problems as related to evaluations.
- 5603. Problems in Industrial Education. (3-0) Credit 3. Conferences and advisement in selection and preparation of an acceptable term paper or essay. Prerequisite: INED 5903.
- 5703. The History of Industrial Education. (3-0) Credit 3. A survey of the early movement, experiments and writings of leaders in the United States and European countries. Intensive study of developments in industrial education since 1950. A comparative study of leaders, movements, institutions and literature in the field.
- 5803. Practicum in Industrial Education. (3-0) Credit 3. Study of problems that arise through the merging of practical experiences with theoretical and scientific concepts.

Vocational Education (VOED)

5043. Methods and Media in Teaching. (3-0) Credit 3. Overview of the various media used to improve instruction, with methods for using audiovisual materials effectively in teaching vocational subjects. General production techniques are emphasized.

- **5103.** Placement and Follow-Up. (3-0) Credit 3. A study of various instruments, methods, and techniques used in determining occupational aptitudes and interests of students. Planning, organizing, and coordinating a program of job and vocational education placement. Development and coordination of student follow-up services.
- **5133.** Vocational Analysis. (3-0) Credit 3. A study of the methods and techniques of collecting, evaluating, and disseminating statistical information of a vocational nature, including identification and selection of vocational students, manpower needs and opportunities.
- **5403.** Occupational and Vocational Education. (3-0) Credit 3. Methods of collecting, evaluating, cataloging and disseminating occupational and vocational education information.
- **5603.** Organization and Administration. (3-0) Credit 3. Analysis of skills and techniques of administering and supervising vocational programs in public schools. Rules and regulations for organizing and operating vocational education programs, including the financing of vocational programs using local, state, and federal funds.
- **5703.** Vocational-Technical Curriculum Development. (3-0) Credit 3. Techniques of vocational-technical curriculum development based on an occupational analysis. How to develop educational specifications, to design classrooms and shop/laboratories, and to select the equipment required for a given curriculum.
- **5753.** Selection, Placement and Follow-Up. (3-0) Credit 3. A study of factors which affect selection and placement of students on industrial work sites. Involves establishing objectives, counseling techniques, advisements, cooperative work site agreements, and job placements.
- **5803.** Supervision of Vocational Programs. (3-0) Credit 3. A study of the organization, administration and supervision of curriculum and instruction in the public schools.
- **5903.** Planning and Organizing. (3-0) Credit 3. Purposes and functions of a guidance program. Group guidance procedures, components of a vocational guidance program, and techniques of providing vocational guidance services for elementary and secondary students and adults.
- **5933. Problems.** (3-0) Credit 3. An in-depth study of the duties of the teachercoordinator of vocational programs. The identification of types of problems encountered, and the application of action-oriented problem-solving techniques. Problems encountered in both the school and the community are addressed.
- **5983.** History and Principles. (3-0) Credit 3. The historical development of vocational education. Course involves an analysis and discussion of the objectives of vocational education, types of vocational programs, services and activities.

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Department of Agriculture

FACULTY

Alfred L. Parks, Head and Coordinator of Agricultural Economics Program Eugene A. Brams, Soil Science Richard Griffin, Soil Science Arthur S. Mangaroo, Coordinator, Soil Science Jerrell A. Meikle, Agricultural Economics Alfred N. Poindexter, Animal Science Freddie L. Richards, Agriculture and Human Resources George H. Stafford, Agricultural Economics Cecil L. Strickland, Sr., Coordinator, Agriculture and Human Resources Victor G. Stanley, Coordinator, Animal Science Lindsey Weatherspoon, Animal Science

INSTRUCTIONAL ORGANIZATION

The Department of Agriculture offers the following graduate degree programs:

Programs	Degrees Offered:	
Agricultural Economics	M.S.	
Agriculture and Human Resources	M.Ed.*	
Animal Science	M.S.	
Soil Science	M.S.	

*Degree Program offered jointly with the College of Education. See College of Education section of catalog for program description.

ADMISSION TO PROGRAM

Application for Admission to the Graduate School is made through the Office of the Graduate School. Applicants seeking a master's degree in Agriculture should have the equivalent of an undergraduate major in Agriculture from an accredited institution. Applicants who do not hold the equivalent of an undergraduate major in Agriculture should have a deficiency plan approved in order to meet this requirement.

ADVANCEMENT TO CANDIDACY

All candidates for the Master of Science degree must prepare an official application for Admission to Candidacy Form and submit it to the Dean of the College of Applied Sciences and Engineering Technology and to the Dean of the Graduate School for approval.

PROGRAM REQUIREMENTS (M.S. - Agricultural Economics)

Core Courses (18 semester hours)

AGEC 5213	Land and Resources Economics
AGEC 5223	Farm and Ranch Management
AGEC 5233	Price Analysis
AGEC 5243	Agricultural Policy
AGEC 5253	Marketing of Farm Products
AGEC 5263	Research Methods
AGEC 5283	Agricultural Finance

DEPARTMENT OF AGRICULTURE

Designated Electives (12 semester hours)

ECON 5013	Microeconomic Theory
ECON 5023	Macroeconomic Theory
MGMT 5113	Business Statistics or AGRO 5713 Introduction to Biometrics
ECON 5223	Mathematics Economics
ECON 5353	Money and Banking
MGMT 5123	Quantitative Analysis or AGRO 5783 Application of Biometrics

Thesis Research (3 semester hours)

AGEC 5203 Thesis Research

Free Electives (3 semester hours)

TOTAL DEGREE REQUIREMENTS. 36 Semester Hours

PROGRAM REQUIREMENTS (M.Ed. - Agriculture and Human Resources)

Core Courses (12 Semester Hours)*

CURR 5003	Theory and Dynamics of Curriculum and Instruction
EDFN 5013	Foundations of Educational Research
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

*See "College of Education" for course descriptions.

Program Concentration (12 semester hours)

AGHR 5323	Workshop in Agric. & Human Resources
AGHR 5333	Administration and Supervision
AGHR 5343	Youth Leadership Development
AGHR 5353	Technological Change
AGHR 5363	Philosophy of Voc. Agric. & Human Resources
AGHR 5373	Seminar
AGHR 5813	Vocational Guidance & Counseling
AGHR 5814	Special Topics in Agriculture
AGHR 5833	Organization & Admn. of Coop. Ext.

Resource/Research (12 semester hours)

EDFN 5923	Master's Seminar
Electives	(9 hours)

TOTAL DEGREE REQUIREMENTS. 36 Semester Hours

PROGRAM REQUIREMENTS (M.S. - Animal Science)

Core Courses (18 semester hours)

ANSC 5513Physiology of ReproductionANSC 5533Non-Ruminant NutritionANSC 5543Ruminant NutritionANSC 5553Dairy Goat ProductionANSC 5563Animal Health	ANSC 5501	Seminar
ANSC 5533Non-Ruminant NutritionANSC 5543Ruminant NutritionANSC 5553Dairy Goat ProductionANSC 5563Animal Health	ANSC 5513	Physiology of Reproduction
ANSC 5543 Ruminant Nutrition ANSC 5553 Dairy Goat Production ANSC 5563 Animal Health	ANSC 5533	Non-Ruminant Nutrition
ANSC 5553 Dairy Goat Production ANSC 5563 Animal Health	ANSC 5543	Ruminant Nutrition
ANSC 5563 Animal Health	ANSC 5553	Dairy Goat Production
	ANSC 5563	Animal Health

Designated Electives (9 semester hours)

CHEM 5534	General Biochemistry
CHEM 5543	Intermediary Matabolism
CHEM 5563	Biochemical and Clinical Analysis
AGRO 5713	Introduction to Biometrics
AGRO 5783	Application of Biometrics

Thesis Research (3 semester hours)

ANSC 5503 Thesis Research

Free Electives (6 semester hours)

TOTAL DEGREE REQUIREMENTS.

36 Semester Hours

PROGRAM REQUIREMENTS (M.S. - Soil Science)

Core Courses (18 semester hours)

AGRO 5614	Soil Microbiology
AGRO 5664	Advanced Soil Chemistry
AGRO 5713	Introduction to Biometrics
AGRO 5723	Advanced Soil Management
AGRO 5733	Soils and Quality of the Environment
AGRO 5743	Soils of the Tropics
AGRO 5753	Plant Nutrition and Soil Fertility
AGRO 5763	Special Problems
AGRO 5781	Seminar
AGRO 5783	Application of Biometrics

Designated Electives (9 semester hours)

BIOL5053Air PollutantsBIOL5083Legal Aspects of Environmental ToxicologyAGEC5213Land Resource EconomicsCHEM5534General Biochemistry

Thesis Research (3 semester hours)

AGRO 5653 Research

Free Electives (6 semester hours)

TOTAL DEGREE REQUIREMENTS

36 Semester Hours

COURSE DESCRIPTIONS

Agricultural Economics (AGEC)

5203. Thesis Research. (2-2) Credit 3. Initiation of a research project of approved originality and scope for an advanced degree. The thesis report is to be of format, style, and quality consistent with the standards of agricultural economics.

DEPARTMENT OF AGRICULTURE

- **5213.** Land and Resource Economics. (2-2) Credit 3. Nature and the economic dimensions of private and public control of land. Use of natural resources, including land, stock and flow resource concepts; and time and space as they affect resource utilization and benefits. Laboratory studies of field problems in resource development and use.
- **5223.** Farm and Ranch Management. (2-2) Credit 3. Theories of the farm and of the management process; farm-ranch business growth and productive efficiency; control and coordination of the agents of production; risk and uncertainty; agri-business organization and management; and managerial decision-making. Laboratory application of principles of economics to the production process, including analysis of costs, returns, and productivity.
- **5233. Price Analysis.** (3-0) Credit 3. Theories and principles fundamental to pricing of agricultural factors of production and agricultural commodities; relationship of prices within the agricultural sector and between the agricultural sector and the general economy; kinds of price changes; forecasting factors and conditions that affect agricultural prices; futures trading; parity prices; and administrated prices.
- **5243.** Agricultural Policy. (3-0) Credit 3. Theoretical foundations of policymaking and economic value of public policies and programs to the agricultural industry; interrelation between the social, political, and economic systems and agriculture; policy development and implementation; and the value of agricultural policy to society.
- **5253.** Marketing of Farm Products. (3-0) Credit 3. Theoretical foundations of the modern economic system, including values added in the marketing system; dimensions and functions of marketing in relation to time, space, and value; market integration and product quality control; and market contracting orders and power.
- **5263.** Research Methods in Agricultural Economics. (3-0) Credit 3. Philosophy, methods, and techniques of scientific research in the discovery of new knowledge, especially in economic development and in productivity of agriculture; role of theory and assumptions. Definition of research and evaluation of research project proposals, including objectives and procedures; analytical methods and techniques in research; and evaluation of research studies and development of thesis prospectives or equivalent.
- **5283.** Agricultural Finance. (3-0) Credit 3. Theories, principles, and problems of financing agricultural business, including farms and ranches; costs and returns from the use of capital; forms and roles of capital in agriculture; capital productivity and earning, and capital market organization and institutions; supply and demand of financial resources; and role of debt in farm growth.
- **5991-5992-5993.** Independent Study. (0-0) Credit 1, 2 or 3. Reading, research and/or field work on selected topics. Prerequisite: consent of advisor.

Agriculture and Human Resources (AGHR)

5323. Workshop in Agriculture and Human Resources. (2-2) Credit 3. Study of selected problems in teacher and/or extension education. Consultants utilized in specialized areas.

- 5333. Administration and Supervision of Agriculture and Human Resources. (3-0) Credit 3. Development, organization, administration, and supervision of vocational agricultural education at the local, state, and national levels.
- **5343.** Youth Leadership Development. (3-0) Credit 3. Procedures of organizing and conducting agricultural programs and activities for developing leadership experience in youth.
- **5353.** Technological Change. (3-0) Credit 3. A study of advanced technological changes affecting the agricultural economy; cultural and socioeconomic forces retarding and/or accelerating change. Processes of planning and implementing change.
- **5363.** Philosophy of Agriculture and Human Resources. (3-0) Credit 3. Study of historical and philosophical developments that brought about education in agriculture. Socioeconomic factors and ideas of individual that influenced agricultural institutions and organizations.
- **5373.** Seminar. (3-0) Credit 3. Study of current legislative and research developments in agriculture and human resources and in related areas of agriculture.
- **5813.** Vocational Guidance and Counseling. (3-0) Credit 3. Study of educational and occupational opportunities to assist youth in making career choices. Special attention is given to rural youth. Techniques of individual and group counseling.
- **5814.** Special Topics in Agriculture. (2-4) Credit 4. Directed individual study of a problem affecting some aspect of the agricultural industry. Special work in the area of major interest. Reports, discussion, and major papers.
- **5833.** Organization and Administration of Cooperative Extension. (3-0) Credit 3. Study of cooperative extension in agriculture and home economics; principles of development; objectives and program planning; coordination and procedures of teaching and evaluating. One week observation with a County Extension Agent. Prerequisite: senior or graduate classification.

Animal Science (ANSC)

- **5501.** Seminar. (1-0) Credit 1. Review and discussion of selected materials from the literature in animal science. Emphasis on recent advances in the animal science industry and research.
- **5503. Research.** (2-2) Credit 3. Preparation of proposal, design of experiment, collection of experimental data, and presentation of the results in a acceptable scientific model.
- **5513.** Physiology of Reproduction. (2-2) Credit 3. Basic biochemical, physiological, and endocrine mechanisms involved in reproductive function. Current research principles and techniques useful in studying physiology of reproduction.
- **5533.** Non-Ruminant Nutrition. (2-2) Credit 3. Full concepts of the function deficiency, interrelation and bioadaptability of nutrients as part of total feed formulation. The physical, chemical, and biological interrelationships of nutrients as they relate to growth, development, and production of monogastic animals.

DEPARTMENT OF AGRICULTURE

- **5543.** Ruminant Nutrition. (2-2) Credit 3. Current concepts in anatomy, physiology, and microbiology of digestion of ruminants, with application of basic principles to efficient management of beef cattle, dairy cattle, goats and sheep.
- **5553.** Dairy Goat Production. (2-2) Credit 3. Review of current research and production practices; the application of developing technology to goat enterprises, with economic evaluation of such enterprises.
- **5563.** Animal Health. (2-2) Credit 3. Etiology, epidemiology, immunology, preventive measures, and management practices pertinent to diseases of small ruminants.

Soil Science (AGRO)

- 5614. Soil Microbiology. (3-2) Credit 4. Soil microorganisms and their effect on soil physical and chemical properties, nitrogen fixation, organic matter decomposition, and soil nitrogen transformations.
- **5653. Research.** (2-2) Credit 3. Registration with permission of College Graduate Committee. Student conducts research activities towards the solution of a thesis problem and communicates results in a thesis monograph.
- **5664.** Advanced Soil Chemistry. (2-4) Credit 4. The physiochemical properties of soil with particular emphasis on methods and instrumentation utilized in characterizing clay minerals, measuring soil acidity, ionic adsorption, soil nutrients, nutrient fixation, nutrient release, and the uptake of soil nutrients by plants.
- 5713. Introduction to Biometrics. (3-0) Credit 3. A study of the scientific methods, statistical concepts, data analysis procedures, and experimental designs.
- **5723.** Advanced Soil Management. (3-0) Credit 3. The application of the principles of soil science for the recommendations of soil management practices under diverse environmental conditions and for specific crops, with emphasis on management practices in tropical climates and crops.
- **5733.** Soils and Quality of the Environment. (3-0) Credit 3. The pollution of soils, soil erosion, and soil pollution in the environment. Agricultural chemicals as pollutants, soil as a sink for industrial and urban wastes, and the impact on biological life.
- **5743.** Soil of the Tropics. (3-0) Credit 3. The physical and chemical properties of tropical soils; their fertility status and the effects of cultural practices on soil properties. Soil conservation and management will be considered for different soils under diverse environmental conditions and farming practices. Special consideration will be given to the yield of tropical crops and their response to cultural practices, including control of soil-borne diseases, pests, and weeds.
- **5753.** Plant Nutrition and Soil Fertility. (3-0) Credit 3. The essential elements for plant growth; with their chemistry, sources and availability in the soil and their functions in plant metabolism, including their role in the retention of toxic metals and of select organic materials.
- **5763.** Special Problems. (3-0) Credit 3. Analysis of select problems in agricultural science, utilizing the scientific method and employing statistical inferences and creative interpretations of data drawn from the literature.

- **5781.** Seminar. (1-0) Credit 1. Techniques for the preparation and presentation of a seminar, the use of media, the lecture method, oratory and public speaking, and the use of notes and outlines.
- **5783.** Application of Biometrics. (3-0) Credit 3. Techniques of experimental designs for biological and agricultural research in field, greenhouse, and laboratory. Methods to reduce error and enhance experimental control.

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Department of Home Economics

FACULTY

Elizabeth N. Noel, *Head, Family and Child Development* Troy L. Daniels, *Human Development and the Family* Glenda J. Island, *Merchandising and Design* Sharon L. McWhinney, *Human Nutrition and Food*

PURPOSE AND GOALS

The graduate program in Home Economics emphasizes the preparation of students for teaching, research, and public service in colleges and universities, in human service enterprises, or in managerial positions in business, industry or government. The curriculum offers opportunities for students to tailor the program to meet individual needs. The program prepares graduates to work with clientele in a professional capacity as agents of change. Students identify alternative solutions to a myriad of social and technical problems encountered now and in the future.

The specific goals of the program are threefold: 1) To provide students with theoretical and practical studies of individuals and families throughout the life cycle as they interact with the environment; 2) To develop and increase professional competencies of students; and 3) To provide an academic and stylistic model for additional graduate study.

DEGREE PROGRAM

The Department of Home Economics offers the following graduate degree program:

Program

Degree Offered

Home Economics

M.S.

The department also provides graduate support courses in this area as well as Home Economics Education. Graduate coursework in Home Economics may also be applied to a master's degree program in education with a concentration in Home Economics. Students seeking this option should apply for admission to the College of Education.

SPECIAL EMPHASIS OPTION

The Master of Science in Home Economics includes degree concentrations in Child and Family, Family Economics, and General Home Economics.

ADMISSION REQUIREMENTS

Students desiring to major in Home Economics on the graduate level must present undergraduate subject matter credits in the following areas: the social, physical, and biological sciences: the arts; and education. These courses shall be approved by the advisor under whose direction the major work is to be completed. In addition, adequate preparation in undergraduate work in Home Economics is necessary.

DEPARTMENT OF HOME ECONOMICS

These criteria are in addition to the basic university requirements for admission to the Graduate School.

Students with grade point averages of less than 2.75 are not admitted to the Department of Home Economics as graduate students.

ADVANCEMENT TO CANDIDACY

A graduate student having been previously admitted to full graduate status does not automatically become a candidate for the master's degree. To become a candidate, the student must complete the following requirements:

Prepare and submit official Application for Candidacy Form reflecting the applicant's having satisfactorily completed twelve (12) semester hours of required graduate courses with an average of "B" or better.

This candidacy form may be obtained in the Office of the Graduate Dean. The application when approved by both major and minor areas of specialization must be submitted to the Graduate Dean for approval.

DEGREE PROGRAM REQUIREMENTS

A minimum of thirty (30) semester hours, exclusive of a research course and thesis, with an average grade of "B", or better, in courses approved for graduate credit, is required for the degree Master of Science.

Suggested Program

The Master of Science in Home Economics includes the following components:

12 semester credit hours

12 semester credit hours

6 semester credit hours

6 semester credit hours

36 semester credit hours

Common Core Degree Concentration Supporting Discipline Resource/Research

Total

Common Core (12 semester credit hours) Child Development I Family Life Problems Problems in Home Economics Studies in Family Resource Management

Degree Concentrations (Select one option of 12 semester credit hours):

Option I: Child and Family Families as Consumers Problems of Youth Child Development II Family Theory and Issues

Option II: Family Economics Personal and Family Finance Families as Consumers Family Financial Consultation Family Theory and Issues

Option III. General Home Economics Select 12 semester credit hours in consultation with an advisor.

