BULLETIN OF

SOUTHWEST TEXAS
STATE UNIVERSITY

THE GRADUATE SCHOOL
1974-1976

SAN MARCOS, TEXAS
78666
ADMINISTRATION

OFFICERS OF ADMINISTRATION
BOARD OF REGENTS, STATE SENIOR COLLEGES

1974-1975

Jerome W. Johnson, President (1975) .................................. Amarillo, Texas
Anne Clark (1977) ...................................................................... Austin, Texas
Lee Drain (1977) ......................................................................... Dallas, Texas
Bernard G. Johnson, Vice President (1975) ......................... Houston, Texas
J. C. Kellam (1979) ...................................................................... Austin, Texas
Dee J. Kelly (1975) .......................................................... Fort Worth, Texas
James L. Powell (1977) ............................................... Fort McKavett, Texas
Emil C. Rassman (1979) .......................................................... Midland, Texas
Sam Tanner (1979) .............................................................. Beaumont, Texas
Harold J. Marburger, Executive Director ................................. Austin, Texas

1973-1974

Jerome C. Cates, M.B.A., Interim President and Vice President for Fiscal Affairs
Joe H. Wilson, Ph.D., Vice President for Academic Affairs and Dean of the University
Oscar L. Dorsey, Ph.D., Dean of the College of Professional Schools and Acting Dean of the School of Applied Arts
William E. Norris, Jr., Ph.D., Dean of the College of Arts and Sciences and Associate Vice President for Academic Affairs
Jerry F. Dawson, Ph.D., Dean of the Graduate School
John R. Harrell, Ed.D., Dean of the School of Creative Arts
Archie O. Parks, Ph.D., Dean of the School of Science
Don C. Green, Ph.D., Dean of the School of Allied Health Professions
Wilton L. Wilson, Ph.D., Dean of the School of Business
Jasper J. Garland, Ed.D., Dean of the School of Education
Alton G. Brieger, M.A., Dean of Admissions and Registrar
Floyd L. Martine, M.Ed., Dean of Students
Louis C. Moloney, D.L.S., Librarian

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SOUTHWEST TEXAS STATE UNIVERSITY  
San Marcos, Texas  

CALENDAR, 1974-1975  

Fall Semester, 1974  

August 21, Wednesday .................................................. Orientation  
8:00 a.m.-2:00 p.m. ........................................ All new students (transfers 
and freshman not registered)  
8:00 a.m.-12:00 noon ........................................ All new faculty  
2:30 p.m.-3:45 p.m. .................................. Departmental meetings as needed  
4:00 p.m. ...................................... General Faculty Meeting in Speech-Drama Center  

August 22, 23, and 26, Thursday, Friday, and Monday .......... Registration  
August 22-September 20 ...................................... Dates to file applications for degrees 
to be conferred on December 21, 1974  

August 23, Friday, 6:30-8:30 p.m. ................ Registration of one-day-a-week 
and Saturday classes  

August 27, Tuesday ..........Holiday (Birthday of Lyndon Baines Johnson)  
August 28, Wednesday ......................Classes begin. No registration 
or adding/dropping of courses  

August 29, Thursday ..................Classes meet. No registration 
or adding/dropping of courses  

August 30, Friday .................Late registration; no adding/dropping courses  

September 2, Monday .........................Labor Day holiday  

September 3-4, Tuesday-Wednesday ...................Late registration and 
adding/dropping courses  

October 2, Wednesday .............. Last day to drop a course without penalty  

October 24, Thursday .................................Mid-semester grades due  

November 2, Saturday .................Homecoming  

November 28-30, Thursday-Saturday ............... Thanksgiving holidays  
(Class will be dismissed on Wednesday, November 27, at 5:00 p.m.)  

December 6, Friday ..................... Last day to drop a course or withdraw 
from the University  

December 9-13, Monday-Friday .........................Dead Week  

December 14, Saturday, 8:00 a.m. .......................Examinations begin  
(A restricted number of final examinations will be given on the evenings 
of December 12 and 13. Classes will meet on these days.)  