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DEPARTMENT OF HOME ECONOMICS

Supporting Discipline (A minimum of 6 semester credit hours may be selected from either of the following suggested disciplines):

Curriculum and Instruction Educational Foundations Marketing and Management Psychology Social Work and Sociology

Resource/Research (6 semester credit hours) Research Problems Thesis

COURSE DESCRIPTIONS

Home Economics (HMEC)

- **5313.** Studies in Family Resource Management. (3-0) Credit 3. An analysis of fundamental management concepts, current research, and special topics and issues related to family consumer resource management. Abstracts of research studies and one major research paper required.
- **5323.** Personal and Family Finance. (3-0) Credit 3. A study of general problems of individual and family handling of money: factors influencing income expenditure relationships: an analysis of problems and programs for improving adequacy and security of income during the family life cycle. Especially planned for students with limited background experiences on the graduate level.
- **5343. Research Problems.** (3-0) Credit 3. A study of research methods in social sciences applicable to research in home economics. Planning a research study; understanding research reports; identifying needed research in home economics. Abstract and proposal writing. One major paper required.
- **5383.** Problems of Youth. (3-0) Credit 3. Problems concerned with youth during adolescent years; current concerns and research literature review; attention to problem cases as represented in secondary home economics classes. One major paper required.
- **5393.** Family Life Problems. (3-0) Credit 3. An analysis of the effects of parenthood, sibling and intergenerational relationships on family solidarity; review and analysis of current literature related to human development; current and emerging factors in marriage and family life. One major paper required. Other projects adapted to special needs and interests of students.
- **5513.** Families as Consumers. (3-0) Credit 3. Theories of consumer behavior; the family's relationship to the consumer movement; consumer issues; dimensions of consumer role; interaction of consumers; government and the market; consumer decision making; evaluation of information and protection.
- **5533.** Family Theory and Issues. (3-0) Credit 3. A comprehensive review of theoretical-conceptual frameworks and research in family studies. The role of theory and research in the interdisciplinary study of individual and family behavior throughout the life cycle.

DEPARTMENT OF HOME ECONOMICS

- **5543.** Child Development I. (3-0) Credit 3. A study of the developmental characteristics of the child from birth to age five. Analysis of major theories and research with emphasis upon interpretation and application of research findings to programs for young children and parent education.
- **5553.** Child Development II. (3-0) Credit 3. A study of the developmental characteristics of middle childhood, ages five through twelve, through the analysis of current research and developmental theories. Examination, evaluation and interpretation of current issues and trends.
- **5683. Problems in Home Economics.** (3-0) Credit 3. Current trends and issues in home economics, the school program and profession of home economics; special work in area of major interest. Reports, discussions, term projects. Registration with permission of instructor.
- 5691. Thesis. (2-2) Credit 1.
- 5693. Thesis. (3-4) Credit 3.
- **5723** Family Financial Consultation. (3-0) Credit 3. Analysis of family expenditure pattern, common financial difficulties, avenues by which families are assisted. Field experience with consumer consulting services required.
- **5993.** Independent Study. (0-0) Credit 1, 2, or 3. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

College of Arts and Sciences

ADMINISTRATIVE OFFICER

Edward W. Martin, Dean

INSTRUCTIONAL ORGANIZATION

The College of Arts and Sciences offers graduate programs leading to the Master's degree in the areas of biology, chemistry, English, history, mathematics, music and sociology. Students admitted to the graduate programs as degree candidates in the College of Arts and Sciences must follow a degree program as outlined by the specific department. A degree plan will be designed according to the student's academic background, personal needs and interests.

Departments	Programs	Degrees Offered
Art, Music and Drama	Music (Applied)	M.A.
Biology	Biology	M.S.
The Distanticum of the	Environmental Toxicology	M.S.
Chemistry	Chemistry	M.S.
English & Foreign		
Languages	English	M.A.
Mathematics	Mathematics	M.S.
Social Work/Sociology	Sociology	M.A.
Division of Social &	tiest while a desire metabler, to pe	
Political Sciences	History	M.A.

The college also provides graduate support courses in these areas as well as several others.

ADMISSION TO PROGRAM

The student seeking admission to the graduate program is required to:

1. Submit a formal application for admission to the Graduate School. The following deadline dates apply:

April 1, for 1st Summer Session May 1, for 2nd Summer Session July 1, for Fall Semester November 1, for Spring Semester

- 2. Submit official transcripts of records covering all college and university work completed to date, together with official evidence of degree(s) conferred. A separate original and official record of completed academic course work must be presented from each institution previously attended. In addition to having the records sent, each student must have in his/her possession official records for use when in conference with the departments and for other purposes when such records are needed.
- 3. Applicants admitted to the university Graduate School must also be admitted by the college or department in which the student plans to pursue a degree. Students should consult the catalog section covering the specific discipline for departmental requirements for admission.

COLLEGE OF ARTS AND SCIENCES

ADVANCEMENT TO CANDIDACY

A student must meet all general requirements and complete the requirements for the specific program area before submitting an Application for Admission to Candidacy for a degree. Consult the catalog section on general requirements for the Graduate School.

PROGRAM REQUIREMENTS

Specific program requirements for Master's degrees are presented by each department offering the degree. Refer to the specific program area for details.

DARSSION TO PROGRAM

Department of Art, Music and Drama

FACULTY

Lucius R. Wyatt, Head, *Music Theory* Rubye N. Herbert, *Voice Performance* Danny R. Kelley, *Piano Performance* Vicki A. Seldon, *Piano Performance* Theodis W. Shine, *Drama* Clarence Talley, *Art*

PURPOSE AND GOALS

The Department of Art, Music & Drama offers the degree Master of Arts in Applied Music. The principal focus on this degree program is to offer preparation in musical performance.

DEGREE PROGRAM

The Department of Art, Music and Drama offers the following graduate degree program:

Program

Music (Applied)

Degree Offered M.A.

Graduate coursework in music education may also be applied to a master's degree program in education with a concentration in music. Students seeking that option should apply for admission to the College of Education.

ADMISSION TO PROGRAM

A person admitted to the graduate program leading to the degree Master of Arts in Applied Music must have completed a Bachelor's degree in music from an accredited institution of higher learning. All entering graduate students in music are required to audition before the music faculty and take departmental examinations in the history of music and in music theory.

ADVANCEMENT TO CANDIDACY

Students must meet all general requirements and complete at least 12 semester hours of all program-required courses before being declared as a candidate for the master's degree.

PROGRAM REQUIREMENTS (M.A. - Applied Music)

30 semester hours of graduate courses in music and a graduate music recital.

DESCRIPTION OF COURSES

Music (MUSC)

5993. Independent Study. (0-0) Credit 3. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

DEPARTMENT OF ART. MUSIC AND DRAMA

Applied Music Courses

Applied Music	Courses		
	Piano	Voice	
MUSC	5513	5613	
MUSC	5523	5623	
MUSC	5533	5633	
MUSC	5543	5643	
MUSC	5553		
MUSC	5563		

PIANO - Applied music studies in piano with attention to appropriate graduate level literature. Private lessons.

VOICE - Applied music studies in voice with attention to appropriate graduate level literature. Private lessons.
Department of Biology

FACULTY

George E. Brown, Head, Microbiology Lee E. Henderson, Science Education Harriette Howard-Lee, Zoology, Biochemistry Ronald D. Humphrey, Microbiology Edward W. Martin, Embryology Seab A. Smith, Science Education Verlie A. Tisdale, Biology

PURPOSE AND GOALS

The graduate programs in Biology and Environmental Toxicology of the Biology Department are designed to provide training at the master's degree level for those persons who wish to continue graduate work elsewhere at the doctoral levels; for those who wish to teach biology in high schools, junior and liberal arts colleges, and for those who wish to seek employment in various fields of biology, including research, and aspects of applied biology.

Graduate study provides students with an opportunity to develop their knowledge and creativity in biology to the maximum of their capabilities.

DEGREE PROGRAMS

The Department of Biology offers the following graduate degree programs:

Programs	Degrees Offered
Biology	M.S.
Biology (Environmental Toxicology)	M.S.

Graduate coursework in Biology may also be applied to a master's degree program in Education with a concentration in Biology. Students seeking this option should apply for admission to the College of Education. The Department also provides graduate support courses to other degree programs.

ADMISSION TO PROGRAM

A student entering graduate study in Biology must present a minimum of 24 semester hours in undergraduate Biology, including courses in General Biology or in Zoology and Botany. In addition to the minimal Biology courses, a student should have completed at least four semester credit hours in both Inorganic and Organic Chemistry. The grade point average in Biology courses should be at least 2.75 based upon the 4.00 grading system.

Students who do not meet the minimal prerequisites must do so before being admitted to graduate status unconditionally. Admission to graduate school does not imply admission to candidacy for the Master's degree.

ADVANCEMENT TO CANDIDACY

Admission to candidacy for the Master's degree is granted after the student completes a minimum of twelve (12) semester hours of resident graduate credit in Biology. Only two courses with "C" grades, regardless of credit hours, will be

DEPARTMENT OF BIOLOGY

accepted toward credit for the Master's degree. The overall grade point average in Biology of a student seeking the Master's degree must be a "B" or better.

Persons failing to meet candidacy requirements are placed on probation for a semester or a summer. In the event candidacy requirements are not met at this time, it will be understood that no further graduate credits by the student will be applicable to the M.S. degree in Biology.

PROGRAM REQUIREMENTS (M.S. - Biology)

Courses for which graduate credit may be obtained are numbered 5000 and above. Upon successful completion of the course work and thesis, the student must pass (1) a written comprehensive examination in Biology and (2) an oral examination in defense of the thesis and fundamentals of Biology.

Program A: A minimum of 30 hours of graduate Biology plus a thesis.

Program B: A minimum of 20 hours of graduate Biology and a minor in some other area plus a thesis.

Graduate Minor in Biology: A minor in Biology at the graduate level includes 12 semester hours of graduate Biology.

Environmental Toxicology Program (M.S. in Biology with Option in Environmental Toxicology). The Environmental Toxicology Program is designed to prepare individuals to work with governmental agencies including the Environmental Protection Agency, Department of Agriculture, Food and Drug Administration, and with a variety of industries which produce chemicals and toxic substances or other pollutants. Individuals pursuing a degree in environmental toxicology must satisfy undergraduate prerequisites in Biology and Chemistry.

DESCRIPTION OF COURSES

Biology (BIOL)

- **5003.** Research in Zoology. (0-6) Credit 3. Selected individual research problems in any specified area in which the student has a sufficient background. Lab fee.
- **5004.** Embryology. (2-4) Credit 4. Descriptive embryology; vertebrate development with special reference to mammals; includes serial section of the fetal pig. Lab fee.
- **5014.** Occupational Toxicology. (2-4) Credit 4. Occupational chemical and biological hazards in general routes of human exposure; their toxic effects and methods of control.
- **5024.** Histology. (2-4) Credit 4. Microscopic study of tissues and organs of vertebraes; relation of structure to function. Lab fee.
- **5033.** Physiology, Environment, and Man. (3-0) Credit 3. This course explores the absorption, metabolism, and excretion of environmental agents, their mechanisms of action, and the processes of adaptation by the exposed organism from the subcellular level to that of the total organism.
- **5053.** Air Pollutants. (3-0) Credit 3. Introduction of the essentials of the toxicology of major air contaminants, the factors governing air quality criteria and standards, and alternatives for air pollution abatement.

- **5063.** Microbial Activity in Toxicology. (3-0) Credit 3. Survey of microbial actions in the field of environmental toxicology. Toxigenic microorganisms, major microbial toxins, and use of microbial systems intoxicological studies. Microbial alterations of environmental contaminants.
- **5073.** Selected Topics in Environmental Toxicology. (3-0) Credit 3. In-depth treatments of several important areas in the field of environmental toxicology, including studies of microbiology of toxic substances, toxic substances in food, poisonous plants and venomous animals, occupational health and safety and chemical ecology.
- 5074. Genetics. (2-4) Credit 4. Laws and principles governing heredity in plants and animals; plant and animal improvement through eugenics. Lab fee.
- **5083.** Legal Aspects of Environmental Toxicology. (3-0) Credit 3. Basic understanding of the laws designed to regulate the use of toxic chemicals in the environment. Federal and State legislation on air and water pollution, pesticide use, food and feed additives, consumer protection, and occupational exposure and hazards of toxic chemicals.
- **5093.** Chemical Ecology. (3-0) Credit 3. Chemically mediated interactions of organisms with one another and their environments. Areas to be covered are: diversity and adaptation, allelopathy, attractants and pheromones, repellents and defensive substances, disposition of chemicals, and research in chemical ecology.
- **5094.** General Microbiology. (2-4) Credit 4. Morphology, physiology, classification, cultivation of microorganisms and their relation to agriculture, premedicine, and industry. Lab fee.
- **5124.** General Parasitology. (2-4) Credit 4. Morphology, life history, diagnosis and control of the important parasites affecting man and other animals. Lab fee.
- **5141-5151.** Seminar in Biological Problems. (1-0) Credit 1 each. Student participation in general and specific research topics in Biology.
- **5143.** Field and Animal Ecology. (1-4) Credit 3. Composition, dynamics and distribution of biotic communities in various sections of the Southwest. Outdoor camping and cooking. Lab fee.
- **5164.** Invertebrate Zoology. (2-4) Credit 4. Classification, morphology, embryology, physiology, and life histories of invertebrates, exclusive of insects. Lab fee.
- **5183.** Experimental Genetics. (3-0) Credit 3. Thorough experimentation to show how variations may be brought about; techniques of mating and breeding to support accepted principles. Lab fee.
- **5184.** Vertebrate Zoology. (2-4) Credit 4. Evolution, development, physiology, and anatomy of major taxonomic groups of chordates. Lab fee.
- **5203-5213.** Selected Topics in Biology. (2-2) Credit 3 each. Basic concepts and recent advances in techniques in Physiology, Bacteriology, Botany, Genetics and Entomology. Experiments, demonstrations and field trips.

DEPARTMENT OF BIOLOGY

- **5204.** Biology for Teachers. (2-4) Credit 4. Training course for prospective teachers of zoology and botany. Lectures or conferences, field and laboratory work. Lab fee.
- 5991-5992-5993. Independent Study. (0-0) Credit 1, 2 or 3. Reading, research and/or field work on selected topics in Biology. Prerequisite: consent of advisor.

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Department of Chemistry

FACULTY

John R. Williams, Head, Physical Henry H. Ballard, Organic Larry L. Cole, Physical Organic Vasant M. Doctor, Biochemistry Harold L. Hauser, Organic Hylton G. McWhinney, Analytical

PURPOSE AND GOALS

The Department of Chemistry offers a program of advanced study that prepares graduate students for careers in research, teaching, or industry. Graduate training in the department is multifaceted and flexible, depending on the interests and needs of the individual student. The program includes coursework, seminars, teaching experience, performance of original research, and writing of a thesis.

DEGREE PROGRAM

The Department of Chemistry offers the following graduate degree program:

Program	Degree
Chemistry	M.S.

Graduate coursework in chemistry may also be applied to a master's degree program in education with a concentration in chemistry. Students seeking this option should apply for admission to the College of Education. The Department also provides graduate support courses to other degree programs.

ADMISSION TO PROGRAM

Persons who plan to work toward the M.S. degree in Chemistry must fulfill the following undergraduate requirements: two semesters of inorganic chemistry, one semester of analytical chemistry, two semesters of organic chemistry, and two semesters 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.

ADVANCEMENT TO CANDIDACY

The Application for Candidacy Form must be approved by the heads of both the major and minor departments and submitted to the Dean of the Graduate School for approval. Research projects for the thesis will be assigned before the student has been approved as a candidate.

DEPARTMENT OF CHEMISTRY

The student is required to pass a written preliminary examination in the major fields of analytical, organic, inorganic, physical and biochemistry before scheduling of the final oral examination which will cover subject materials dealing with the thesis and course work.

PROGRAM REQUIREMENTS (M.S. - Chemistry)

It is recommended that persons who plan to qualify for the M.S. Degree in Chemistry spend at least one year in residence and that those who plan to study during the summer periods plan to spend at least one summer which can be devoted entirely to research. It is required that the thesis be of such quality that it may be published in an accepted scientific journal. Below is a suggested outline of study for the various fields of Chemistry. These, of course, represent the minimum requirement:

- MAJOR: Each candidate is expected to successfully complete a minimum of 24 semester hours of course work exclusive of research. These courses must include: CHEM 5314, 5324, 5402, 5534, 5613, 5783, and sufficient graduate electives in Chemistry to satisfy the semester-hour requirement. Only six (6) semester hours of credit for courses designed especially for summer institutes may be applied toward a M.S. degree in Chemistry.
- MINOR: The minimum number of hours required for a minor in Chemistry is (12) hours of graduate course work exclusive of research. Only three (3) semester hours of credit for courses designed especially for summer institutes may be applied toward a minor in Chemistry.

DESCRIPTION OF COURSES

Chemistry (CHEM)

- 5006. Research. (0-0) Credit 6. Problems for investigation may be selected from one of the following fields of chemistry: 1. Analytical; 2. Biochemistry; 3. Inorganic; 4. Organic; 5. Physical.
- 5013. Research. (0-0) Credit 3. Problems for investigation may be selected from one of the following fields of Chemistry: 1. Analytical; 2. Biochemistry; 3. Inorganic; 4. Organic; and 5. Physical.
- 5023. Research. See CHEM 5013.
- 5026. Research. See CHEM 5006.
- 5036. Research. See CHEM 5006.
- 5046. Research Physical Chemistry. See CHEM 5006.
- **5111 or 5113.** Seminar. (1-0 or 3-0) Credit 1 or 3. Seminar classes will involve lectures, reports, and discussions on current research in Chemistry featuring faculty members, guest lectures and students. Students will make presentations at weekly seminars on topics of interest in Organic, Nuclear, Inorganic, Physical and Bio-medical Chemistry. Topics selected will reflect current trends in research. Prerequisite: Graduate standing or consent of instructor.

5121. Seminar. Continuation of 5111.

- **5213-5223.** Chemical Principles. (3-0) Credit 3. A survey course emphasizing extended treatment, development and application of selected fundamental concepts and principles of Chemistry.
- **5314.** Advanced Analytical Chemistry. (2-4) Credit 4. Chemical analysis and characterization of chemical substances. Theory and practice of sampling, synthesis, isolation, purification, and analysis of compounds. Laboratory program designed to develop technical efficiency, familiarity with instrumental techniques and chemical literature, trace analysis, and methods of handling experimental data including use of the computer are offerings of this course.
- **5324.** Instrumental Analysis. (2-4) Credit 4. The Theoretical principles coupled with practice involving modern instrumental techniques. Used for elucidation and characterization of molecular structure and physical properties of systems in Chemistry, including biochemical and biomedical systems. Trace Analysis. Techniques include: polarography, fluorometry, differential thermal analysis, NMR, atomic absorption, mass spectrometry, infrared and UV-Visible spectroscopy, and ion selective electrode methods. Course will emphasize computer acquisition and reduction of experimental data. Prerequisite: CHEM 4023.
- **5402.** Advanced Organic Chemistry. (2-0) Credit 2. A review of elementary Organic Chemistry with an extension of more advanced topics. Includes assigned subject materials.
- **5412.** Organic Synthesis. (2-0) Credit 2. Conferences and laboratory work dealing with the syntheses of various organic compounds. Prerequisite: two semesters of Organic Chemistry.
- 5414. Identification of Organic Compounds. (2-4) Credit 4. The separation and identification of pure organic compounds and mixtures.
- 5423. Quantitative Organic Chemistry. (1-4) Credit 3. An introduction to micromethods. The determination of elements and functional groups by micromethods.
- 5433. Advanced Topics in Organic Chemistry. (3-0) Considers stereochemistry, reaction mechanisms, and terpenes and carbohydrates.
- **5534.** General Biochemistry. (2-4) Credit 4. A basic and extension course designed for graduate students planning to major or minor in Biochemistry or related fields and who require more than an elementary knowledge of the subject. Prerequisite: CHEM 3033 or permission of instructor.
- **5543.** Intermediary Metabolism. (3-0) Credit 3. The intermediates formed in the metabolism of fats, carbohydrates, proteins, minerals and nucleic acids and interrelation between the metabolic pathways in both plants and animals. Prerequisites: 4044 and 4023.
- **5563.** Biochemical and Clinical Analysis. (1-4) Credit 3. Conference and laboratory work dealing with the analysis of blood, urine and vitamin essay. Prerequisite: CHEM 4033.
- **5582.** Nutrition. (2-0) Credit 2. Lectures, assigned readings on the most recent developments in research on developments in research on vitamins, amino acids, proteins, minerals and hormones as related to human and animal nutrition. Prerequisite: CHEM 4053.