December 18, Wednesday ...................... Examinations end  
December 21, Saturday .................................Graduation  

Spring Semester, 1975  

January 7, Tuesday ......................... Orientation for all new students  
January 8-10, Wednesday-Friday ..................... Registration  
(Thursday, 6:30-8:30 p.m.—Registration for 
Saturday and one-day-a-week classes only)  
January 8-February 14 .................... Dates to file applications for degrees 
to be conferred on May 17, 1975
January 13, Monday ..................................... Classes begin. No registration or adding/dropping courses

January 14, Tuesday .............................. No registration or adding/dropping courses
January 15-17, Wednesday-Friday .............................. Late registration and adding/dropping courses

February 14, Friday .................. Last day to drop a course without penalty
March 8, Monday ........................................................ Mid-semester grades due
March 10-14, Monday-Friday ................................................. Spring vacation
March 15, Saturday ........................................................ Saturday classes meet
March 28-29, Friday-Saturday ................................................. Easter vacation

(Classes will be dismissed on Thursday, March 27, at 9:00 p.m.)

March 31, Monday ........................................................ Classes resume
May 1-7, Thursday-Wednesday ............................................. Dead Week
May 2, Friday ........................................... Last day to drop a course or withdraw from the University

May 7, Wednesday ........................................ Free day; no classes and no required meetings
May 8-14, Thursday-Wednesday ..................................... Final Examinations
May 17, Saturday ........................................................ Graduation

SUMMER, 1975

First Term

May 30, Friday ........................................................ Registration
May 30-June 20 ........................................................ Dates to file application for degrees to be conferred on August 16, 1975

June 2, Monday ........................................................ Classes begin
June 3, Tuesday .................................. Only day to register late and to add/drop courses
June 13, Friday ........................................... Last day to drop a course without penalty
June 18, Wednesday ................................ Half-term (3 weeks) classes final examinations
June 28, Saturday ........................................................ Classes meet
July 4, Friday ........................................................ Holiday
July 7, Monday ........................................................ Classes meet
July 7, Monday ........................................................ Examinations begin
July 8, Tuesday ........................................................ Examinations end

Second Term

July 10, Thursday ........................................................ Registration
July 11, Friday ........................................................ Classes begin
July 12, Saturday ........................................................ Classes meet
July 14, Monday .................................. Only day to register late and to add/drop courses
July 24, Thursday ........................................... Last day to drop courses without penalty
July 28, Monday ................................ Half-term (3 weeks) classes final examinations
August 13, Wednesday ........................................................ Classes meet
August 13, Wednesday ........................................................ Examinations begin
August 14, Thursday ........................................................ Examinations end
August 16, Saturday ........................................................ Graduation

(This calendar is subject to change depending on the energy crisis)
GENERAL INFORMATION

AUTHORIZATION

The establishment of a Graduate School at Southwest Texas State University was authorized by the Board of Regents at its meeting on July 15, 1935. Graduate courses were first offered during the summer session of 1936, and the first Master of Arts degree was conferred at the spring commencement of 1937. In 1950, the Board of Regents authorized the granting of the Master of Education degree in addition to that of Master of Arts. In 1968, action of the Coordinating Board, Texas College and University System, added the degree of Master of Business Administration for implementation in 1969. In 1972, the University was authorized to grant the degrees of Master of Science and Master of Arts in Teaching, and in 1973 the degree of Master of Public Administration and Master of Science in Health Professions. The graduate program, originally designed exclusively for the preparation of teachers and school administrators, has been expanded more recently to meet other demands such as the preparation of junior college instructors and to fulfill the present role of the university as a general regional institution.

ORGANIZATION AND ADMINISTRATION

The university is organized into the School of Creative Arts, the School of Liberal Arts, the School of Sciences, the School of Business, the School of Education, the School of Applied Arts, the School of Allied Health, and the Graduate School.

The Graduate Council determines the policies of the Graduate School, and these policies are administered by the Dean of the Graduate School. Besides the Dean, who serves as chairman, the Graduate Council is composed of a representative of each department which offers a graduate major. The President of the University, the Dean of the University, and the Registrar are ex officio members of the Council.

GRADUATE COUNCIL

Dr. Alfred E. Borm (1973-1977)
Dr. J. Peter Coulson (1973-1977)
Dr. Don C. Green (1973-1977)
Dr. Jean-Pierre Heudier (1970-1974)
Dr. Victor E. Michalk (1971-1975)
Dr. Robert E. Patton (1970-1974)
Dr. James W. Pohl (1971-1975)
Dr. Francis M. Rich Jr. (1972-1976)
Dr. David Stevens (1973-1977)
Dr. Robert M. Stevenson (1973-1976)
Dr. Doyle G. Ward (1972-1976)
Dr. Billy L. Windham (1973-1977)
Dr. David C. Whitenberg (1970-1974)
ADMISSION POLICIES

Applications for admission to the Graduate School may be obtained from the Graduate Office and submitted at least thirty days prior to the beginning of the semester of entrance. These applications must be accompanied by two official copies of transcripts showing all college work and degree(s) conferred. In addition, all applicants are required to take the aptitude portion of the Graduate Record Examination. Seniors who have a superior academic record and lack nine (9) or fewer semester hours toward graduation may, with the approval of the proper departmental advisor and the Graduate Dean, register during their final semester of undergraduate study for courses to be applied toward a Master's degree.

There are three levels of admission to the graduate program:

1. Applicants with an undergraduate grade-point average (GPA) of 2.5 or more (on a 4.0 scale) and above 900 on the Graduate Record Examination may be admitted with departmental approval to the level of “Definitive” admission.

2. Applicants with a GPA of less than 2.5, but not less than 2.0, or with a GRE of less than 900, may be admitted with departmental approval to the level of “Tentative” admission. Tentative students may make no grade below “B” on their first twelve (12) hours.

3. Applicants with a GPA of less than 2.5 but not less than 2.0, and with no GRE score may be admitted with departmental approval to the level of “Probationary” admission. Probationary students are restricted to six (6) hours of graduate work and are subject to review. Probationary status will be granted only in very rare and exceptional cases.

In addition to these levels of admission, there is a “Special Student” classification for students who wish to take graduate courses but do not wish degree credit.

All admissions are subject to the approval of the respective major and minor departments.

REQUIREMENTS FOR THE MASTER'S DEGREE

1. Residence requirement: In general, thirty semester hours of graduate work should be completed on the campus of Southwest Texas State University.

2. Credits by Transfer, Extension Study, or Correspondence: A maximum of six semester hours of credit earned at another institution may be
accepted on transfer and applied toward the master's degree, provided that
the credit was earned in graduate courses completed in residence at the
accredited institution, and that the courses are appropriate to the student's
degree program at this university.

Not more than six semester hours of graduate credit may be earned
in extension courses offered by Southwest Texas State University.

No credit toward a master's degree may be earned through extension
courses at another institution or through correspondence study.

3. Time Limit: A program leading to the master's degree must be
completed within six years from the date of the student's initial enrollment
for graduate courses. No credit will be applied toward the master's degree
for courses completed more than six years before the date on which the
degree is to be conferred. An extension of time will be given to students
who are inducted into military service.

4. The minimum number of semester hours required for the master's
degree is 30; the maximum is 45.

5. At least one half of the courses applied toward any major or minor
program must be numbered 5000 or above.

6. Only in rare situations will credit earned in courses open to juniors
be applied toward the master's degree, and credit in such courses may be
applied only with the express approval of the Graduate Dean. Students
enrolled in undergraduate courses for graduate credit will be required to
meet higher standards of work, both quantitatively and qualitatively, than
are required for undergraduates.

7. Majors in education who apply for the Master of Education degree
must include a problems course: Education 5390 or Education 5391. As a
part of the requirements of each course the student will write a formal
report prepared in conformity with instructions given in the manual for
writing the thesis.