DEPARTMENT OF CHEMISTRY

- **5584. Topics in Chemistry Nutrition.** (2-4) Credit 4. Lectures on recent developments in nutrition and in the biochemical role of vitamins, amino acids, proteins, minerals and hormones as related to human and animals. Laboratory work will include formulation and evaluation of selected synthetic materials as diet supplements.
- **5613.** Advanced Inorganic Chemistry. (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 aqueous electrolytes in non-aqueous solvents.
- 5733. Quantum Chemistry. (3-0) Credit 3. Elementary principles of quantum mechanics with applications to atoms, molecules, and chemical topics. Angular Momentum perturbation and variation methods. Matrix and group theory methods in quantum mechanics. Molecular orbital theory. Prerequisite: CHEM 4013-4023. MATH 3073-4013.
- **5743.** Chemical Thermodynamics. (3-0) Credit 3. A rigorous presentation of classical thermodynamics. The application of the laws of thermodynamics to chemical systems including systems with intensive properties other than temperature and pressure. Calculations of heats of reaction, free energy and entropy using tabulated thermodynamic data. Principles and methods of statistical thermodynamics applied to simple physio-chemical systems. Introduction to the thermodynamics of irreversible processes. Bioenergetics.
- **5754.** Nuclear and Radio Chemistry. (2-4) Credit 4. A study of the theories of nuclear structure, nuclear energy, nuclear reactions and radioactivity. Radiation detection and measurement; interaction of radiation with matter; health physics; radioisotope technology. Prerequisite: Consent of instructor.
- **5783.** Advanced Physical Chemistry. (3-0) Credit 3. A lecture course dealing with advanced topics of special interest in modern physical chemistry in areas including experimental and theoretical thermodynamics, chemical kinetics, collision and transition state theories, atomic and molecular spectra, quantum mechanical systems, photochemistry, structure of crystals and liquids, surface chemistry, macro-molecules, and gas phase reactions. Specific areas to be announced in advance of the semester in which the course will be offered. Prerequisites: CHEM 4013-4023 and mathematics through Differential Equations.
- 5991-5992-5993-5996. Independent Study. (0-0) Credit 1, 2, 3 or 6. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

Department of English and Foreign Languages

FACULTY

William H. Chapman, Interim Head, English and Foreign Languages
Diljit Chatha, English
Theodis Shine, Drama
Eileen Skaggs, English
E. Joahanne Thomas-Smith, English
Jana Wainwright, English

PURPOSE AND GOALS

Graduate study in English leads to the Master of Arts degree. It aims to increase capabilities in comprehending and analyzing literature and language. While graduate students have traditionally become teachers during or following completion of the degree requirements, the exposure to American and British literature as well as linguistics and grammar provides students with the foundation on which various technical, educational, and administrative careers can be built.

DEGREE PROGRAMS

The Department of English and Foreign Languages offers the following graduate degree program:

Program

Degree M.A.

English

Graduate coursework in English may also be applied to a master's degree program in education with a concentration in English. Students seeking this option should apply for admission to the College of Education. The Department also provides graduate support courses in English to other degree programs.

ADMISSION REQUIREMENTS

For admission to the program, a student should present a minimum of 18 semester hours of undergraduate English coursework and a minimum grade of "B" in that work. Prerequisite courses not taken at the undergraduate level, such as English Language, must be taken before the student advances beyond 12 semester hours of graduate coursework. A student is expected to pass an English qualifying examination before admission to candidacy is approved.

Action on admission to candidacy for a Master of Arts degree in English will be taken after the student has been in residence for at least one semester or summer session; earned at least 12 semester hours of graduate course credits; maintained a "B" average or better; and satisfactorily passed a comprehensive examination in English language and literature.

The student failing to meet the above requirements will be continued on probation for a second semester. In the event the requirements for candidacy remain unmet, it will be understood that no further graduate credits earned by the student will be applicable to a master's degree.

PROGRAM REQUIREMENTS (M.A. - English)

Of the 33 semester hours required for graduation with the M.A. in English, 27 must be taken at his university.

Major Requirements (M.A., English) 33 Semester Hours

Major:	33 semester hours in English including thesis; no minor
	or
	24 semester hours in English including thesis; 9 semester hours in an

Minor: If minor option selected, 9 semester hours in an approved minor required

Total Degree Requirements

33	Semes	ter H	lours

Minor Field Requirements 9 Semester Hours

approved minor field

English Minor: ENGL 5113, and 6 semester hours of 5000 level courses

SUGGESTED PROGRAM SEQUENCE

English Major (no minor)

Language		Hours
ENGL 5113	Linguistics and Grammar	3
Literature		
ENGL 5243	Shakespeare	3
ENGL 5233	Medieval Literature	3
ENGL 5213	A Study of the Short Story	3
ENGL 5223	The Novel	3
ENGL 5263	Seminar in Masterpieces of Literature	3
ENGL 5313	Literary Criticism	3
ENGL 5143	English Workshop	3
ENGL 5273	Chaucer	3
Research		
ENGL 5123	Research	3
ENGL 5133	Seminar in Thesis Writing	3
English major (n	ninor option)	
Language		
ENGL 5113	Linguistics and Grammar	3
Literature		
ENGL 5243	Shakespeare	3
ENGL 5213	A Study of the Short Story	3
ENGL 5223	The Novel	3
ENGL 5263	Seminar in Masterpieces of Literature	3
ENGL 5143	English Workshop	3

Minor

9 Semester Hours

3

Courses must be approved prior to student's enrolling in them.

Research

ENGL 5123 Research ENGL 5133 Seminar in Thesis Writing

COURSE DESCRIPTIONS

English (ENGL)

- **5053.** Studies in Teaching English. (3-0) Credit 3. Special problems, critical study and evaluation of methods of teaching English at secondary level. Pre-requisite: Twelve semester hours of English at 3000 level or above and one year of teaching experience.
- **5113.** Linguistics and Grammar. (3-0) Credit 3. Nature of modern linguistic science and its approach to phonology, morphology, syntax, and semantics; structural, generative-transformational grammar in the linguistic context. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5123. Research.** (3-0) Credit 3. Principles of literary theory and research technique. Pre-thesis research practice. Prerequisite: 27 hours of graduate English courses.
- **5133.** Seminar in Thesis Writing. (3-0) Credit 3. Application of research skills to thorough development of thesis on topic approved by advisor. Prerequisite: Candidacy for graduate degree.
- **5143.** English Workshop. (3-0) Credit 3. Lectures and practice exercises for enrichment in language usage and methods of teaching for non-English majors. Advanced study and practice for English majors. Prerequisite: 12 hours of English at 3000 level or above and one year of teaching experience.
- **5156.** English Workshop. (609) Credit 6. Lectures and practice exercises for enrichment in language usage and methods of teaching for non-English majors. Advanced study and practice for English majors. Prerequisite: 12 hours of English at 3000 level or above and one year of teaching experience.
- **5213.** A Study of the Short Story. (3-0) Credit 3. The history, art, and techniques of the short story with emphasis on the American short story. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5223.** The Novel. (3-0) Credit 3. The evolution of the English novel, with study of representative novels of the 19th and 20th centuries. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5233.** Medieval Literature. (3-0) Credit 3. Survey, in translation, of major genres, allegory and romance, of English and continental European literature from the beginning through the thirteenth century. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5243.** Shakespeare. (3-0) Credit 3. Shakespeare's art at its maturity, with emphasis on masterpieces of history, romance, and tragedy. Prerequisite: Acceptance to graduate study or to the teacher certification program.

DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES

- **5253.** Twentieth Century Literature. (3-0) Credit 3. Study of modern and contemporary English and American poets, dramatists, and fiction writers. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5263.** Seminar in Masterpieces of Literature. (3-0) Credit 3. Study and analysis of form, language, and style of English and American masterpieces of literature. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5273.** Chaucer. (3-0) Credit 3. Detailed study of *Troilus and Criseyde* and selected *Canterbury Tales*. Prerequisite: Acceptance to graduate study or to the teacher certification program.
- **5313.** Literary Criticism. (3-0) Credit 3. Survey of critical theories of literature from Plato and Aristotle to the present. Prerequisite: 9 hours of graduate English courses.
- 5991-5992-5993. Independent Study. (0-0) Credit 1, 2 or 3. Readings, research, and/or field work on selected topics. Prerequisite: Consent of department head.

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Department of Mathematics

FACULTY

Evelyn E. Thornton, Head, Algebraic Topology and Number Theory Arouna R. Davies, Operation Research Frank T. Hawkins, Mathematics Education Vera C. King, Mathematics Education n'Ekwunife Muoneke, Numerical Linear Algebra Pedro A. Oliver, Applied Mathematics and Geometry Madolyn Reed, Mathematics Education George A. Roberts, Complex Analysis and Approximation Theory A. D. Stewart, Differential and Integral Equations

PURPOSE AND GOALS

The Department of Mathematics offers innovative and flexible graduate programs in Mathematics. Students are encouraged to be creative in putting together a course of study that will lead to the fulfillment of individual professional goals in Pure Mathematics, Applied Mathematics or Mathematics Education.

A faculty advisor and/or Director of Graduate Mathematics will assist each graduate student on a continual basis to ensure proper course selection relative to career objectives and goals.

DEGREE PROGRAM

The Department of Mathematics offers the following graduate degree program:

Program	Degree
Mathematics	M.S.

Graduate coursework in mathematics may also be applied to a masters degree program in education with a concentration in mathematics. Students seeking this option should apply for admission to the College of Education. The Department also provides graduate support courses in mathematics to other degree programs.

ADMISSION TO PROGRAM

Application for admission to the Graduate School is made through the Office of the Dean of the Graduate School. Applicants seeking a Master's degree in mathematics should have the equivalent of an undergraduate major in mathematics from an accredited institution. Applicants who do not hold the equivalent of an undergraduate major in mathematics should have a deficiency plan approved in order to meet this requirement.

PROGRAM REQUIREMENTS (M.S. - MATHEMATICS)

A minimum of 36 semester hours (including thesis) is required for the M.S. degree in mathematics. These courses must be selected from approved 5000 level courses and a grade point average of 3.00 or better must be maintained with no grade below a "C". All applicants seeking a degree should plan a degree program with a graduate advisor.

DESCRIPTIONS OF COURSES

Mathematics (MATH)

- **5123.** General Topology I. (3-0) Credit 3. Topological spaces including continuous functions, compactness, separation properties, connectedness and metric spaces. Prerequisite: MATH 5013.
- **5133.** General Topology II. (3-0) Credit 3. Topological spaces including convergence, product, and quotient spaces, metrization, compactness and uniform spaces, path spaces and homotopy. Prerequisite: MATH 5123.
- **5023.** Complex Analysis I. (3-0) Credit 3. Holomorphic functions, complex integration, residue theorem. Taylor series, Lauren series, conformal mapping, and harmonic functions. Prerequisite: MAT 4033.
- 5033. Complex Analysis II. (3-0) Credit 3. Infinite products, Weierstrass factorization theorem, Mittag-Leffler's theorems, normal families, Picard's theorem, and Riemann mapping theorem. Prerequisite: MATH 5023.
- **5103.** Special Problems. (3-0) Credit 3. Reading and discussion of articles appearing in various mathematical journals; patterns and techniques of mathematical research; modern techniques and trends in the field of advanced mathematics. Trends in the field of elementary mathematics. May be repeated for credit.
- **5113.** Elementary Functions. (3-0) Credit 3. Real number system, algebraic functions, circular functions, exponential functions, logarithmic functions, hyperbolic functions, and their properties. Prerequisite: Graduate standing in mathematics.
- **5003.** The Real Number System. (3-0) Credit 3. The development of the real number system, deductive systems, field properties, order properties, completeness properties, powers and roots, and Zdecimal representation. Prerequisite: Consent of instructor.
- **5013.** Introduction to Point-Set Theory. (3-0) Credit 3. Basic set theory; cardinal and ordinal numbers, countable and well-ordered sets; and the study of the basic properties of metric spaces with an introduction to completeness, separability and compactness. Prerequisite: Consent of instructor.
- **5173. Computer Programming.** (3-0) Credit 3. Basic computer concepts and terminology. Computer characteristics and storage fundamentals of output and input operations. Flow charts and block diagrams. Programming elementary algorithms using a scientific language.
- **5203.** Calculus for High School Teachers. (3-0) Credit 3. Concise treatment of certain fundamental ideas in the mathematics of the calculus with the intention of extending, illuminating, and clarifying the teacher's past knowledge. Prerequisite: Consent of instructor.
- **5233.** Selected Topics in Mathematics. (3-0) Credit 3. Introduction to symbolic logic and set theory; applications to elementary algebra; linear and plain analytical geometry; and probability statistics. Prerequisite: Consent of instructor.

- **5283.** Structure of Arithmetic. (3-0) Credit 3. Introduction to sets, the number concept, the evolution of numeration systems, modular systems, the number system, measurement, ratio, proportion, and percentage.
- 5293. Logic and Geometry. (3-0) Credit 3. Elementary logic, plausible reasoning, informal geometry, and coordinate geometry as a mathematical system.
- **5303.** Modern Techniques in Secondary Mathematics. (3-0) Credit 3. Teaching strategies; instructional packages composed of modules of various areas and topics of mathematics; performance-based teaching methods; effective use of audiovisual equipment and materials; and small group methods.
- **5343.** Boundary Value Problems. (3-0) Credit 3. Fourier Series and integrals, application of partial differential equations to problems, including heat flow, fluid flow, electric fields, mechanical vibration, and similar problems arising in chemistry, physics, radiotherapy and engineering. Prerequisite: One course in ordinary differential equations. Prerequisite: MATH 4013.
- **5413.** Seminar. (3-0) Credit 3. Seminar in mathematics for elementary teachers; lectures, demonstrations, and reports on current trends in the field of mathematics. Prerequisite: Consent of instructor.
- **5443.** Statistics for High School Teachers. (3-0) Credit 3. Processes of statistical methods, with reference to applications in various fields and with special application to analysis of school data.
- **5473. Probability.** (3-0) Credit 3. Theory of permutations, combinations, distributions, repeated trials, and discussion of the probability integral. Prerequisite: MATH 2034.
- **5543.** Integrated Introduction to Geometry. (3-0) Credit 3. The origin of geometry; the three classical problems of antiquity; the five Platonic solids; Euclid's elements and fallacies; a modern set of axioms for geometry; geometries in the Euclidean plane; transformation groups; hyperbolic geometry; and elliptic geometry. Prerequisite: Consent of instructor.
- **5613.** Theory of Matrices. (3-0) Credit 3. Definitions in matrix algebra; inverse of a matrix, transposition of a matrix; rank of a matrix, linear transformations; differentiation and integration of matrices; and application of matrices to systems of linear equations; quadratic forms, bilinear forms, and systems of differential equations. Prerequisite: MATH 3013 or 3073.
- **5723.** Partial Differential Equations. (3-0) Credit 3. Existence and uniquenss theorems, techniques for solving first and second order partial differential equations, approximate (numerical) solutions and applications. Prerequisite: MATH 5343.
- **5753.** Intermediate Analysis. (3-0) Credit 3. Continuous functions; sequences; limits of functions; integrable functions; the integral of continuous and bounded functions; series and step-functions. Prerequisite: Consent of instructor.
- **5763.** Intermediate Differential Equations. (3-0) Credit 3. Existence theorems, uniqueness theorems, and vector and matrix treatment of linear and non-linear systems of ordinary differential equations. Prerequisite: MATH 3073 or 4113.

DEPARTMENT OF MATHEMATICS

- **5773.** Advanced Analysis. (3-0) Credit 3. Continuous functions of several numbers; properties of functions of several numbers; the double integral; and the Riemann-Stieltjes integral. Prerequisite: MATH 5753.
- 5823. Analytic Mechanics. (3-0) Credit 3. Axiomatic foundations of mechanics; Newton's laws; harmonic oscillator; planetary motion; non-inertial coordinate systems; systems of particles; plane motion of rigid bodies; space motion of rigid bodies; Lagrange's equations; and Hamilton's principle. Prerequisite: Consent of instructor.
- 5893. Thesis Research, A-D. (0-0) Credit 3. Research for thesis. Course may be repeated for credit.
- **5903.** Modern Algebra. (3-0) Credit 3. Fundamental concepts of algebra; integral domain, fields, and introduction to such concepts as groups, vector spaces, and lattices. Prerequisite: MATH 3013.
- **5913. Real Variables.** (3-0) Credit 3. Introduction to point-sets, rigorous approach to the concepts of function and limit, the Riemann integral, the Lebesque integral and some of their generalizations. Prerequisite: MATH 5773.
- **5991-5992-5993.** Independent Study. (0-0) Credit 1, 2 or 3. Readings, research, and/or field work on selected topics. Prerequisite: Consent of advisor.

Department of Physics

FACULTY

Cleo L. Bentley, Department Head

DEGREE PROGRAM

The Department of Physics does not offer a graduate degree program, but does provide graduate support courses in physics and physical sciences. The courses offered are designed to contribute to the development of competencies needed by in-service teachers.

DESCRIPTION OF COURSES

Physical Science (PHSC)

- **5013.** 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.
- **5043.** Earth Sciences I. (3-0) Credit 3. Introduction to astronomy for teachers of science and mathematics in secondary schools. Considers the celestial sphere and coordinates thereon; measures of time; the solar system including the earth, moon, planets, comets, meteors, satellites, and the sun.
- **5053.** Earth Sciences II. (3-0) Credit 3. Introduction to geology and weather. For teachers. General principles of geology, physiography. Covers geologic processes and an introduction to historical geology and the fundamental principles of weather.
- **6013-6023.** Concepts in Physical Science. (2-2) Credit 3 each. Deals with the physical, chemical and electrical characteristics of matter. Special emphasis will be placed on experimentation, demonstrations and new approaches in the teaching of physical sciences. The course is primarily designed for in-service secondary teachers. Prerequisite: 1 course in physical science or consent of instructor.

Physics (PHYS)

5013-5023. Physics for the In-Service Teacher. (2-3) Credit 3 each. Designed primarily for secondary school teachers of physics; graduate credit may be obtained; offered usually during the summer; theoretical and experimental techniques of teaching physics in secondary school.

Department of Social Work and Sociology

FACULTY

Sarah B. Williams, *Head, Social Work and Sociology* Elizabeth A. Martin, *Social Work* Clyde C. McDaniel, Jr., *Sociology* Jimmie P. Poindexter, *Social Work*

PURPOSE AND GOALS

The graduate sociology program in the Department of Social Work and Sociology prepares sociologists for work in governmental offices, business organizations, social and public service agencies, and in secondary and higher education. Further, it prepares students for advanced study in sociology, criminology, law and social welfare.

DEGREE PROGRAM

The Department of Social Work and Sociology offers the following graduate degree program:

Program

Degree Offered

Sociology

M.A.

The Department also provides graduate support courses in Sociology to other degree programs.

ADMISSION TO PROGRAM

Prerequisites for admission to the program are: a BS/BA degree from an accredited university or college, and undergraduate GPA of at least 2.75, three positive letters of recommendation, an acceptable biographical/professional statement, a completed application by the admissions cut-off date, a personal interview, and take the GRE test.