8. Prerequisites for Graduate Courses: Generally a background of at
least 24 semester hours, including 12 advanced, is required for the graduate
major; and 18 hours, including six advanced, are required for the graduate
minor. Exceptions in background requirements may vary in split minors
and in requirements for minors in elementary education. In some instances
18 advanced hours in education may be sufficient background for a major
in education. Majors in any field of education who have not completed
student teaching must complete this course as a background requirement
or obtain a waiver from the Department of Education on the basis of
teaching experience. Background for the degree of Master of Business
Administration normally consists of the baccalaureate degree in business
administration, or 30 hours in the field to include these courses or their
equivalents: accounting, 6 hours; economics, 6 hours; business law, 3 hours;
finance, 6 hours; management, 3 hours; marketing, 3 hours; statistics,
3 hours.
9. Grades in all courses taken for graduate credit and in all courses completed in the major field must average "B," provided that no grade of "D" shall be valid, and provided further that a grade of "A" must be earned for each grade below "B" and for each incomplete grade except in thesis courses. An "A" grade earned at another institution may not be used to remove a grade deficiency earned at this university. A student who falls two points below a "B" average may not continue a degree program without approval of the Dean of the Graduate School.

10. Thesis Requirements: If the student elects to write a thesis, a committee to direct the thesis will be assigned by the department chairman in conference with the student.

   a. The thesis must demonstrate the student's capacity for research and independent thought. The completed thesis must be submitted to the chairman of the thesis committee not later than 45 days before the date of the commencement at which the degree is to be conferred and must be deposited with the Dean of the Graduate School for final approval not later than 30 days before the date of the commencement at which the degree is to be conferred.

   Two copies suitable for binding must be delivered to the Dean of the Graduate School before the week of graduation.

   b. Two copies of the thesis must be deposited in the library, and a fee to cover the cost of binding must be paid to the library before the degree is conferred. Failure to comply with this regulation will delay graduation until the following semester.

   c. The thesis must be prepared in conformity with Kate L. Turabian's *A Manual For Writers* which is available in the University Bookstore.

   d. Credit for the thesis will be recorded as course number 5699, or 5399 in the field in which the subject matter of the thesis falls, e.g. Education 5699, English 5699. If the student does not complete the thesis in the term or semester in which he is enrolled for it, he will receive a grade of "P" with the privilege of redeeming credit for the course by completing the thesis at any time prior to his graduation.

   A student may enroll for either three or six hours of credit in the thesis course in any semester or summer term, for a total of six hours. A student will be required to enroll and pay the fee for at least three hours of the thesis course during any semester or term during which he desires thesis supervision. Preliminary discussions regarding the selection of a topic and assignment to a supervisor will not require enrollment for the thesis course. Failure to register for the thesis course during a semester in which supervision is received may result in postponement of graduation. All candidates for degrees must be registered for the thesis course during the semester in which the degree is conferred. The only exception to this rule will be in cases where copies are delivered for binding prior to the day of graduation, but too late for participation in graduation ceremonies.
In this case, and this case only, the candidate need not enroll in the succeeding semester.

11. Comprehensive Examination: All candidates for the master’s degree must pass a comprehensive examination, either written or oral or both, covering at least the field of concentration and the thesis if a thesis is written. This examination may not be taken until the student has acquired at least 18 hours of graduate credit and may not be taken before the final term or semester if the student has a grade deficiency. The grade on the comprehensive examination must be filed in the Graduate Office at least 10 days before the commencement at which the degree is to be conferred. Arrangements for the examination may be made with the major professor or the department head.

12. Application for the Degree: The candidate must file in the Graduate Office application for his degree within the period announced in the university calendar. He must also pay a diploma fee in the Business Office.

13. Recommendations for the Degree: Upon the completion of all requirements for the master’s degree, and with the approval of the department concerned, candidates are certified for graduation by the Dean of the Graduate School. Degrees are conferred publicly at the close of the fall semester, the spring semester, and of the summer session.