ADMISSION TO CANDIDACY

In order to be admitted to candidacy for the master's degree, students must meet all the general requirements and complete at least 12 semester hours of all program-required courses.

PROGRAM REQUIREMENTS (M.A. - Sociology)

MAJOR: A minimum of 30 hours of graduate courses, plus the completion of a thesis;

or A minimum of 36 hours of graduate sociology courses with no thesis required.

CORE COURSES: Students must enroll in:

SOCG 5213 Social Theory

SOCG 5223 Social Research

SOCG 5253 Seminar (Statistics)

The remaining 21-27 hours may be selected from additional courses included in the curriculum.

MINOR: A minimum of 9 hours of graduate sociology courses chosen from:

SOCG 5213	Social Theory
SOCG 5223	Social Research
SOCG 5263	Sociology of Education
SOCG 5284	Aspects of Poverty
SOCG 5293	Social Disorganization
SOCG 5333	Criminology
SOCG 5353	Race and Ethnic Relations
	Electives (9-15 hours)

DESCRIPTION OF COURSES

Sociology (SOCG)

- **5213.** Social Theory. (3-0) Credit 3. This course is designed to introduce major classical sociological theories. Systems theory, the conflict perspective, symbolic interaction and other sociological theories are discussed.
- **5223.** Social Research. (3-0) Credit 3. A study of the various methods of social investigation, such as the social survey, the case study method, and 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.
- **5233.** American Social Welfare. (3-0) Credit 3. Historical development of social work as an institution. Fields of specialization and functions of agencies. Research papers tracing the development of specific areas of social work.
- **5243.** Sociology of Urban Areas. (3-0) Credit 3. 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.
- **5253.** Seminar. (3-0) Credit 3. Seminar approach to specialized fields and topics in sociology. Subject matter varies by semester. May be repeated for credit when topics vary.
- **5263.** Sociology of Education. (3-0) Credit 3. Analysis of factors influencing the structures and function of the educational institution.

- **5273.** Programs of Child Welfare. (3-0) Credit 3. A study of child welfare movements and contemporary children's agencies and their services, including programs for improving the home environment for children and youth, substitute care, safeguarding health, employment protection, and delinquency prevention.
- **5284.** Aspects of Poverty. (4-0) Credit 4. This course presents several theoretical perspectives on poverty in American society. Past, current, and proposed solutions to poverty are discussed.
- **5293.** Social Disorganization. (3-0) Credit 3. This course examines social problems in society from the social disorganization approach.
- **5314.** Sociology for Community Work. (4-0) Credit 4. Analysis of the complex of social arrangements, group characteristics, traits, and institutions that characterize rural and urban living. Emphasis on techniques for analyzing special social problems and utilizing social organization as a means of achieving program objectives.
- **5323.** Sociology of Youth. (3-0) Credit 3. The culture of adolescence and youth in modern societies, with emphasis on Western Civilization's youth as influenced by social class and ethnic status and by the family and other societal institutions.
- **5333.** Criminology. (3-0) Credit 3. Nature and extent of crime. Past and current theories of the etiology of criminal behavior. Emphasis on crime in American society and its relation to American values and institutional arrangements.
- **5353.** Race, Gender and Ethnic Relations. (3-0) Credit 3. A study of race, gender and ethnic relations. The course deals mostly with groups in the United States, but does yield cross-cultural perspectives.
- 5991-5992-5993-5996. Independent Study. (0-0) Credit 1, 2, 3, or 6. Readings, research and/or field work on selected topics. Prerequisite: consent of advisor.

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3.254. Aspects of Powerty. (4-0) Credit 4. This course potentia as and theorem is it perspectives on powerty in American accepty. Part recreat and proposed is discussed. In Provide the American acception from the proposed conditions to powerty are discussed.

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5303. Semilarr. (3-0) Gredit 3. Semilar represents to specialized fields and the set of statistical Subject matter varies by seminater. May be proported for a spinor mater.

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Division of Social & Political Sciences

FACULTY

Mack H. Jones, *Head* Lena Boyd-Brown, *World Civilization, European History* Purvis M. Carter, *American History* Howard Jones, *American History*

PURPOSE AND GOALS

The Division of Social & Political Sciences offers the M.A. degree in history with the objective of broadening the intellectual and scholarly capacities of students in understanding and analysing the historical development of contemporary events, thoughts, values, ideas and institutions. The program is designed to prepare students for careers in teaching history and social studies in schools and colleges and also to train specialists for various branches of government, business, archives and other social service. The students may specialize in U. S. history or European and World history.

Students may minor in economics, education, English, business, sociology and other social science fields.

DEGREE PROGRAM

The Division of Social and Political Sciences offers the following graduate degree program:

Program	Degree Offered
History	M.A.

ADMISSION TO PROGRAM

In addition to the general admission requirement to the graduate school described elsewhere in the catalogue, students seeking admission to the M.A. degree in history should meet the following requirements:

Prerequisites for a major or minor in the field of history are: (a) lower-level college courses in American and European history that correspond with courses offered in the field of history at Prairie View A&M University; (b) at least one advanced course in modern or contemporary European or American history; (c) a cumulative grade point average of "B" or better in social science courses at the undergraduate level; (d) evidence, by the end of the first semester, as a condition of precandidacy status, of the proper inclination to master the skills and attitudes necessary for graduate study.

ADVANCEMENT TO CANDIDACY

As early as possible in the first semester of residence, a student pursuing the M.A. degree should select a program of study, then obtain the agreement of a professor in that program to direct the student's preparation for the qualifying examination and the writing of the thesis. The student and the major program professor will arrange the minor program of study with a view towards keeping the two programs reasonably related. A program of study and an area of thesis

DIVISION OF SOCIAL & POLITICAL SCIENCES

interest, both to be approved by the history program, must be filed before the end of the student's first semester or summer session in graduate school.

A student must complete 12 semester hours of graduate credits before applying for candidacy.

DEGREE PROGRAM REQUIREMENTS

Program Requirements

MAJOR: 21 semester hours, consisting of:

 HIST 5903
 Thesis

 HIST 5923
 Tools of Scientific History

and 15 hours from any one or more of these three fields of specialization:

Methods:

HIST 5023 Methods of Teaching History

American History:

HIST 5313	American Revolution and the Constitution
HIST 5323	Sectionalism and Civil War
HIST 5333	The New South
HIST 5343	Western American History
HIST 5353	Economic History
HIST 5363	Contemporary United States
HIST 5373	American Foreign Relations
HIST 5913	Great American Historians

European History:

HIST 5513	French Revolution and Napoleon, 1648-1815
HIST 5523	England since 1485
HIST 5543	Contemporary Europe

World History:

HIST 5403	Problems of Latin-American History
HIST 5813	History of Civilization to 1500
HIST 5823	History of Civilization, 1500 to Present
HIST 5833	Imperialism

MINOR: 15 semester hours

COURSE DESCRIPTOINS

History (HIST)

- **5023.** Methods of Teaching History. (3-0) Credit 3. The nature of social studies: the development of and changing emphasis in current social studies programs; purposes and values; classroom methods and materials.
- **5043.** Multicultural Social Studies. (3-0) Credit 3. Emphasis is placed on helping administrators and teachers acquire a broad theoretical grasp of multicultural and multiethnic education, and develop the practical skills (strategies, methods, and techniques) for applying that knowledge to various situations.

- **5213.** Afro-American History. (3-0) Credit 3. This course emphasizes the importance of the black contribution to America's history. In examining that history, the course investigates the stereotyped views that have been handed down from one generation to the next, slanted accounts of black experience, apathy of many blacks and prejudices of many whites.
- **5313.** American Revolution and the Constitution. (3-0) Credit 3. An examination of scholarly research into the American Revolution that regards certain aspects of the Revolution as "clinical phenomena" in the development of revolutions in general; ideological background, actionists and vigilantes, the fall of Tory rule, the internal revolution, subsidence of the fever, and the *Neuer Ordnung*. Prerequisite: Graduate Status.
- **5323.** Sectionalism and Civil War. (3-0) Credit 3. Regional hypothesis; socioeconomic regionalism; government, politics, and the regional compromise in the middle period; important issues and men; Reconstruction and the new nation.
- **5333.** The New South. (3-0) Credit 3. 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.
- **5343.** Western American History. (3-0) Credit 3. Considers the exploration, settlement and development of the region west of the Mississippi. Examines materials on the early Spanish, French, African and Anglo-Saxon explorations and on the contributions of immigrants who made their homes in the Western region later.
- **5353.** Economic History. (3-0) Credit 3. 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 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, employers' associations, and cooperatives.
- **5363.** Contemporary United States. (3-0) Credit 3. Twentieth century American development: 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.
- **5373.** American Foreign Relations. (3-0) Credit 3. Problems in the diplomatic history of the United States with emphasis on the analysis of the growth of principles in the making and the execution of American foreign policy to 1889 and challenges to those principles since 1889.
- **5383.** American Foreign Relations. (3-0) Credit 3. The United States and its relationships with Latin America and the rest of the world. Public opinion and the economy.

- 5403. Problems in Latin-American History. (3-0) Credit 3. Geography and resources of the Latin-American countries; cultural traits of the population; description of the social, political and economic institutions. History of the relations between the United States and Latin American countries. Seminar organization, problem emphasis, special reports, discussion, and research paper.
- **5513.** French Revolution and Napoleon, 1648-1815. (3-0) Credit 3. Seminar approach to the cause and development of the Revolution, the disciplining of the Revolution by Napoleon, the greater France in Europe—the imperialistic impulse of the Revolution.
- **5523.** England Since 1485. (3-0) Credit 3. Development of Britain in modern historical perspective; Tudors and the Reformation; the Stuarts and Parliament; English expansion under Parliament; the Era of Reform and Empire. Lectures, discussions, and special reports.
- **5543. Contemporary Europe.** (3-0) Credit 3. Twentieth century European development in its world setting; the background and causes of World War I; the war itself; the Versailles settlement and post-war effort 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.
- 5813. History of Civilization to 1500. (3-0) Credit 3. Theoretical scholarly treatment of the ideals and institutions connected with the policical, social and economic life during periods of ancient, classical, Medieval and Reformation.
- **5823.** History of Civilization, **1500** to Present. (3-0) Credit 3. Theoretical scholarly treatment of the ideals and institutions connected with political, social and economic life from the 16th century to present.
- 5833. Imperialism. (3-0) Credit 3. The era of modern imperialism. Development and theories of Imperialism in the scholarship of the field, 1870 to 1920; Humanitarianism; Imperialism and Liberalism, 1870 to 1920.
- **5903.** Thesis. (0-0) Credit 3. Credit allowed upon satisfactory completion of required thesis.
- **5913.** Great American Historians. (3-0) Credit 3. A critical examination of selective writings of American history emphasizing the sociological, economic and political motivations, and historical theory. Representative historians and their writing will be selected from the following periods: Colonial, Revolutionary, Nationalistic, Modern and Contemporary.
- **5923.** Tools of Scientific History. (3-0) Credit 3. History and its relationship to the social sciences; the subject, collection and classification of sources; the criticism of data; exposition or the presentation of historical evidence.
- **5991-5992-5993.** Independent Study. (0-0) Credit 1, 2 or 3. Readings, research, and/or field work on selected topics. Prerequisite: Consent of advisor.

College of Business

ADMINISTRATIVE OFFICER

Barbara A. P. Jones, Dean

PURPOSE AND GOALS

The mission of the College of Business is to integrate the various disciplines into the pursuit of business studies and problems while providing the students an understanding of business organization and its place in the larger society in which it operates. Additionally, the College will strive to create an environment conducive to preparing individuals for a lifetime of learning and growth. The ultimate goal of the College is to produce graduates who are capable of solving these concepts in the structured and nonstructured problems in business, industry, and government. Public service activities, in the form of technical assistance, will be provided to surrounding communities to enhance mutual growth and development.

DEGREE PROGRAM

The College of Business offers a Master of Business Administration (MBA) degree. The M.B.A. Degree program is designed for students who can demonstrate sufficient academic potential for graudate work, and focuses on problem solving and decision making responsibilities of modern management. It is aimed at providing broad-based preparation for careers in either the private or public sectors. The program offers a general degree in Business Administration. No specific areas of specialization are given.

ADMISSION TO PROGRAM

Students desiring admission to the graduate program in the College of Business must meet the general admission requirements given elsewhere in this catalog for the Graduate School. Admission to the Graduate School, however, does not constitute admission to the Master's program in the College of Business.

In determining an applicant's eligibility for admission to the College of Business, the following measures are of critical importance:

- 1. an overall undergraduate grade point average of 2.75 on a 4.0 scale, or the equivalent; and
- 2. completion of the Graduate Management Admissions Test (GMAT) with a minimum score of 350.

Students failing to meet the criteria for admission will automatically be placed in a non-degree/special status. Such students are not entitled to pursue a degree in the College of Business until they receive **unconditional admission**.

Students who fail to satisfy the admission GPA or GMAT minimum may not enroll for more than six (6) semester hours of graduate work in any one long semester or full summer term while attempting to attain unconditional status. A student may not enroll for more than 12 semester hours in business while in this category. Students admitted **conditionally** (non-degree/special status) may attain **unconditional status** by achieving the following:

- achieve a 3.0 GPA for the first 12 hours of graduate work, with no more than one "C", including satisfactory completion of MGMT 5113, Statistics; and
- 2. attain a GMAT score of 350.

Completion of Entrance Requirements. Students enrolled in special status may take no more than 12 semester hours prior to attainment of unconditional admission. Unconditional admission will require completion of all university requirements, including the TOEFL, if appropriate. Discovery of enrollment completed in violation of these requirements will result in permanent bar to enrollment in the MBA program.

Minimum GPA Standards. Students whose semester GPA for courses leading to the MBA falls below 3.0 for two consecutive semesters, and whose overall GPA falls below 3.0, will be suspended from the program.

Academic Suspension. Academic suspension is an administrative action taken by the Dean of the College of Business for reasons indicated in this catalog. It bars a student from enrollment in graduate courses for at least one semester. Students may request return to the program in a probationary status through written petition to the Dean, who will refer the request to a committee of graduate faculty for review and recommendation. Students are limited to one suspension.

Probationary Status. A condition in which a student must maintain at least a 3.0 GPA each semester until his/her cumulative GPA reaches 3.0.

The Two-C Rule. Students who earn more than two grades of "C" or below will be suspended from the program. This applies to courses repeated and to those taken for the first time.

Transfer Credit. Credit from other universities may be transferred to Prairie View by either transfer or continuing students, provided:

- a. Transfer students newly admitted may apply up to six hours of graduate credit earned elsewhere to their Prairie View MBA program. However, that application must be requested during their first semester of registration at Prairie View and included in the degree plan prepared at the time of Admission to Candidacy. Work taken at other institutions expires at the end of six years from completion, just as does work completed at Prairie View.
- b. Transient credit. Continuing students may request transfer of up to six hours credit from other universities to the MBA program for substitution for Prairie View courses, provided:
 - The official catalog description of the course is furnished the MBA Coordinator for review at least two weeks prior to the final registration day of the semester in which the course is to be taken.
 - 2) The Prairie View MBA Coordinator approves the course for transfer credit prior to enrollment.
- Subsequent to completion of the course, the student has the university where the course was taken furnish the Office of the Registrar and the MBA Coordinator with either an official course grade report

or transcript which reflects the official grade. (Instructor submissions to their Registrar Offices will not suffice.)

4) If prior to enrollment in the transfer course, the student has not made a grade of "C" or below in the Prairie View course which is equivalent to the transfer course.

Removal of Incompletes. All incompletes must be removed within three regular semesters after the semester in which the grade was received. After that, the grade of "F" will be entered.

ADVANCEMENT TO CANDIDACY

Retention in the Master's Degree Program. For retention in the Master's program in the College of Business, each student must comply with the following:

- 1. Satisfy the conditions of admission described earlier if admitted as a SPECIAL GRADUATE student.
- 2. Maintain an overall Grade Point Average of 3.0. A maximum of two "C's" will be allowed; students will be dismissed from the Master's program in the College of Business when the third "C" has been earned.

Admission to Candidacy. Admission as an applicant for the Master's degree program does not constitute advancement to candidacy. Such advancement will be granted upon the completion of at least 12 semester hours of graduate credit with at least a "B" average. The student must submit a formal application, through the College of Business, to the Graduate Dean. Failure to fulfill this requirement may prevent the student from enrolling the following semester or having credits considered for a degree.

Admission to candidacy cannot be granted unless the conditions for admittance have been satisfied and all appropriate test scores have been placed on file in the College of Business Dean's Office. Admission to candidacy is granted by the Dean of the Graduate School. The application for admission to candidacy and the application for graduation may NOT be filed during the same semester. In general, a minimum of 12 hours must be completed after one has been admitted to candidacy.

Application for Graduation. An application for graduation may not be filed unless the applicant has:

- Earned a 3.00 cumulative Grade Point Average with no grade less than a "C". Any graduate course in which a grade less than a "C" has been earned must be repeated.
- 2. Earned no more than two "C's" in graduate courses.
- 3. Presented written evidence of any course substitute.
- 4. Secured formal evaluation of all academic work prior to registration for the final semester.
- 5. Been admitted to candidacy at least one semester prior to applying for graduation.

PROGRAM REQUIREMENTS (M.B.A.)

The M.B.A. provides broad preparation for management, with analytical techniques emphasized because of their importance in modern decision-making. The M.B.A. degree program consists of courses which make up a common body of

COLLEGE OF BUSINESS

knowledge – 36-51 credit hours – of advanced courses in Accounting, Economics, Finance, Management, Marketing or Administrative Information Systems.

Prerequisites. A Bachelor's degree from an approved institution, including at least 27 semester hours in business administration courses, is needed for graduate study. The M.B.A. degree program requires, as a minimum background, courses equivalent in content to those courses required of the undergraduate business majors at Prairie View in the areas of:

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Statistics	
Accounting	
Finance	
Management	
Marketing	
Economics	
Administrative Information Systems	

Graduate students should, if at all possible, remove any deficiencies by completing courses at the 5000 level which are designed for this purpose. Considering the above prerequisites, students may pursue one of two plans:

PLAN I

Hours

ACCT	5003	Financial Accounting	3
FINA	5013	Legal Environment of Business	3
ECON	5013	Microeconomic Theory	3
ECON	5023	Macroeconomic Theory	3
FINA	5003	Introduction to Finance	3
MRKT	5003	Advanced Marketing	3
MGMT	5003	The Management Process	3
ACCT	5103	Managerial Accounting	3
ADSY	5203	Managerial Communication	3
MGMT	5323	Strategy and Policy	3
MGMT	5113	Business Statistics	3
MGMT	5123	Quantitative Analysis	3
FINA	5103	Theory of Financial Management	3
MRKT	5303	Marketing Management	3
		Electives	6

Hours

PLAN II

ACCT	5103	Managerial Accounting	3
ADSY	5203	Managerial Communication	3
MGMT	5113	Business Statistics	3
MGMT	5123	Quantitative Analysis	3
FINA	5103	Theory of Financial Management	3
MRKT	5303	Marketing Management	3
MGMT	5103	Organizational Theory	3
MGMT	5323	Strategy and Policy	3
FINA	5303	Managerial Finance	3
MGMT	5513	Management Information Systems	3
		Electives	6

The above programs are flexible—depending upon one's undergraduate degree or post-graduate studies prior to entering as a degree applicant.

Suggested Program

Master of Business Administration (M.B.A.)