OBJECTIVES OF THE GRADUATE SCHOOL

The purpose of the Graduate School is to provide the means for continued intellectual growth through advanced and specialized education. The ultimate aim is to develop leaders in the professions and in research. More explicitly, the following objectives have been adopted to add both breadth and depth to the academic and professional preparation received at the undergraduate level:

1. To reinforce and extend the student’s academic and professional equipment as a means of improving professional competence.

2. To familiarize the student with current and recent research in his field; to acquaint him with the techniques of research; to enable him to interpret his own and current research, to derive significant implications therefrom, and to apply pertinent findings.

3. To challenge the student intellectually, to develop the power of independent thought, and to direct him toward the goal of greater effectiveness in both his personal and professional life.

CHARACTERISTICS OF GRADUATE STUDY

Graduate study affords students of superior ability opportunity for continued intellectual growth and development. It presupposes a broad background of knowledge, adequate preparation in the major and minor fields of study, and a command of the skills and techniques needed to carry on intensive research and investigation with a high degree of
resourcefulness and self-direction. Policies of the Graduate Council provide that graduate instruction will differ from undergraduate instruction in at least the following respects:

1. More emphasis is placed on bibliography and on the use of library materials.
2. More extensive reading is required.
3. More comprehensive papers and reports are required.
4. The graduate student is expected to assume greater responsibility and to exercise more initiative.
5. Seminar methods will be employed more frequently, requiring more class participation on the part of the student.

COURSE NUMBERS

Courses numbered 5000 and above are open to graduate students exclusively. Courses in the 3000 and 4000 series may, in rare instances, be accepted for graduate credit. The inclusion of undergraduate courses in a graduate program must have the prior approval of the Dean of the Graduate School, and graduate students enrolled in such courses will be held to a higher standard of performance than is required of undergraduates.

Graduate courses typically carry 3 semester hours of credit; among the exceptions are thesis courses, which yield 6 semester hours of credit.

AMOUNT OF WORK PERMITTED

At the graduate level the normal course load during a semester is 12 hours; the maximum is 15 hours. The maximum load during a summer term of six weeks is 6 hours. The permissible load of assistant instructors and other part-time employees of the university will be determined by the department.

Teachers who are employed full time in the public schools must have the approval of their employer to enroll for more than three hours during any semester; they may not under any circumstances earn more than six hours of credit during any semester nor more than nine hours during any long session.

REQUIRED IMMUNIZATIONS

Students must have proof of having had immunizations for diphtheria, tetanus, and polio within the past ten years. Students over 19 are exempt from the polio requirement.
FEES AND EXPENSES

REGISTRATION FEES AND DEPOSITS

General Property Deposit. Each student is required to make a General Property Deposit of $10.00 which must remain with the University through his career here except as noted in "A" below. All charges for property losses or damages or breakages or violations of rules of the University must be settled promptly. However, any unpaid current charges will be deducted from the deposit before a refund is made.

A. Refund of General Property Deposit. The General Property Deposit less charges will be returned to the student at the end of his career as a student, provided, however, that any General Property Deposit which remains without call for refund for a period of four years from the date of last attendance at this University shall be forfeited and the deposit become a part of and operative to the permanent use and purpose of the University State Deposit Fund.

REQUIRED REGISTRATION FEES FOR EACH SEMESTER

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*Add $4.00 for tuition and $3.00 for Building Use Fee for each hour over 20; Student Service Fee remains the same.
### Summer Term—1975

**per term**

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*Add $4.00 for tuition and $3.00 for Building Use Fee for each hour over 7
**Add $1.00 for Student Service Fee for each hour over 7—Maximum $15.00

### NON-RESIDENT STUDENTS

**UNITED STATES CITIZENS**

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*Add $40.00 for tuition and $3.00 for Building Use Fee for each hour over 20; Student Service Fee remains the same.
### Summer Term—1975

(per term)

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* Add $40.00 for tuition and $3.00 for Building Use Fee for each hour over 7.
** Add $1.00 for Student Service Fee for each hour over 7—Maximum $15.00

### FOREIGN STUDENTS

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* Add $14.00 for tuition and $3.00 for Building Use Fee for each hour over 20; Student Service Fee remains the same.
### Summer Term—1975

*(per term)*

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*Add $12.00 for tuition for one hour over 7; add $26.00 for tuition for two hours over 7;**

**Add $1.00 for Student Service Fee for each hour over 7—Maximum $15.00

***Add $3.00 for Building Use Fee for each hour over 7.

### NON-RESIDENT STUDENTS


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*Add $3.00 for Building Use Fee for each hour over 15; tuition and Student Service Fee remain the same.*
Any non-resident student who was enrolled in the Spring Semester of 1971 and has been continuously enrolled in each Fall and Spring Semester thereafter at Southwest Texas State University is entitled to pay the same tuition rate that was effective at the time of his original enrollment until one of the following conditions occurs:

A. He receives the degree or certificate toward which he was working during the Spring Semester of 1971, or

B. He voluntarily withdraws or the institution involuntarily withdraws him from any Fall or Spring Semester; and

C. The termination of the Spring Semester of 1975.

Rules and regulations governing the resident classification of a student shall be available in the Office of the Dean of Admissions and any student who is uncertain of his status should be encouraged to obtain such rules and regulations and to seek a determination of his status through that office.

The University reserves the right to change fees in keeping with the acts of the Texas Legislature and the Board of Regents, State Senior Colleges.

Payment of Fees. All fees and deposits are payable at the time of registration, and a student is not registered until his fees are paid. Payment may be made in check or money order payable to Southwest Texas State University. If checks are returned unpaid for any reason other than the admitted error of the bank, the student must pay in cash immediately. Students whose checks have been dishonored may be required to pay in cash thereafter.

Loose coins in excess of the appropriate denomination required by banks are not acceptable for payment of any fee unless they are wrapped in appropriate denominational coin wrappers and signed by the payer.

The payment of these fees entitles the student to admission to classes in accordance with the provisions of this catalog, admission to auditorium and athletic attractions, subscription to the University Star, use of the Student Center facilities, part of the health services, Sewell Park facilities, and partial purchase of the Pedagog. These fees also help provide funds for the Associated Students, Band, A Cappella Choir, dramatics, debate, and other student activities.

Auditing Fee. Where auditing of a course is permitted, all fees will be the same as if the course were taken for credit.

Extension and Correspondence Instruction: Pursuant to the action taken by the Board of Regents, the fee for extension and correspondence instruction is $60.00 for a three-hour course, with a pro rata portion of the fee charged for each additional semester hour, payable in advance. There is an examination fee of $2.00 for each correspondence course. The audit fee for extension courses is the same as if the course were taken for credit.
Fee for Late Registration: A late registration fee of $5.00 will be charged all undergraduate students who register after the first class day of any semester or of either term of a summer session, provided that the Registrar may waive such fee if the late registration was dictated by circumstances deemed by him to be beyond the student's control.

Fee for Schedule Change: A fee of $2.00 will be charged for each change in the schedule of an undergraduate student after that schedule has been filed, except when such change is dictated by circumstances deemed by the Registrar to be beyond the student's control.

Motor Vehicle Registration Fee: Every faculty member, student, or employee of the University who operates or parks one or more vehicles on the campus must register each vehicle during registration at the beginning of the fall semester of each year, or as soon thereafter as each vehicle is brought on the campus with the Assistant Business Manager's office. A registration fee will be charged according to the following schedule:

Automobiles:

Twelve months beginning the fall semester .........................7.00
Spring semester and summer session .................................7.00
Summer session only ...................................................2.00

Motorcycles:

Twelve months beginning the fall semester .........................3.00
Spring semester and summer session .................................8.00
Summer session only ...................................................2.00

The official traffic regulations will be those published by the University each year, entitled "Traffic-Parking Regulations."