PLAN I

First Semester	Hours	Second Semester	Hours
ACCT 5003		ACCT 5103	
Financial Accounting		Managerial Accounting	
ADSY 5203		FINA 5003	3
Managerial Communica	ation	Introduction to Finance	
MGMT 5003		MGMT 5113	
The Management Proce	SS	Business Statistics	
MGMT 5513		MRKT 5003	3
Management Informatio	n	Advanced Marketing	
Systems	f charge and so a		15. 25.3C
	12		12
Third Semester	Hours	Fourth Semester	Hours
ECON 5013		ECON 5023	3
Microeconomic Theory		Macroeconomic Theory	
FINA 5103		FINA 5013	3
Theory of Financial Mg	mt.	Legal Environment	
MGMT 5123	3	MGMT 5323	3
Quantitative Analysis		Strategy and Policy	
MRKT 5303	3	Elective	3
Marketing Management	transit problems.		
			-

PLAN II

No specific schematic plan is recommended for students with an undergraduate degree in business administration admitted to Plan II. However, students are cautioned to take prerequisite courses before enrolling in advanced level courses. In general, the courses in any area of specialization should be taken in numerical sequence.

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DESCRIPTION OF COURSES

Accounting (ACCT)

- **5003.** Financial Accounting. (3-0) Credit 3. A survey of fundamental concepts of financial accounting with special emphasis upon the interpretation and use of financial accounting data for evaluative and administrative purposes.
- **5103.** Managerial Accounting. (3-0) Credit 3. The interpretation and use of accounting data for management purposes. Topics covered include: cost accounting; budgets; standards; production costing; distribution costing; and special analyses for managerial purposes. Prerequisite: ACCT 5003 or equivalent.
- **5213.** Accounting Theory. (3-0) Credit 3. Critical evaluation of theory structure in accounting. Study of the criteria for choices among income-determination and asset-valuation rules for public reporting. Prerequisite: ACCT 5103.
- **5313.** Seminar in Tax Planning. (3-0) Credit 3. The study of business situations and appropriate alternative plans to minimize taxes. Tax research and planning for business enterprise and individuals. Prerequisite: ACCT 5103.

Administrative Information Systems (ADSY)

- **5203.** Managerial Communication. (3-0) Credit 3. Applications of communications theory, human relations concepts, research methods, and information technology to the internal communication of the manager's work environment. Survey of the organizational communication climate; applications: Oral and written reports, system-related documents (reports, proposals, procedures).
- **5513.** Management Information Systems. (3-0) Credit 3. Analysis and synthesis of the principle interactions among the components of a company and its environment; setting of systems requirements; and development of control processes to increase effectiveness. Examines methods of evaluating the effectiveness and efficiency of systems.

Economics (ECON)

- 5013. Microeconomic Theory. (3-0) Credit 3. Critical analysis of neoclassical price and production theories. Demand, cost of production, and price determination under various conditions of the market.
- **5023.** Macroeconomic Theory. (3-0) Credit 3. Classical Keynesian and Post-Keynesian aggregate income and employment analysis. Determination of price level and interest rate.

Finance (FINA)

- **5003.** Introduction to Finance. (3-0) Credit 3. Corporate organization and control; security; the management of fixed capital, working capital, working capital reserve, and surplus and dividend policies; and investment banking and the securities market.
- **5013.** Legal Environment of Business. (3-0) Credit 3. Designed to introduce the student to the legal environment in which business decisions are made. An introduction to business organizations, torts, government regulations, taxation, and the legal profession.

- **5103.** Theory of Financial Management. (3-0) Credit 3. Principles and practices influencing the decision-making responsibility for business financial operations. Financial analysis, planning and control; long-term investment decisions; financial structure and cost of capital; working capital management; and long-term external financing.
- **5303.** Managerial Decisions in Finance. (3-0) Credit 3. Concerned with managerial problems of the financial manager, with the emphasis on financial analysis, current asset management, capital budgeting and capital structure.
- **5313.** Investment Theory and Portfolio Management. (3-0) Credit 3. Study of advanced portfolio management objectives and techniques. Analysis of new trends in security regulation. Criteria of measuring performance. Evaluation of risk in stock and bond markets.
- **5333.** International Finance. (3-0) Credit 3. Theory and policy on analysis of the role of the world bank, international monetary fund and other international agencies. Problems of multinational business enterprises. Issues involved in foreign exchange, international trade, and devaluation and revaluation of currency of nations.

Management (MGMT)

- **5003.** The Management Process. (3-0) Credit 3. Examines major concepts, theories, and practices in management. Topics include theories of management, decision-making of organizational structures, human factors, decision theory and behavior, measurement and control. Examines key aspects of the manager's role and provides framework for decisions and action. Prerequisite: MGMT 5413.
- **5103.** Organizational Theory. (3-0) Credit 3. The theory of organization and the human element of management within structures established to carry out objectives of business enterprises. Focus is placed on the systematic interrelationship of economic, technological, psychological, and sociological variables which are useful in discerning, predicting, and influencing the behavior of an organization. Prerequisites: MGMT 5413, 5003.
- **5113.** Business Statistics. (3-0) Credit 3. Review of statistical measures, tests of hypotheses, analyses of variance, and specialized correlation techniques as applied to business and economic data.
- **5123.** Quantitative Analysis. (3-0) Credit 3. Application of quantitative methods to solution of business problems, including linear programming, integer programming, dynamic programming, goal programming, network models, transportation methods, inventory models, and decision-making under uncertainty. Prerequisite: MGMT 5113.
- **5313.** Organizational Decision-Making. (3-0) Credit 3. An examination of the interactions of the groups of individuals making up the organization as they decide, act, and are acted upon in carrying out their responsibilities. Decision and organizational theory are both utilized in carrying out this exploration. Prerequisites: MGMT 5413. MGMT 5003.

- **5323.** Strategy and Policy Formulation. (3-0) Credit 3. Examines top management strategy, formulation, implementation, and evaluation characteristic of each function; diagnosis of ill-structured problems from private and public sectors; use of analytical methods and models; and organizational change process. Synthesis of functions included in the planning and evaluation strategy of major organizations. Prerequisite: 12 semester hours of management courses.
- **5333.** Problems in Manpower Management. (3-0) Credit 3. Explores forecasting a firm's future manpower requirements, development of the necessary capabilities to meet these requirements, the theory of incentives, and the management of human resources.
- **5343.** Personnel Management. (3-0) Credit 3. An analysis of the techniques and problems of training, recruitment, selection, testing, promotion, specification and description of jobs, and renumeration in the personnel management field.
- **5413.** Introduction to Behavioral Science. (3-0) Credit 3. A study of the social science disciplines relevant to the understanding and prediction of human behavior in organizations. Topics include: individual behavior motivation, perception, and learning; group process; interaction, communications and power; organizational structure, dynamics and change.
- 5433. Production and Operations Management. (3-0) Credit 3. Organization for production and analysis of production methods. Techniques addressed include forecasting models; capacity, location and layout analysis; inventory management; material requirements planning; scheduling; project management; network analysis; quality control. Prerequisites: MGMT 5113, MGMT 5123.

Marketing (MRKT)

- **5003.** Advanced Marketing. (3-0) Credit 3. The application of quantitative and behavioral techniques to the strategic planning and evaluation of marketing systems is studied.
- **5303.** Marketing Management. (3-0) Credit 3. An analysis and synthesis of the principal interactions among the components of a company and its environment; setting of system requirements; development of control processes to increase effectiveness. Examines methods of evaluating the effectiveness and efficiency of systems.
- **5313.** International Marketing. (3-0) Credit 3. A study of the problems and policies in the international exchange of goods and services. Economic, political, and cultural differences among nations in the world community.

College of Education

ADMINISTRATIVE OFFICER

M. Paul Mehta, Dean

ADMINISTRATIVE STAFF

Martha L. Bailey, Interim Director of Student Teaching and Field Experiences Marion Henry, Director of Teacher Certification

PURPOSE AND GOALS

The College of Education is the designated teacher education unit of the university. The objectives of the college center around the areas of pre-service, inservice, and continuing education of teachers in elementary and secondary schools.

The purpose of graduate programs offered by the college is to help the practioners in the field to gain a mastery of knowledge in a particular area or discipline. They are designed to meet the needs of a diverse group—elementary teachers, subject area teachers, teachers of children with special needs, counselors, and those who aspire for supervisory and administrative roles in elementary and secondary schools. The graduate coursework also enables educators to earn certification and/or endorsements in additional fields. Individuals with non-education degrees desiring to be certified as teachers may pursue graduate studies in the college to meet the state certification requirements.

DEGREE PROGRAMS

The College of Education provides programs of study leading to the Master of Science (M.S.) in Education and the Master of Education (M.Ed.) degrees. Requirements for these degrees including a common core of twelve semester hours, a program concentration of twelve semester hours and a research/resource area containing a research requirement or thesis and electives.

The departments within the college and departments with related fields in other colleges provide program concentrations required for advanced degrees, professional certificates, and endorsements to certificates. Courses are also available for continuing education and professional development.

Departments in the College of Education offer the following program concentrations and certificates:

Departments Curriculum and Instruction Programs Curriculum and Instruction Elementary Education Early Childhood Education Special Education Certificates Professional Secondary Early Childhood Education Elementary Education Generic Special Education Educational Diagnostician Early Childhood Special Education

COLLEGE OF EDUCATION

Health and Human Health Education Performance

School Services

Physical Education

School Administration Counseling

Professional **Physical Education** (All-Level) Mid Management Professional Counselor **Professional Special Education Counselor** Professional Vocational Counselor Superintendent Instructional Supervisor Learning Resource Specialist **Reading Specialist**

Program concentrations in related fields available through the Department of Curriculum and Instruction from other colleges include:

Biology Mathematics Chemistry Music English Physics Economics Social Studies History Industrial (Technology) Education

ADMISSION TO PROGRAMS

A student seeking admission to graduate programs in the College of Education must first be admitted to the Graduate School and classified as degree only, certificate-only, degree and certificate, or special graduate student. Specific criteria for admission can be found in the Graduate School section of this catalog.

Formal application for admission to graduate studies is made to the Graduate School. The departments offering graduate degrees may set requirements over and above those set by the Graduate School.

Department of Curriculum and Instruction

FACULTY

Daryl Wilcox, Head and Elementary Education Coordinator Martha Bailey, Early Childhood Education Coordinator Ross Clark, Secondary Education Ollie Davis, Early Childhood Education Mary Edwards, Curriculum and Instruction Harold Fillyaw, Educational Psychology M. Paul Mehta, Curriculum and Instruction Marilyn Randolph, Early Childhood Education and Elementary Education

PURPOSE AND GOALS

This graduate program is designed to develop those advanced competencies in leadership and instruction that will enable individuals to demonstrate analytical processes of problem solving in the teaching/learning environment and procedures of educational research and its application.

ADMISSION TO PROGRAM

An individual must have completed a Bachelor's degree from an accredited institution of higher learning and admission to Graduate School.

ADVANCEMENT TO CANDIDACY

An individual must have completed twelve (12) semester hours of graduate courses with a minimum grade point average of "B" before admission to candidacy is granted.

PROGRAM REQUIREMENTS (M.S. in EDUCATION OR M.ED.)

Suggested Program

Common Core (12 semester hours)

CURR 5003	Theory and Dynamics of Curriculum and Instruction
EDFN 5103	Foundations of Educational Research
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

Program Concentration (12 semester hours)

Courses to be selected from program concentration of student's choice from the following specializations:
DEPARTMENT OF CURRICULUM AND INSTRUCTION

PROGRAMS

Curriculum and Instruction Mathematics Education Social Science Education Early Childhood Education English Education Industrial Education Music Education Science Education Social Studies Education Special Education

Resource and Research (12 semester hours)

For the M.S. degree

EDFN 5903 Thesis Research Electives - Six (6) semester hours

For the M.Ed. degree:

EDFN 5923 Master's Seminar Electives - Nine (9) semester hours

Total Degree Requirements

36 Semester Hours

CERTIFICATION: Students seeking certification must meet all requirements listed in the Teacher Certification section of this catalog. Specific requirements may be obtained from the Office of Teacher Certification in the College of Education.

DESCRIPTON OF COURSES

Curriculum (CURR)

- **5003.** Theory and Dynamics of Curriculum and Instruction. (3-0) Credit 3. An examination of theoretical and logical structures forming the basis for curriculum and instructional decision-making. Consideration of implications for the work of responsible curriculum decision-makers at all levels.
- **5133. Principles of Instructional Design.** (3-0) Credit 3. Development of competencies related to translating general and theoretical knowledge about learning and instruction into specifications for materials, devices, or settings.
- **5143.** Managing Classroom Interaction. (3-0) Credit 3. Identification of an practice with the skills and dynamics of instructional behavior. Examination of the predictability of student response behavior when strategies are selected according to pre-determined criteria.
- **5503.** Curriculum Evaluation. (3-0) Credit 3. An examination of the several procedures used to evaluate curricular materials and development activities. Formative and summative evaluation methodologies are compared and contrasted and the consequences of model evaluative systems demonstrated.
- **5993.** Independent Study. (3-0) Credit 3. Reading, research, and/or field work on selected topics. Prerequisite: consent of advisor.

Early Childhood Education (ECED)

5303. Development of the Young Child. (3-0) Credit 3. A study of the sequential stages of growth and maturation of the young child to include physical, social, emotional and cognitive development.

- **5313.** Foundations of Early Childhood Education. (3-0) Credit 3. An overview of the historical, philosophical, and theoretical development of early childhood and its relationship to child development.
- **5323.** Methods and Materials for Teaching Young Children. (3-0) Credit 3. A study of the teaching strategies, techniques and materials designed to enhance learning experiences for young children.
- **5333.** Assessment Techniques in Early Childhood Education. (3-0) Credit 3. A study of evaluative instruments appropriate for the assessment of young children's intellectual, social and motor development. Practical experiences are provided in test administration, scoring, interpretation and utilization of results.
- 5343. Organization and Administration of Programs for Young Children. (3-0) Credit 3. An examination of the organization and administration of early childhood programs with emphasis on early childhood. A study of the impact of legislation and professional organizations on program operations.
- **5353.** Seminar in Early Childhood Education. (3-0) Credit 3. An analysis of current research literature trends and issues in Early Childhood Education.
- **5363.** Early Childhood Practicum. (3-0) Credit 3. Planned observation and interaction experiences with young children in a classroom setting. Organized feedback sessions are provided in structured seminars.

Educational Foundations (EDFN)

- **5103.** Foundations of Educational Research. (3-0) Credit 3. Basic concepts of research design, strategies of experimental, historical and descriptive research, and basic statistical procedures are introduced.
- **5113.** Psychology of Learning and Development. (3-0) Credit 3. An analysis of mental processes involved in learning the developmental relationship of these processes. In-depth study of major theories which relate learning, development, and physiology.
- **5123.** Socio-Cultural Issues in Education. (3-0) Credit 3. An analysis of historical, philosophical, and multi-cultural issues in American education and their implications for the setting of standards that govern educational policy and practice.
- **5903.** Thesis. (3-0) Credit 3. Selection, preparation, and presentation of a research proposal for purposes of completing thesis requirement. Prerequisite: admission to candidacy and approval of thesis advisor.
- **5923.** Master's Seminar. (3-0) Credit 3. Investigation and analysis of research in the field of curriculum and foundations. Major paper a requirement for this course. Prerequisite: EDFN 5103.

Elementary Education (ELED)

5103. Elementary School Curriculum. (3-0) Credit 3. Characteristics and organization of the elementary school curriculum. Intensive study of competencies included in elementary school subjects: Texas curriculum goals, requirements, and strategies for compliance.

- **5113.** Teaching/Learning Styles In Elementary Classrooms. (3-0) Credit 3. Study of effective instructional performances and effective student learning in elementary classrooms. Analysis of research findings and experiments related to teaching/learning situations.
- **5123.** Studies In Elementary Education. (3-0) Credit 3. Investigation of instructional problems, trends, and research related to the development of educational programs for elementary school children.
- **5133.** Seminar In Elementary Education. (3-0) Credit 3. Analysis of contemporary issues in elementary education; problems and challenges associated with teaching/learning and the education profession.
- **5143.** Individualizing Instruction In Elementary Classrooms. (3-0) Credit 3. Evaluation and creative ideas for edcuational software programs in computer instruction; self-paced evaluation techniques, logical reasoning activites and materials for diagnostic and prescriptive teaching in elementary classrooms.
- **5153.** Classroom Communication. (3-0) Credit 3. Study of the role of communication in the teaching/learning process in elementary classrooms. Analysis of the relationship between verbal and nonverbal messages, classroom management skills, instructional communication and student performances.
- **5993.** Independent Study. (3-0) Credit 3. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

Secondary Education (SCED)

- **5503.** Principles of Secondary Education. (3-0) Credit 3. Origins, development and organization of the secondary school. Contemporary problems and trends in secondary education are identified and studies.
- **5513.** Secondary School Curriculum. (3-0) Credit 3. Characteristics and organization of curriculum and teaching in secondary schools. Relationships to socio-cultural influences in society and within the schools.

Special Education (SPED)

- **5203.** Special Education Seminar. (3-0) Credit 3. A seminar designed to investigate contemporary issues in the area of special education as well as to increase the students' familiarity with current literature and knowledge in the field.
- **5213.** Introduction to Exceptional children. (3-0) Credit 3. An in-depth study of the various types of exceptional learners and their educational needs.
- **5223.** Psychology of Retarded Children. (3-0) Credit 3. Designed to provide the learner with an overview of various tests, learning characteristics and etiology of the exceptional individual.
- **5233.** Language and Communication Problems. (3-0) Credit 3. An overview of particular communication problems as they relate to the oral language skills of the exceptional learner. Prerequisites: SPED 5213, 5243, and consent of program coordinator.
- **5243.** Methods for the Exceptional Learner. (3-0) Credit 3. Deals with problems of instruction, methods of teaching retarded children and learning disabled, organization of special classes and curriculum development for the exceptional learner.

- 5263. Diagnostic and Perspective Techniques for the Exceptional Learner. (3-0) Credit 3. Designed to provide the opportunity for students to experience and develop a descriptive orientation of the learning disabled student. Prerequisites: SPED 5213, 5243, 5273, and consent of program coordinator.
- **5273.** Learning Theory. (3-0) An in-depth study of the various learning theories and an analysis of systematic approaches to learning. Prerequisites: SPED 5213, 5223, 5243, 5283 and consent of program coordinator.
- **5283.** Curriculum Adjustment and the Exceptional Child. (3-0) Credit 3. The experience of altering traditional curricula to mesh with the individual learning needs of the exceptional learner. Prerequisites: SPED 5213, 5243, and consent of program coordinator.
- **5343. Practicum.** (3-0) Credit 3. Direct experience with children referred to the special education laboratory for testing and evaluation. These referrals are related directly to public school problems.
- **5353.** Individual Testing of Exceptional Child. (3-0) Credit 3. Familiarizes the learner with the administration and interpretation of individualized testing designed for the exceptional learner.

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Department of Health and Human Performance

FACULTY

Mary V. White, *Head, Human Performance* Leroy Moore, *Human Performance* Hoover J. Wright, *Human Performance*

PURPOSE AND GOALS

The programs in the Department of Health and Physical Education are designed to meet the professional needs and interests of students who wish to pursue a Master of Science in Education or a Master of Education, with a concentration in physical education.

Graduate programs in physical education are designed to assist in the advanced preparation of coaches, teachers, and administrators at the elementary and secondary school levels. A professional teaching certificate in physical education may be earned in the department.

DEGREE PROGRAMS

The Department of Health and Human Performance offers the following graduate degree programs:

M.S./Education (concentration in physical education) M.Ed. (concentration in physical education)

DEGREE PROGRAM REQUIREMENTS

M.S./Education (physical education)	
M.Ed. (physical education)	
Common Core Education	12 hrs.
Program Concentration (physical education)	12 hrs.
Research/Resource	12 hrs.

Total

MINOR FIELD REQUIREMENTS

Physical education requires 12 semester hours of graduate courses in the 5000 series for a minor.

PROGRAM REQUIREMENTS (M.S.-Education)

Suggested Program (Concentration in physical education)

Common Core (12 semester hours)

CURR 5003	Theory and Dynamics of Curriculum and Instruction
EDFN 5103	Foundations of Educational Research
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

36 hrs.

DEPARTMENT OF HEALTH AND HUMAN PERFORMANCE

Program Concentration (12 semester hours)

PHED 5133	Physical Education Curriculum
PHED 5403	Administrative Problems in Physical Education
PHED 5503	Teaching Physical Education
PHED 5123	Scientific Foundations of Physical Education
or	
PHED 5703	Kinesiology

Research and Resource (12 semester hours)

EDFN 5143	Adv Educ Stat
EDFN 5903	Thesis Research
ELECTIVES	(6 semester hours from the courses listed below):
PHED 5103	Psychology of Motor Learning
PHED 5113	Supervision in Physical Education
PHED 5203	Physiology of Muscular Exercises
PHED 5303	Tests and Measurements in Physical Education
PHED 5343	Professional Preparation in Health, Physical
	Education, Recreation and Dance
PHED 5353	Mainstreaming in Health, Physical Education,
	Recreation and Dance

Total Degree Requirements

36 Semester Hours

PROGRAM REQUIREMENTS (M.Ed.)

Suggested Program (Concentration in physical education)

Common Core (12 semester hours)

CURR 5003	Theory and Dynamics of Curriculum and Instruction
EDFN 5103	Foundations of Educational Research
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

Program Concentration (12 semester hours)

PHED 5133	Physical Education Curriculum
PHED 5403	Administrative Problems in Physical Education
PHED 5503	Teaching Physical Education
PHED 5123	Scientific Foundations of Physical Education
Or	
PHED 5703	Kinesiology

5705 Killesiology

Research Resource (12 semester hours)

EDFN 5923	Master's Seminar
ELECTIVES	(9 semester hours from the courses listed below):
PHED 5103	Psychology of Motor Learning
PHED 5113	Supervision in Physical Education
PHED 5203	Physiology of Muscular Exercises
PHED 5303	Tests and Measurements in Physical Education
PHED 5343	Professional Preparation in Health, Physical Education,
	Recreation and Dance
PHED 5353	Mainstreaming in Health, Physical Education, Recreation and
	Dance

Total Degree Requirements

36 Semester Hours

NOTE: Students seeking certification must meet all requirements listed in the teacher certification section of this catalog. Specific requirements may be obtained from the Office of Teacher Certification in the College of Education.

DESCRIPTION OF COURSES

Physical Education (PHED)

- **5103.** Psychology of Motor Learning. (3-0) Credit 3. Learning process in motor skills as the foundation of teaching methods in physical education activities. Practical experience in testing theories.
- **5113.** Supervision in Physical Education. (3-0) Credit 3. Study of principles and practices of educational supervision and their application to physical education.
- **5123.** Scientific Foundations of Physical Education. (3-0) Credit 3. Study of the scientific foundations of physical activity as they relate to biological, psychological, sociological, and biomechanical factors in the teaching of physical education.
- **5133.** Physical Education Curriculum. (3-0) Credit 3. Study of activities, aims, objectives, and outcomes as they relate to courses and their construction. Development of a course of study based on individual student needs.
- **5203.** Physiology of Muscular Exercises. (3-0) Credit 3. Physiological effects of exercise upon the body. Basic physiological concepts and their relation to the total physical education program.
- **5303.** Tests and Measurements. (3-0) Credit 3. Test construction, test administration, and statistical procedures for evaluating test results in physical education.
- 5343. Professional Preparation in Health, Physical Education, Recreation, and Dance. (3-0) Credit 3. Focus on professional preparation for those students who are teachers and/or administrators the are of health, physical education, recreation, or dance.
- 5353. Mainstreaming in Health, Physical Education, Recreation, and Dance. (3-0) Credit 3. Principles and methods of providing educational services for handicapped students in the least restrictive environment.

DEPARTMENT OF HEALTH AND HUMAN PERFORMANCE

- **5403.** Administrative Problems in Physical Education. (3-0) Credit 3. Coordination of the different phases of the program; administrative problems of physical education, intramural sports, and intercollegiate athletics.
- **5503.** Teaching Physical Education. (3-0) Credit 3. A study of traditional and innovative teaching techniques in physical education, including the practical application of teaching styles.
- **5703. Kinesiology.** (3-0) Credit 3. Muscular and bone structure of the body in relation to the science of movement; joint mechanism and muscle action with special application to sports participation and training.
- **5991-5992-5993.** Independent Study. (0-0) Credit 1, 2, or 3. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

Department of School Services

FACULTY

William H. Parker, Head, School Administration
Clarissa Gamble Booker, Coordinator of Reading Programs
Lee R. Coleman, Counseling
Marion Henry, Coordinator of Educational Media and Technology
Joseph T. Travillion, School Administration
Willie F. Trotty, School Administration
Waymon T. Webster, Coordinator of Counseling Program, School Counseling

PURPOSE AND GOALS

The Department of School Services offers programs of study leading to the Master of Science in Education and the Master of Education degrees with program concentrations in School Administration, Counseling, Educational Media & Technology, Instructional Supervision, and Reading. In addition, students may complete the requirements for certification in these areas, as well as the requirements for the Professional Counselors License.

DEGREE PROGRAMS

Degree Master of Science

Program Concentration

School Administration School Counseling Educational Media & Technology Instructional Supervision Reading School Administration School Counseling Educational Media & Technology Instructional Supervision Reading

Master of Education

The instructional program is also designed to provide all course work leading to certificates and the Professional Counseling License.

ADMISSION TO PROGRAM

Candidates for admission to the graduate program must have completed a degree in education or show evidence of course work having resulted in establishing eligibility for a teaching certificate. Admission to the department shall be considered complete when the following requirements have been met.

- 1. Admission to Graduate School
- 2. Development of a credentials file to include:
 - a. Degree or Certificate Plan
 - b. Teaching Certificate
 - c. Transcript(s) of all previous college course work
 - d. Two letters of recommendation

ADVANCEMENT TO CANDIDACY

Students must have completed all admissions requirements and twelve (12) semester hours of course work before applying for advancement to degree candidate status.

PROGRAM REQUIREMENTS

Master of Science (M.S.Ed)

Common Core (12 semester hours)

CURR 5003	Theory and Dynamics of Curriculum and Instruction
EDFN 5013	Foundations of Educational Research
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

Program Concentration (12 semester hours)

Coursework to be chosen in the administration or counseling area of study.

Resource (6 semester hours)

Coursework to include departmental requirements and/or electives.

THESIS -

Master of Education (M.Ed.)

Common Core (12 semester hours)

Theory and Dynamics of Curriculum and Instruction
Foundations of Educational Research
Psychology of Learning and Development
Socio-Cultural Issues in Education

Program Concentration (12 semester hours)

Coursework to be chosen from the administration, counseling, educational technology, reading, or supervision areas of study.

Resource/Research (12 semester hours)

Coursework to include EDFN 5923 (Masters Seminar), and other departmental requirements and/or electives.

Certification

Course requirements for various certificates can be found in the Teacher Certification section of this catalog.

DESCRIPTION OF COURSES

Administration (ADMN)

5003. Fundamentals of School Administration. (3-0) Credit 3. A study of educational administration, basic concepts of administrative theory and practice, and the relationship of administrative practice to school organization and control.

- **5013.** Educational Administration: Theory, Practice and Research. (3-0) Credit 3. The analysis and study of theory, practice, and research as they relate and interrelate to effective educational management. This course includes an in-depth study of contemporary research and practice in educational administration.
- **5023.** Public School Law. (3-0) Credit 3. An examination and study of legal principles as they apply to public education.
- **5033.** School Business Management. (3-0) Credit 3. Management techniques for the school administrator in the areas of preparing and managing the school budget, in-school accounts, and the financial auditing process.
- **5043.** The School Principalship. (3-0) Credit 3. Problems in elementary and secondary school administration with emphasis on the organization, administration, and supervision of curricular and extra-curricular programs, and the management of school personnel and students.
- **5053.** Administration of Special Programs. (3-0) Credit 3. Administrative and management techniques for implementing special school programs in the areas of special education, reading, career education, vocational-technical education and pupil services.
- **5063.** Problems in Education Administration. (3-0) Credit 3. Study and analysis of contemporary issues related to the administrative function in an educational setting.
- **5103.** School Personnel Administration. (3-0) Credit 3. The administration of school personnel services, including standards and procedures of the personnel office and the supervision and evaluation of personnel records and policies.
- 5113. Planning and Managing Educational Facilities. (3-0) Credit 3. Educational facilities planning with emphasis on design, financing, and management.
- **5123.** School Finance. (3-0) Credit 3. Fiscal planning for educational excellence. Includes systems of needs assessment, budget preparation, and management. Federal, state, and local resources for financing education.
- **5133.** School-Community Relations. (3-0) Credit 3. A study of the relationships between the school and other elements of the community. Insight into the development of a comprehensive school-community relations program.
- **5503.** Mid-Management Internship. (0-3) Credit 3. Field-based and seminar experiences designed to provide for on-site school-related activities, and the analysis of actual administrative situations and problems. Prerequisites: 18 semester hours of ADMN course work.
- **5513.** Superintendency Internship. (0-3) Credit 3. Field-based and seminar experiences designed to provide on-site school-system related activities, and the analysis of actual administrative situations and problems.
- 5991-5992-5993. Independent Study. (0-0) Credit 1, 2, or 3. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

Counseling (CNSL)

- **5003.** Organization and Administration of Guidance and Human Service Programs. (3-0) Credit 3. Introduction to guidance and counseling programs in schools and community agencies. Emphasis on the history, philosophy, and development of programs: programmatic activities and delivery; organizational and administrative patterns; and the interrelationships of educational and human services agencies.
- **5013.** Counseling Techniques. (3-0) Credit 3. Study and practice of basic interview communication skills and counseling techniques. Emphasis on self-development, attending, feedback and influencing skills and core elements of counseling.
- **5023.** Theory and Practice of Counseling. (3-0) Credit 3. A study of major counseling theories and issues related to therapeutic practice with emphasis on practical application. Prerequisites: CNSL 5013 and/or consent of advisor.
- **5033. Counseling Process.** (3-0) Credit 3. Pre-practicum experience with emphasis on the counselor-client relationship and on using appropriate therapeutic strategies and techniques in working with children, adolescents, and adults. Special consideration given to the counseling needs of minorities. Prerequisites: CNSL 5013 and 5023.
- **5043.** Consultation. (3-0) Credit 3. Theoretical rationale for consultation; content and process of consultation services. Basic principles of and skill development in several approaches to consultation.
- **5053.** Professional Orientation and Development. (3-0) Credit 3. Obligations and problems in professional practice of guidance, counseling, human development services and research. Professional ethics, legal considerations, and relations with other professionals and with the public. Current trends and issues emphasized.
- 5063. Counseling Practicum I. (0-3) Credit 3. Laboratory and supervised practical experiences in individual/group counseling and related functions in a public school, a university, or a community agency setting. A minimum of 150 clock hours required. Prerequisites: 12-hour core and CNSL 5013, 5023, 5033, 5113, and 5123.
- **5073.** Counseling Practicum II. (0-3) Credit 3. A continuation of supervised practical experiences in individual/group counseling and related functions in a public school, a university, or a community agency setting. A minimum of 150 clock hours required. Prerequisite: 12- hour core and CSNL 5013, 5023, 5033, 5113. and 5123.
- **5083.** Psychology of Abnormal Behavior. (3-0) Credit 3. An examination of dysfunction in human behavior, with emphasis on description, causation, and treatment. Prerequisite: EDFN 5113.
- **5093.** Principles and Practice of Individual Intelligence Testing. (3-0) Credit 3. History, principles, and methodology of intelligence testing will be examined. Extensive supervised practice in administration, scoring, interpretation, and use of the Wechsler Intelligence Scales. Prerequisites: CNSL 5123 and consent of instructor.

- **5113.** Career Development Counseling. (3-0) Credit 3. A study of major vocational development and career choice theories. Sources and use of educational and career information; community resources; and use of interest and aptitude instruments in career/vocational decision-making. Individual and group career counseling practice emphasized.
- **5123.** Appraisal Techniques. (3-0) Credit 3. An examination of several instruments used to measure achievement, aptitude, interest and personality, and to collect non-test data. Emphasis on selection and use of these instruments for individual and group assessment, and on techniques of interpretion. Ethical and legal issues of testing addressed.
- **5133.** Group Dynamics. (3-0) Credit 3. Theory and practice in group work. Examination of types of groups; group processes and theories; and techniques and methods of practice in group counseling. Ethical and professional issues addressed. Group participation and facilitation required. Prerequisite: CNSL 5013.

Educational Technology (EDTC)

- **5403.** Audiovisual Materials in Instruction. (3-0) Credit 3. Theoretical and practical experience in the use of instructional media, materials selection, evaluation, and equipment operation for classroom instruction.
- **5423.** Reference and Bibliography. (3-0) Credit 3. The theory and principles underlying reference selection, information collection, and reference services. Theory and purpose of bibliography as form of access to information collection, introduction to communication, question-negotiation, and search strategy.
- **5433.** Acquisition and Cataloging of Materials and Information. (3-0) Credit 3. Principles of acquisition, descriptive cataloging, classification, and subject analysis of print and non-print materials. Application of the Dewey Decimal and Library of Congress classification systems.
- **5443.** Local Production of Instructional Materials. (3-0) Credit 3. The development of competencies related to translating specifications for instructional materieals into prototype, final version, and/or mass-produced products.
- **5453.** Children and Young Adult Literature. (3-0) Credit 3. Advanced study for librarians and teachers of books and other materials for children and young people. Wide reading of books and magazines and the examination of non-print materials.
- **5463.** School Media Centers. (3-0) Credit 3. Study of the theoretical foundations and objectives of school libraries and media centers; factors to be considered in planning and developing a media center. Consideration of interpretation of media centers; administrative programs in technical services; problems in technical services; and professional literature.
- **5473. Practicum.** (3-0) Credit 3. Identifying current trends of managing media centers and interfacing in practial experience with theoretical and scientific concepts in public school settings.

DEPARTMENT OF SCHOOL SERVICES

Reading (RDNG)

- **5613.** Teaching in the Elementary Grades. (3-0) Credit 3. Detailed consideration of problems involved in selection of content, grade placement, methods, and materials, and the evaluation of achievement.
- **5623.** Psychology of Reading and Reading Difficulties. (3-0) Credit 3. An examination of social and psychological factors related to success and failure in learning to read.
- **5633. Teaching Reading in Secondary School.** (3-0) Credit 3. Instructional approaches to the reading in the secondary school. Planning, organizing, implementing, and evaluating instructional procedures and outcomes.
- **5643.** Diagnosis and Correction of Reading Diffuculties. (3-0) Credit 3. Diagnostic devices and techniques for identifying strengths and weaknesses in reading. Prescriptive techniques for overcoming difficulties in reading.
- **5663.** Clinical Experiences in Reading. (3-0) Credit 3. Case study analysis, seminars, and field experiences in school classrooms. Prerequisite: Consent of instructor.

Supervision (SUPV)

- **5113. Principles of Supervision.** (3-0) Credit 3. Principles, practices and problems of the supervisiory program; includes analysis of current research in the field.
- **5213.** The School Supervisor. (3-0) Credit 3. A rationale for supervision, and techniques for the supervision of instructional personnel and programs' with special emphasis on the clinical supervision cycle.
- **5513.** Supervision Practicum. (3-0) Credit 3. Field-based and seminar experiences designed to provide on-site and/or system-related activities, with analysis of actual superivsory situations and problems.
- 5713. Problems in Supervision. (3-0) Credit 3. The study and analysis of contemporary issues related to the supervisory function in an educational setting.

Graduate Teacher Education Certificate and Endorsement Programs

Graduate-level certificate programs are coordinated and administered by the College of Education. Components of these programs are provided by various colleges and departments throughout the University. In general, all professional elementary and secondary certificate programs require the following components:

- 1. An Area of Specialization (12 semester hours), approved by the Texas Education Agency, that consists of graduate-level courses in a teaching field or support area common to Texas public schools.
- Professional Development Courses (6 semester hours), consisting of advanced study in the theory, methods, and problems of education; designed to improve the efficiency and effectiveness of public schools and public school personnel.
- 3. *Resource Area(s)* (6 semester hours), consisting of courses that provide background or support knowledge and skills for the specialization, or that extend the student's preparation in a closely related field.
- 4. *Electives* (6 semester hours) of the student's choice, usually in one of the three areas above or a combination of them.

Eligibility for a professional certificate usually requires two or three years of acceptable teaching experience in an accredited elementary or secondary school. All candidates for certification must pass the appropriate components of the Examination for the Certification of Educators in Texas (ExCET). A listing of certificates available and of the specific requirements for each is provided on the following pages.

Students who are pursuing certificates must submit a certification plan to the office of Teacher Certification. Applications for admission to graduate teacher certification programs may be obtained from the Graduate School.

APPROVED PROFESSIONAL CERTIFICATE AND ENDORSEMENT PROGRAMS

1. PROFESSIONAL ALL-LEVEL

Learning Resources Specialist

- 2. PROFESSIONAL ELEMENTARY General
- 3. PROFESSIONAL SECONDARY

Biology
Chemistry
English
History

Industrial Arts Mathematics Physical Education Social Science Composite

4. PROFESSIONAL SERVICES CERTIFICATES

Mid-Management Administrator Counselor Reading Specialist Superintendent Supervisor

CERTIFICATION PROGRAMS

5. PROFESSIONAL SPECIAL EDUCATION

Early Childhood Special education Counselor Educational Diagnostician Supervisor

6. TEMPORARY PROFESSIONAL SERVICE

Mid-Management Administrator Assistant Principal Principal Superintendent

7. PROFESSIONAL VOCATIONAL

Agriculture Counselor Home Economics Supervisor

REQUIREMENTS FOR THE PROFESSIONAL ELEMENTARY CERTIFICATE

Prerequisites: A Texas Provisional Elementary Certificate and three years of teaching experience.

Academic Specialization (12 semester hours)

The 12 semester hours must be in a subject taught in Texas public schools and in which the student already has earned at least 18 semester hours of undergraduate credit in a program for elementary teachers.

Professional Development (6 semester hours)

Two of the following four courses:

CURR 5003	Theory & Dynamics of Curriculum & Instruction
EDFN 5113	Psychology of Learning & Development
EDFN 5123	Socio-Cultural Issues in Education
EDFN 5143	Advanced Educational Statistics

Resource Area (6 semester)

Two of the following six courses:

ELED 5103	Elementary School Curriculum
ELED 5113	Teaching/Learning Styles in the Elementary School
ELED 5123	Studies in Elementary Education
ELED 5133	Seminar in Elementary Education
ELED 5153	Classroom Communication
ELED 5143	Individualizing Instruction in the Elementary Schools

Electives (6 semester hours)

Courses may be selected from any of the areas above.

REQUIREMENTS FOR THE PROFESSIONAL SECONDARY CERTIFICATE

Prerequisites: A Texas Provisional Secondary Certificate and three years of teaching experience.

Academic Specialization (12 semester hours)

The courses selected, with approval of the advisor, must be graduate level courses in one of the following specializations:

Biology	Industrial Arts	
Chemistry	Mathematics	
English	Physical Education	
History	Social Studies	

Professional Development (6 semester hours)

EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

Resource Area (6 semester hours)

CURR 5003 Theory and Dynamics of Curriculum and Instruction and 3 semester hours of graduate-level courses selected with approval of advisor.

Electives (6 semester hours)

Courses must be selected from one of the three areas above, or a combination of them.

REQUIREMENTS FOR SPECIAL SERVICES PROFESSIONAL CERTIFICATES

ADMINISTRATION: MID-MANAGEMENT CERTIFICATE

For the Mid-Management Certificate issued by the Texas Education Agency, requirements are a master's degree, a valid Texas Certificate, two years of acceptable *classroom teaching experience*, and completion of an approved administrative internship experience.

Common Core for Mid-Management Administration and Superintendent (18 semester hours)

ADMN 5003	Fundamentals of School Administration
ADMN 5013	Educational Administration: Theory, Practice and Research
ADMN 5023	Public School Law
ADMN 5033	School Business Management
ADMN 5003	Theory and Dynamics of Curriculum and Instruction
SUPV 5113	Principles of Supervision

CERTIFICATION PROGRAMS

Academic Specialization (12 semester hours)

EDFN 5113 Psychology of Learning and Development EDFN 5123 Socio-Cultural Issues in Education and 6 hrs. advanced credit electives from the following areas:

Economics	Psychology	Educ. Measurement
Computer Science	Anthropology	Educ. Test
Educational Media	Sociology	Educ. Research
and Technology		

Specialized Preparation for Mid-Management School Administrators (15 semester hours)

ADMN 5043 The School Principalship ADMN 5053 Administration of Special Programs ADMN 5103 School Personnel Administration ADMN 5503 Mid-Management Internship and 3 hrs. advanced credit electives.

*All electives must have advisor's approval

ADMINISTRATION: SUPERINTENDENT CERTIFICATE

Prerequisite: The Professional Mid-Management or Professional Principal Certificate.

Specialized Preparation for School Superintendents (15 semester hours)

ADMN 5063	Problems in Education Administration
ADMN 5113	Planning and Managing Educational Facilities
ADMN 5113	Planning and Managing Educational Facilities
ADMN 5123	School Finance
ADMN 5133	School-Community Relations
ADMN 5513	Superintendent Internship

COUNSELOR CERTIFICATE

For the Professional Counselor Certificate issued by the Texas Education Agency, requirements are a valid Texas Teacher Certificate, three years of teaching experience, and the completion of 30 semester hours of graduate work in counseling.

The Guidance Program (3 semester hours)

CNSL 5003 Organization and Administration of Guidance and Human Service Programs

Pupil Services (6 semester hours)

CNSL 5083	Psychology of Abnormal Behavior
EDFN 5113	Psychology of Learning and Development

Resource Area (21 semester hours)

CNSL 5013	Counseling Techniques
CNSL 5023	Counseling Theory and Practice
CNSL 5063	Counseling Practicum I
CNSL 5113	Career Development Counseling
CNSL 5123	Appraisal Techniques
CNSL 5133	Group Dynamics
EDFN 5123	Socio-Cultural Issues in Education

COUNSELOR (SPECIAL EDUCATION) CERTIFICATE

For the Professional Special Education Counselor Certificate issued by the Texas Education Agency, requirements are a valid Professional Counselor Certificate and 6 semester hours in special education.

Courses Required (36 semester hours)

CNSL 5003	Organization and Administration of Guidance and Human
	Service Programs
CNSL 5013	Counseling Practicum I
CNSL 5023	Counseling Theory and Practice
CNSL 5083	Psychology of Abnormal Behavior
CNSL 5113	Career Development Counseling
CNSL 5123	Appraisal Techniques
CNSL 5133	Group Dynamics
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

Special Education Electives (6 semester hours selected with approval of advisor)

EDUCATIONAL DIAGNOSTICIAN (SPECIAL EDUCATION) CERTIFICATE

For the Professional Educational Diagnostician Certificate issued by the Texas Education Agency, requirements are a master's degree, a valid Texas Teaching Certificate and three years of elementary and secondary teaching experience.

Education for the Handicapped (9 semester hours)

SPED 5213	Introduction to Exceptional Children
SPED 5233	Language and Communication Problems
SPED 5203	Special Education Seminar

Psychoeducational and Other Diagnostic Procedures (9 semester hours)

RDNG	5643	Diagnosis and Correction of Reading Difficulties
SPED	5353	Individual Testing of the Exceptional Child
SPED	5263	Diagnostic and Prescriptive Techniques for the Exceptional
		Learner

Human Development and Learning Theory (9 semester hours)

EDFN 5113	Psychology of Learning and Development	
SPED 5223	Psychology of Retarded Children	
SPED 5273	Learning Theory	

CERTIFICATION PROGRAMS

Instructional Modification (6 semester hours)

SPED 5283 Curriculum Adjustment SPED 5343 Practicum

Resource Area (3 semester hours)

EDFN 5123 Socio-Cultural Issues in Education

INSTRUCTIONAL SUPERVISOR CERTIFICATE

Prerequisites: A bachelor's degree, a valid Texas Teacher Certificate, and three years of elementary or secondary teaching experience.

Leadership for Instructional Improvement (9 semester hours)

SUPV 5113	Principles of Supervision
SUPV 5213	School Supervision
or	
SUPV 5713	Problems in Supervision
SUPV 5513	Supervision Practices

Academic Area (12 semester hours)

9 semester hours of graduate level coursework in the content area to be supervised.

Resource Area (9 semester hours)

CURR 5003	Theory and Dynamics of Curriculum Instruction
EDFN 5113	Psychology of Learning and Development
EDFN 5123	Socio-Cultural Issues in Education

LEARNING RESOURCES SPECIALIST CERTIFICATE

For the Professional Learning Resources Specialist Certificate, requirements are a valid Texas Teacher Certificate, three years of successful teaching experience, a basic understanding of multicultural and multiethnic elements in society, and the completion of 36 semester hours of course work.

Specialization (21-24 semester hours)

EDTC 5403	Audiovisual Materials
CURR 5133	Principles of Instructional Designe
EDTC 5423	Reference and Bibliography
EDTC 5433	Cataloging
EDTC 5443	Local Production of Instructional Materials
EDTC 5453	Child and Young Adult Literature
EDTC 5463	School Media Centers
EDTC 5473	Practicum
	*or
	1 year of acceptable experience as a school librarian

Resource Area (6 semester hours)

EDFN 5	113	Psychology	of L	earning	and	Development
EDFN 5	103 1	Foundations	of	Educatio	onal	Research

Professional Education (6 semester hours)

CURR 5003 Theory and Dynamics of Curriculum and Instruction EDFN 5123 Socio-Cultural Issues in Education

*21 semester hours required if the 1 year experience is used.

READING SPECIALIST CERTIFICATE

Prerequisites: A master's degree, a valid Texas Teaching Certificate and three years of secondary or elementary classroom teaching experience.

Reading Education (12 semester hours)

RDNG 5613	Teaching Reading in Elementary Grades
RDNG 5633	Teaching Reading in Secondary Schools
RDNG 5643	Diagnosis and Correction of Reading Difficulties
RDNG 5663	Clinical Experiences in Reading

Professional Development (6 semester hours)

ELED 5113	Teaching/Learning Styles
ELED 5123	Studies in Elementary Education (for holders of secondary certificate)
or SCED 5503 SCED 5513	Principles of Secondary Education Secondary School Curriculum

Resource Area (9 semester hours)

EDFN 5123	Socio-Cultural Issues in Education
ENGL 5113	Linguistics and English Grammar
RDNG 5623	Psychology of Reading and Reading Difficulties

REQUIREMENTS FOR THE VOCATIONAL EDUCATION PROFESSIONAL CERTIFICATES

VOCATIONAL AGRICULTURAL EDUCATION CERTIFICATE (31 semester hours)

AGED 5333	Administration and Supervision of Agricultural Education
AGED 5353	Youth Leadership Development
AGED 5363	Philosophy of Agricultural Education
AGED 5393	Principles of Adult Education in Agricultural
AGED 5713	Vocational Guidance and Counseling
AGED 5714	Special Topics
CURR 5003	Theory and Dynamics of Curriculum and Instruction
EDFN 5123	Socio-Cultural Issues in Education
	and goldrold landboard, case ORMH
	C hours of alactives

6 hours of electives

VOCATIONAL COUNSELOR CERTIFICATE

For the Professional Vocational Education Counselor Certificate issued by the Texas Education Agency, requirements are: a bachelor's degree, a valid Professional Counselor Certificate, 12 semester hours of specified vocational guidance courses, and three years of experience. This experience may include teaching experience and not less than one year of wage-earning experience in an occupation for which vocational education is being conducted in the public secondary school, or two years of teaching experience in an approved vocational program preparing students for gainful employment.

Required Courses (39 semester hours)

EDFN 5123	Socio-Cultural Issues in Education
CNSL 5003	Organization and Administration of Guidance and Human
	Service Programs
CNSL 5013	Counseling Techniques
CNSL 5023	Counseling Theory and Practice
CNSL 5083	Psychology of Abnormal Behavior
CNSL 5113	Career Development Counseling
CNSL 5123	Appraisal Techniques
CNSL 5133	Group Dynamics
CNSL 5063	Counseling Practicum I
EDFN 5113	Psychology of Learning and Development
VOED 5103	Placement and Follow-up
VOED 5403	Occupational and Vocational Education
VOED 5903	Planning and Organization
VOED 5093	History and Principles

NOTE: In addition to coursework, certification is dependent upon passing a comprehensive departmental examination.

VOCATIONAL HOMEMAKING EDUCATION CERTIFICATE (30 semester hours)

Academic Specialization (18 semester hours selected from the following courses)

Studies in Family Resource Management
Personal and Family Finance
Family Economics
Problems of Youth
Family Life Problems
Child Development Programs
Seminar in Human Nutrition and Food
Functional Clothing
Problems in Home Economics

Professional Development (6 or more semester hours selected from the following courses)

HEED 5433	Supervision
HEED 5443	Advanced Methods
HEED 5463	Adult Education
HEED 5473	Measurement and Evaluation
HEED 5493	Home Economics Curriculum

Resource Area (6 or more semester hours selected from the following courses)

EDFN 5123	Socio-Cultural Issues in Education (Required)
SOCG 5243	Sociology of Urban Areas
SOCG 5263	Sociology of Education
SOCG 5273	Programs for Child Welfare
SOCG 5284	Aspects of Poverty
SOCG 5293	Social Disorganization
SOCG 5323	Sociology of Youth

VOCATIONAL SUPERVISOR CERTIFICATE

For the Professional Vocational Supervisor Certificate, the requirements are: a bachelor's degree, a valid Texas Teacher Certificate, three years of teaching experience in an approved vocational education program, and the courses listed below.

Vocational Education (18 semester hours)

VOED 5133	Vocational Analysis
VOED 5603	Organization and Administration
VOED 5703	Vocational-Technical Curriculum Development
VOED 5803	Supervision of Vocational Programs
VOED 5903	Planning and Organizing Vocational Programs
VOED 5983	History and Principles of Vocational Education
VOED 5803 VOED 5903 VOED 5983	Supervision of Vocational Programs Planning and Organizing Vocational Programs History and Principles of Vocational Education

General Supervision and Supportive Courses (9 semester hours)

SUPV	5113	Principles of Supervision
SUPV	5213	The School Supervisor
SUPV	5513	Supervision Practicum

Resource Area (3 semester hours)

EDFN 5123 Socio-Cultural Issues in Education

REQUIREMENTS FOR THE PROVISIONAL CERTIFICATE ENDORSEMENTS

Endorsements in Generic Special Education and Early Childhood Education are available. Advisements for course election and sequence is required.

College of Engineering and Architecture

ADMINISTRATIVE OFFICER

John Foster, Dean

ADMINISTRATIVE STAFF

James O. Morgan, Coordinator

FACULTY

Ronald Boyd, Mechanical Engineering Ing Chang, Mechanical Engineering John Foster, Electrical Engineering Kamel Fotouh, Chemical Engineering John Fuller, Electrical Engineering Surjit Grewal, Mechanical Engineering S. T. Koav, Electrical Engineering A. A. Kumar, Electrical Engineering Shield Lin, Mechanical Engineering James Morgan, Mechanical Engineering John Okvere, Electrical Engineering Ramalinjam Radnakrishnan, Civil Engineering K.M.A. Rahaman, Civil Engineering C. L. Tolliver, Electrical engineering Hsi C. Yang, Civil Engineering & Architecture Hsiang Yeh, Civil Engineering

PURPOSE AND GOALS

The College of Engineering and Architecture offers a graduate program of study leading to the professional degree, Master of Science in Engineering (M.S.E.). The Graduate program is designed to improve the student's ability in the professional practice of engineering and to develop the student's research and managerial capabilities. It is the continuation of the intellectual, scholarly and professional development of the individual, producing technological leaders and creative engineers who are devoted to the discovery, development, and refinement of knowledge and methodologies associated with the various engineering disciplines. Each M.S.E. candidate is expected to have demonstrated the highest degree of professional ethics and standards.

ADMISSION TO PROGRAM

In addition to the general admission requirements to the graduate school, given elsewhere in the catalog, the following requirement must be satisfied by the candidates seeking admission to the graduate program in the College of Engineering.

- 1. An undergraduate engineering degree a cumulative grade point of not less than 3.00 on a 4.00 scale (or equivalent).
- 2. An acceptable score on the Graduate Record Examination (GRE).

Provisional acceptance may be granted if one of the above criteria has not been satisfied at the time of admission. However, the condition should be satisfied before enrolling in the graduate program. Students having undergraduate degrees in mathematics and the natural sciences will be considered for provisional acceptance on an individual basis.

Special and provisional students must petition the Office of the Dean of Engineering for unconditional admission to the graduate program within the first 12 graduate credit hours earned. To be considered for admission to the graduate engineering program, special or provisional students must have earned a minimum cumulative grade point of 3.00 in all courses recommended by the engineering faculty. Normally special or provisional students will not be allowed to take more than 12 graduate credits.

PROGRAM REQUIREMENTS

The maximum course load for which engineering graduate students can enroll, on a full-time basis, is 12 credit hours in a regular semester or in two summer sessions. If a student is enrolled part-time as a graduate student assistant, working no more than 20 hours per week, the maximum course load that the student may enroll for is nine credit hours per regular semester or ten-week summer term. If a student is working full-time, the recommended maximum load is six credit hours per regular semester or during the two summer terms. All students should have prior approval each semester from the Office of the Dean of Engineering and Dean of Graduate School before enrolling in graduate engineering courses.

The Master of Science in Engineering (M.S.E.), with thesis option, requires 30 semester hours. The M.S.E. with non-thesis option requires 33 semester hours. Both options require 12 credit hours of graduate core courses in engineering and science plus a minimum of 12 hours in a chosen area of concentration.

ADVANCEMENT TO CANDIDACY

As soon as practicable after the student enrolls in the graduate engineering program, the Coordinator of Graduate Studies shall recommend to the Dean of Engineering and Dean of the Graduate School a committee of the graduate faculty to advise the student.

Each student committee shall consist of at least three members of the engineering faculty, and the chairman of the committee should be a full-member of the graduate faculty and in the engineering department (Civil, Electrical or Mechanical).

The student in conjunction with the committee shall submit to the Office of the Dean and the Graduate Dean a program of study. This program shall be developed under the direction of the chairman of the committee.

A graduate student admitted to full degree status does not automatically become a candidate for the Master's degree. To become a candidate the student must complete the following requirements:

- 1. Achieve a satisfactory score on the GRE as stipulated by the College of Engineering.
- 2. Demonstrate the highest degree of professional ethics and standards.
- 3. The application when approved by the student's advisor and the Office of the Dean of Engineering must be submitted to the Graduate Dean for final approval.

MASTER OF SCIENCE IN ENGINEERING CURRICULUM

Core Engineering Courses

GNEG 5063	Engineering Analysis I
GNEG 5073	Engineering Analysis II
GNEG 5033	Engineering Probability & Statistics
GNEG 5133	Numerical Methods in Engineering

Civil Engineering: Concentration

CVEG 5113	Soil Dynamics
CVEG 5123	Structural Dynamics
CVEG 5133	Advanced Mechanics of Materials
CVEG 5153	Biological Wastewater Treatment
CVEG 5173	Finite Element Analysis

Electrical Engineering: Concentration

ELEG 5133	Electric Power System Analysis I
ELEG 5143	Electric Power System Analysis II
ELEG 5153	Engineering Solid Sate Theory
ELEG 5163	Integrated Digital Electronics
ELEG 5063	Advanced Semiconductor Devices
ELEG 5073	Statistical Communication Theory

Mechanical Engineering: Concentration

MCEG 5023	Advanced Thermodynamics
MCEG 5123	Advanced Computer-Aided Engineering Design
MCEG 5133	Engineering Numerical Methods
MCEG 5143	Heat, Mass, and Momentum Transfer
MCEG 5153	Conduction Problems in Engineering
MCEG 5163	Advanced Engineering Fluid Dynamics
MCEG 5173	Radiation Problems in Engineering

Engineering Management: Concentration

GNEG 5043	Safety Engineering and Ergonomics
GNEG 5013	Advanced Engineering Economic Analysis
GNEG 5023	Engineering Operations Research
GNEG 5153	Engineering Management Processes
GNEG 5183	Advaned Operations Research
ACCT 5003	Financial Accounting
ACCT 5103	Managerial Accounting

COLLEGE OF ENGINEERING AND ARCHITECTURE

Electives should be selected from the following courses.

All Concentration (Graduate Mathematics Electives)

MATH 5343	Boundary Value Problems
MATH 5613	Theory of Matrices
MATH 5723	Partial Differential Equations
MATH 5753	Intermediate Analysis
MATH 5763	Intermediate Differential Equations
MATH 5133	Introduction to Point Set Theory
MATH 5473	Probability Theory
MATH 5903	Modern Algebra

Engineering Management Concentration only (Graduate Business Electives)

ACCT	5343	Managerial Accounting Analysis
BSAD	5013	Legal Environment of Business
ECON	5013	Micro Economic Theory
ECON	5333	Labor Problems
FINA	5303	Managerial Finance
MGMT	5323	Strategy and Policy Formulation
MGMT	5333	Problems in Manpower Management

DESCRIPTION OF COURSES

Civil Engineering (CVEG)

- 5113. Soil Dynamics. (3-0) Credit 3. Wave propagation in soils. Dynamic response of soil media to vibration effects and earthquakes. Cratering by explosives and penetration by projectiles. Analysis and design of dynamically loaded foundations.
- **5123.** Structural Dynamics. (3-0) Credit 3. Single and multidegree systems, linear nonlinear systems, damped or forced random vibrations, self-introduced vibrations, numerical and phase plane solutions, modal analysis, formulation by flexibility and stiffness matrices, response spectra, and computer applications.
- **5133.** Advanced Mechanics of Materials. (3-0) Credit 3. Theory of stress and strain, stress-strain relationships. Deformations and instability by analytical methods; stability of columns, bars and frames; inelastic bucking, torsional bucking; and binding and bucking of thin plates and shells.
- **5153.** Biological Wastewater Treatment. (3-0) Credit 3. Course on the fundamentals and on selected design aspects of biological wastewater treatment. The need and objectives of wastewater treatment are introduced starting with an overview of the federal water pollution control acts and of the major physical-chemical-biological characteristics of waste streams.
- **5163.** Air Pollution Engineering. (3-0) Credit 3. The nature of the air polution problem and its effects on the public at large. Present legal and engineering controls to combat pollution. Techniques of air sampling and testing.

- **5173.** Finite Element Analysis. (3-0) Credit 3. Using numerical integration, Galerkin-weighted residual and variation approaches to formulate and solve one-and-two dimensional problems in solid mechanics, fluid flow, heat transfer, and electro-magnetics.
- **5991-5992-5993.** Independent Study. (0-0) Credit 1,2 or 3. Readings, research, and/or field work on selected topics. Prerequisite: consent of advisor.

Electrical Engineering (ELEG)

- **5063.** Advanced Semiconductor Devices. (3-0) Credit 3. Development of mathematical analysis and systematic modeling of solid state devices; relationship of measureable electrical and optical characteristics to structural and material properties of solid devices p-n junctions, bipolar and unipolar devices, MOSFETs, IMPATT diodes; utilization of these models in IC design consideration; radiation effects.
- **5073.** Statistical Communication Theory. (3-0) Credit 3. Concepts of probability and random processes necessary for advanced study of communications, stochastic control and other electrical engineering problems involving uncertainty; coding of information over a noisy channel; inclusion of additive and multiplicative gaussian channels; limits on rates at which information can be coded and transmitted over noisy channels; application to elementary detection and estimation problems.
- **5133.** Electric Power System Analysis I. (3-0) Credit 3. Components of power systems. Analysis of electric power generation, transmission and utilization. Transient performance of linear circuits, load flow analysis, and computer use in automatic control.
- **5143.** Electrical Power System Analysis II. (3-0) Credit 3. Transient performance of nonlinear characteristic circuits, power system stability, and future expansion and optimization of the system.
- **5153.** Engineering Solid State Theory. (3-0) Credit 3. Quantum theory applied to electronic, mechanical, and chemical properties of perfect crystals. Theory will be related to spectroscopic and defraction experiments. Imperfactions in crystal and glassy substances.
- **5163.** Integrated Digital Electronics. (3-0) Credit 3. Impact of large-scale integration and VLSI on digital and application is discussed. Special emphasis is given to microprocesses and memory devices; and information theory and the possibility of artificial intelligance and studied.
- 5991-5992-5993. Independent Study. (3-0) Credit 1, 2 or 3. Reading, research, and/or field work on selected topics. Prerequisite: consent of advisor.

General Engineering (GNEG)

5013. Advanced Engineering Economic Analysis. (3-0) Credit 3. Macro and micro economics as an imput to engineering decisions. Resource allocations, distribution and conservation; political realities and societal demands, coupled with national and regional legal policies as constraints and as goals. Environmental impact and technology assessment.

COLLEGE OF ENGINEERING AND ARCHITECTURE

- **5023.** Engineering Operations Research. (3-0) Credit 3. An introduction to quantitative modeling and optimization; linear and dynamic programming; queueing theory; inventory modeling; critical path systems; network flow modeling, and technological forecasting.
- **5033.** Engineering Probability and Statistics. (3-0) Credit 3. Theory of permutations, combinations; statistical principles of analysis of random data probability as a basis of engineering design.
- **5043.** Safety Engineering and Ergonomics. (3-0) Credit 3. Engineering Concerns of Public Safety, Occupation Safety and Product Safety. Applications of engineering principles to the design and manufacture of safety products and systems. Study of Safety relationships to product reliability, human factor and quality assurance. use of various analytical techniques, including failure analysis, fault-tree analysis and risk assessments. Study of Occupational Safety and Health Aids and similar legal codes.
- **5053.** Engineering Instrumentation and Information Systems. (3-0) Credit 3. Transducer theory and operations; operational amplifiers and feedback control in analog systems; A-D converters for digital systems information processing retrieval, and management.
- **5063.** Engineering Analysis I. (3-0) Credit 3. Boundry value problems in various engineering disciplines using Maxwell's equations and nonlinear partial differential equations.
- **5073.** Engineering Analysis II. (3-0) Credit 3. Complex variable theory in engineering applications using techniques, including conformal mapping, control systems, and signal processing.
- **5153.** Engineering Management Processes. (3-0) Credit 3. Theories of engineering management. Integration of human relations, planning and control concepts, systems analysis and design, and principles of management oriented towards engineering functions within an organization.
- **5183.** Advanced Engineering Operations Research. (3-0) Credit 3. Continuation of Engineering 5023 with emphasis on advanced operation research techniques and computer simulation.
- **5186.** Research and Thesis. (0-0) Credit 3. A candidate for the Master Science in Engineering is required to perform a study, design or investigation, under the direction of a faculty advisory committee. A written thesis is required to be presented, defended orally and submitted to the faculty advisory committee for approval.
- **5193.** Special Topics. (3-0) Credit 3. Special topics in engineering relating to materials, renewable and non-renewable resources, environmental and energy fields are selected and discussed in detail. Considers all aspects of planning, design fabrication, development and implementation.
- 5203. Graduate Internship. (0-0) Credit 3. A realistic experience in engineering to enhance the student's professional abilities. Students work on significant projects with industry firms or governmental agencies involving decision-making responsibility. Course requires oral and written report.

Mechanical Engineering (MCEG)

- **5023.** Advanced Thermodynamics. (3-0) Credit 3. Theories of thermodynamics and their application to the more involved problems in engineering practice or design. Topics include advanced power cycles, superconductivity, thermodynamic relations, chemical thermodynamics and phase equilibrium.
- **5123.** Advanced Computer-Aided Engineering Design. (3-0) Credit 3. Computer-aided engineering design includes an advanced study of both mechanical and thermal systems using the computer as a tool. Total interactive system design will be emphasized along with optimization, simulation, analysis (economical and theoretical) and parametric studies. Elements of computer aided manufacturing will be introduced.
- **5133.** Engineering Numerical Methods. (3-0) Credit 3. Numerical methods in engineering includes fundamental numerical techniques involving recursion relationships, numberical quadratures, etc. applied to engineering problems. Emphasis will be placed on the solution of advanced engineering problems involving ordinary and partical differential equations. Proven and efficient finite methods will be covered with emphasis on engineering conceptualization and formulation. An introduction to finite elements analysis will also be given.
- **5143.** Heat, Mass, Momentum Transfer. (3-0) Credit 3. The basic laws applied to the analysis of heat transfer, mass transfer, and momentum transfer in boundary layer flow are studied. selected important applications are analyzed.
- **5153.** Conduction Problems in Engineering. (3-0) Credit 3. An advanced study in molecular heat transfer (conduction includes: (1) a development of the unified governing and auxiliary equations from principles of thermodynamics, (2) an establishment of a unique formulation approach for thermal engineering problems, and (3) detailed analytical solutions of one, two and three-dimensional conduction problems. Elements of inverse conduction will be introduced.
- **5163.** Advanced Engineering Fluid Dynamics. (3-0) Credit 3. A Comprehensive study of fluid mechanics and dynamics is considered. This includes Potential flow, Stokes flow, Oseen flow, other invescid flow, Echkman flow, and other viscous flows such as Boundary Layer Analysis. An introduction to perturbation to theory will also be given.
- **5173.** Radiation Problems in Engineering. (3-0) Credit 3. A comprehensive study of radiation heat transfer includes: the derivation of thermal radiation equations form the electromagnetic wave theory; a study of the radiative emissive and absorption properties of engineering materials; formulation of the engineering radiation transport equation, a study of view-factor determination techniques, integra approximations, and combined-mode heat transfer; and a study of gas radiation, participating mediums, and other methods such as the zone method.
- 5991-5992-5993. Independent Study. (0-0) Credit 1, 2 and 3. Reading, research, and/or field work on selected topics. Prerequisite: consent of advisor.

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Officers of Graduate Instruction

BAILEY, HENRI L., (1989)	Associate Professor
B.A., Roosevelt University, 1962 M.B.A., Southern Illinois University, 1973 Ph.D., Saint Louis University, 1982	Management and Marketing
BAILEY, MARTHA, (1977) Associate Profe	ssor, Curriculum and Instruction
B.A., Southern University, 1972 M.A., Southern University, 1973 Ed.D., University of Houston, 1977	Contraction and a second second second
BALLARD, HENRY H., (1982)	Associate Professor, Chemistry
B.S., Texas College, 1965 Ph.D., Texas Christian University, 1982	
BEAL, JANICE M., (1991)	Assistant Professor, Psychology
B.A., University of St. Thomas, 1983 M.A., Texas Southern University, 1985 Ed.D., Texas Southern University, 1991	Curriculum and Instruction
BENTLEY, CLEO L., (1982)	Professor, Physics
B.S., Howard University, 1968 M.S., Howard University, 1972 Ph.D., Howard University, 1974	
BONNER, HAROLD S., (1970) Associat	e Professor, Industrial Education
B.S., Prairie View A&M University, 1962 M.S., Prairie View A&M University, 1970 Ed.D., Texas A&M University , 1972	
BOOKER, CLARISSA G., (1969)	Associate Professor, Reading
B.S., Prairie View A&M University, 1968 M.A., University of Northern Colorado, 1969 Ed.D., University of Houston, 1977	School Services
BOYD, RONALD, (1983)	Professor, Mechanical
B.S., Tuskegee Institute, 1968 M.S., University of New Mexico, 1970 Ph.D., University of Michigan, 1976	Engineering
BOYD-BROWN, LENA, (1991)	Assistant Professor, History
B.A., Xavier University, 1958 M.A., Howard University, 1960 E.D., Rutgers University, 1979	Clearly, Sill B. (16), A. (16)
BRAMS, EUGENE A., (1971)	Professor, Agriculture
B.S., University of Wisconsin, 1948 M.S., University of Wisconsin, 1949 Ph.D., University of Florida, 1967	 (9841) - S VSLIDE SOLVER (9841) - S VSLIDE SOLVER
BROWN, GEORGE E., (1975)	Associate Professor, Biology
B.S., Prairie View A&M University, 1960 M.S., University of Florida, 1972 Ph.D., University of Florida, 1976	And the second s
BRYANT, MILTON R., (1986)Disti	nguished Professor, Management
B.S., Florida Southern College, 1965 M.Engr., Texas A&M University, 1968 Ph.D., Texas A&M University, 1973	and Marketing
BYRD, FLOSSIE M., (1962)	Professor, Home Economics
B.S., Florida A&M University, 1948 M.Ed., Pennsylvania State University, 1954 Ph.D., Cornell University, 1963	

OFFICERS OF GRADUATE INSTRUCTION

CARTER, PURVIS M., (1956)	Associate Professor, Social
A.B., Tillotson College, 1948 M.A., Howard University, 1950 Ph.D., University of Colorado, 1970	& Political Sciences
CHANG, ING, (1970)Associate	Professor, Mechanical Engineering
B.S., National Taiwan University, 1961 M.S., Rice University, 1965 Ph.D., Rice University, 1969	
CHAPMAN, WILLIAM H., (1966)	Associate Professor, English and
B.A., North Carolina A&T University, 1959 M.A., University of Iowa, 1966	Foreign Languages
CHATHA, DILJIT, (1987)	Assistant Professor, English
B.A., Punjab University, 1960 M.A., Jodhpur University, 1963 M.A., Texas Christian University, 1975 Ph.D., Texas Woman's University, 1984	
CHEN, BIE-CHING, (1987)	Assistant Professor, Accounting
B.S., National Cheng King University, 1976 M.B.A., University of Texas, 1980 Ph.D., University of Texas at Austin, 1988	and Information Systems
CHIZARI, MOHAMMAD (1986)	Assistant Professor, Management
B.B.A., Tehran University, 1976 M.B.A., North Texas State University, 1978 Ph.D., North Texas State University, 1983	and Marketing
CLARK, ROSS D., (1972) Assoc	iate Professor, Secondary Education
B.S., Texas Tech University, 1960 M.A., Sul Ross University, 1965	Curriculum and Instruction
COLE, LARRY L., (1972)	Associate Professor, Chemistry
B.S., Texas Southern University, 1966 Ph.D., University of Houston, 1971	
COLEMAN, LEE R., (1976)	Instructor, Counseling
B.S., Prairie View A&M University, 1967 M.Ed., Prairie View A&M University, 1973	School Services
CREDLE, SID H. (1988)	Associate Professor
B.S., Hampton University, 1972 M.B.A., Cornell University, 1974 Ph.D., The University of Texas at Austin, 1985	Accounting Information Systems
DAVIES, AROUNA R., (1986)	Associate Professor, Mathematics
B.Sc., Durham University, England, 1969 M.Sc., London University, England, 1975 Graduate Diploma in Education, University of Ph.D., New Mexico State University, 1986	London, 1975
DAVIS, OLLIE, (1989)	Assistant Professor
B.A., University of Houston, 1974 M.S., Texas Southern University, 1976 Ed.D., University of Houston, 1988	Curriculum and Instruction
DEBNATH, SUKUMAR C	Assistant Professor
B.Com., University of Chittagong, 1975 M.Com., University of Dacca, 1976 M.B.A., University of Southern Mississippi, 1 D.B.A., Mississippi State University, 1989	Management and Marketing 983

DOCTOR, VASANT M., (1967)	Professor, Chemistry
B.S., Royal Institute of Science, 1946 M.S., University of Wisconsin, 1951 Ph.D., Texas A&M University, 1953	
EDWARDS, CHARLES T., (1957)	Professor, Industrial Technology
B.S., Hampton Institute, 1954 M.S., Kansas State College of Pittsburg, 1966 Ed.D., University of Houston, 1977	Saint a Saint Vien Natar in Insensor polya Antonia View Aste University, 0 M.A.T., University of Illinois, 1903
EDWARDS, MARY, (1990)	Assistant Professor, Curriculum
B.S., Texas A&M University, 1980 M.S., Texas A&M University, 1985 Ed.D., Texas A&M University, 1991	and Instruction
EILAND, MILLARD F., (1968)	Professor, Communications
B.A., Baylor University, 1955 B.D., Southern Baptist Theological Seminary Th.M., Southern Baptist Theological Semina M.A., University of Houston, 1968 Ph.D., Louisiana State University, 1974	7, 1959 iry, 1961
ESCOBAR, ENRIQUE N	
B.S., University of El Salvador, 1972 M.S., University of Maryland, 1975 Ph.D., University of Maryland, 1978	 B.S., Southers Jorvenity, 1952 1951 M.S., Bredley Distorsity, 1953 Ph.D., Spracting University, 1972
FILLYAW, HAROLD, (1975) Associa	ate Professor, Educational Psychology
B.S., Fayetteville State University, 1965 M.A., University of Michigan, 1971 Ph.D., University of Michigan, 1975	Curriculum and Instruction
FOSTER, JOHN, (1992)	Professor, Electrical Engineering
B.S.E.E., Tuskegee Institute, 1979 M.S.E.E., Stanford University, 1980 Ph.D., Stanford University, 1983	B.5. Colorado Stata University, 1960 M.S. Colorado State University, 1960 N.D. University of Turns et Austin.
FOTOUH, KAMEL, (1984) Asso	ciate Professor, Chemical Engineering
B.S., Cairo University, 1965 M.S., Monash University, 1972 Ph.D., University of Oklahoma, 1976	B.S., Science Limits University (India N.S., University of Control (India).
FULLER, JOHN H., (1977) Asso	ciate Professor, Electrical Engineering
B.S.E.E., Prairie View A&M University, 1969 M.S.E.E., University of Missouri, 1974 Ph.D., University of Missouri, 1977	A.B., University of Chickens, 1963 A.B., University of Chickens, 1963 ville 19.00, Conferences and Billionic, 1969
GREWAL, SURJIT, (1986)	Assistant Professor, Mechanical
B.A., Punjab University, India, 1952 B.S.M.E., Agra University India, 1956 M.S.M.E., University of California, Berkeley, Ph.D., University of Houston, 1972	Engineering
GRIFFIN, RICHARD W., (1991)	Instructor, Agriculture
B.S., North Carolina State, 1984 M.S., North Carolina State, 1986 Ph.D., Texas A&M University, 1991	M.A., Liniversity of Illicols, 1964 Ph.D. University of Illicols, 1966 Ph.D. University of Illicols, 1968
HARRISON, ORDIA (1990) I	Professor, Curriculum and Instruction
B.A., Southern University, 1962 M.Ed., Louisiana State University, 1973 Ph.D., Washington University, 1984	
HAUSER, HAROLD, (1984)	Assistant Professor, Chemistry
B.S., North Carolina College, 1960 M.S., North Carolina College, 1963 Ph.D., Wayne State University, 1977	

OFFICERS OF GRADUATE INSTRUCTION

HAWKINS, DORISULA W., (1966)	Associate Professor
B.S., Jarvis Christian College, 1962 M.S., Prairie View A&M University, 1967 Ed.D., University of Houston, 1975	Accounting & Information Systems
HAWKINS, FRANK T., (1965)	Professor, Mathematics
B.S., Prairie View A&M University, 1958 M.S., Prairie View A&M University, 1965 M.A.T., University of Illinois, 1969 Ed.D., University of Illinois, 1975	
HEBERT, RUBYE N. (1978)	Associate Professor,
B.S., Bishop College, 1961 M.M., Indiana University, 1964 D.M.A., Ohio State University, 1976	Art, Music and Drama
HENDERSON LEE E., (1971)	Assistant Professor, Biology
B.S., Prairie View A&M University, 1963 M.S., Prairie View A&M University, 1972 M.Ed., Prairie View A&M University, 1976 Ed.D., University of Houston, 1980	
HENRY, MARION, (1956)	Associate Professor, Educational
B.S., Southern University, 1952 M.S., Bradley University, 1953 Ph.D., Syracuse University, 1972	Media and Technology, School Services
HOWARD-LEE, HARRIETTE, (1990)	Assistant Professor, Biology
B.A., Fisk University, 1975 M.S., Atlanta University, 1978 Ph.D., Atlanta University, 1981	 A second by Second Distance 19, 11 A second se
HUMPHREY, RONALD D., (1970)	Professor, Biology
B.S., Colorado State University, 1960 M.S., Colorado State University, 1963 Ph.D., University of Texas at Austin, 1970	A STATE COLORE HERITOR 1970
ISRANI, HAKUMAT, (1985)	Professor, Engineering Technology
B.S., Banaras Hindu University (India), 1960 M.S., University of Roorkee (India), 1966 Ph.D., University of Arkansas, 1971	 Cherristenetic, 1998 Cherristenetic, 1998 Cherristenetic, 1878 Cherristenetic, 1870 Cherristenetic, 1870
JONES, BARBARA A.P., (1987)	Professor, Economics & Finance
A.B., University of Oklahoma, 1963 A.M., University of Illinois, 1966 Ph.D., Georgia State University, 1973	(in a star when a star with the provident of the star of the st
JONES, HOWARD J., (1985)	Associate Professor, Social
B.A., Southern University, 1966 M.A., Howard University, 1968 Ph.D., Washington State University, 1975	& Political Science
JONES, MACK HENRY, (1987)	
B.A., Texas Southern University, 1962 M.A., University of Illinois, 1964 Ph.D., University of Illinois, 1968	Social and Political Sciences
KELLEY, DANNY R., (1978)	
B.A., Prairie View A&M University, 1969 M.M., Peabody Conservatory of Music, 1971 D.M.A., Peabody Conservatory of Music, 198	Music and Drama
KHAN, MOHIUDDIN M., (1989)	Assistant Professor, Economics
B.A., Dhaka University, 1975 M.A., Dhaka University, 1976 M.A., University of Manitoba, 1979 Ph.D., Simon Fraser University, 1986	and Finance
KING, VERA C., (1967)	Associate Professor, Mathematics
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B.S., Prairie View A&M University, 1960 M.S., Prairie View A&M University, 1965 A.M., University of Illinois, 1971 Ed.D., University of Houston, 1976	
KIRKPATRICK DAVID (1968)	Associate Professor, Engineering
B.S. Prairie View A&M University, 1967 M.S., Kansas State College of Pittsburg, 1968 Ph.D., Purdue University, 1974	Technology
KOAY, SIEW. (1985)	Associate Professor, Electrical
B.S., Taiwan University, 1962 M.S., University of Toledo, 1964 Ph.D., University of California, 1971	Engineering & Computer Science
KUMAR, ABBURI, (1986)	Associate Professor, Electrical
B.S., Osmania University, Hyderabad, 1971 M.S., India Institute of Technology, Delhi, 1973 Ph.D., India Institute of Science, Bangalore, 1978	Engineering
LIN, SHIELD B., (1986)	Assistant Professor, Mechanical
B.S.M.E., National Chung-Hsing University, Taiw M.S.M.E., Texas A&I University, Kingsville, 1981 Ph.D., Texas A&M University, 1986	van, 1975 Engineering
MANGAROO, ARTHUR S., (1969)	Professor, Agriculture
B.S., North Carolina A&T University, 1962 M.S., Ohio State University, 1963 Ph.D., Ohio State University, 1967	 Sectors of Witcowers (1998) Current of Witcowers (1998) Current (1998)
MARTIN, EDWARD W., (1952)	Professor. Biology
B.A., Fisk University, 1950 M.A., Indiana University, 1952 Ph.D., State University of Iowa, 1962	ALL AND ALL TOPICS CHARTER CONTRACT ON A
MARTIN, ELIZABETH A., (1975)	Assistant Professor, Sociology
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