FEES FOR SPECIAL COURSES
(In addition to registration fees)

Piano, organ, voice, band or orchestral instruments:
Two (one-half hour) lessons per week ..................$35.00 per semester
One (one-half hour) lesson per week ..............18.00 per semester
Class Piano 1108, 1110, 1112, 1114 .......................10.00 per semester
Music Practice Fee .................................................2.00 per semester

Scattered Practice Teaching, Education 4382, 4383 or 4384 ........Off-campus
(Payable in full upon initial registration) ..........50.00 per long session

Internship Practicum, Education 5389 ..........................Off-campus
(Payable in full upon initial registration) ..........50.00 per long session

Internship Practicum, “Special” Education 5389 ................Off-campus
(Payable in full upon initial registration) ..........50.00 per long session
Laboratory Fees:

Agriculture 2473, 3375, 4374 .........................................5.00 per semester
Agriculture 2379, 3379, 4361, 4379 ...........................3.00 per semester
Agriculture 2345 ............................................................8.00 per semester
Allied Health Science 1410, 1420, 2430 .......................4.00 per semester
Biology 5690, 5699 ........................................................4.00 per semester
Biology—all other courses except 1310, 3305, 3351, 3352
  4301, 4325, 5110, 5301, 5325, 5350, and 5610 ..........2.00 per semester
Chemistry 5699 ..............................................................4.00 per semester
Chemistry—all other courses except 1210, 2330,
  3330, 3340, 4345, 5110, 5325, 5345, 5350, 5360,
  5380, and 5395 (not including breakage) ..............2.00 per semester
Education 4303, 4331, 4332, 5305, 5325,
  5357, and 5359 ............................................................2.00 per semester
General Science 3310, 3320, 4309 ..............................2.00 per semester
Geography 1314, 1315 ..................................................5.00 per semester
Home Economics 1330, 2332, 3338 ..........................5.00 per semester
Industrial Arts 1313, 1319, 1320, 1330, 1350, 2310,
  2320, 2330, 2365, 2370, 3310, 3313, 3320, 3350,
  3365, 3370, 3380, 3386, 4310, 4313, 4330, 4360,
  4362, 4382, 4383, 4385, 4390, 4392, 5396 ............6.00 per semester
Certificate Fee (payable when applying for certificate) ...........2.00 Provisional (permanent) 3.00 Professional
Diploma Fee ................................................................................$8.00

OTHER FEES

For therapy in Speech, Hearing and/or Language Clinic ...........................................60.00 per semester*

Refund of Fees. Any student who has paid his registration fees and officially withdraws by submitting a withdrawal card and registration receipt to the Cashier in the Division of Business Management prior to the first regularly scheduled class day is entitled to a refund of 90 per cent of his tuition and fees; during the first two weeks of regularly scheduled classes, he is entitled to a refund of 80 per cent of his tuition and fees; during the third week, 60 per cent; during the fourth week, 40 per cent; during the fifth week, 20 per cent; and thereafter, no refund. No refunds will be made where the amount is less than $2.00. An immediate refund will not be made at the time a student withdraws during a semester, but upon request a check covering all refunds due will be mailed within approximately 30 days to the address left at the cashier's window, Division of Business Management.

*Exceptions are students regularly enrolled in this University and others recruited for therapy for the type of disability especially needed for training university therapists in that particular field.
Should a student reduce his semester hours sufficiently to be entitled to a refund, the same time and percentage schedule will apply.

In the summer session any student withdrawing officially and submitting a withdrawal card and registration receipt to the Division of Business Management prior to the first regularly scheduled class day is entitled to a refund of 90 per cent of his tuition and fees; during the first week of regularly scheduled classes he will receive a refund of 65 per cent of tuition and fees; during the second week, 30 per cent, and thereafter, no refund.

No refund of tuition and fees will be made in cases where students are requested to withdraw.

The University Bookstore. The University Bookstore, located in the Student Center Building, offers textbooks and school supplies for sale to students and faculty.

The snack bar, popularly known as The Lair, is also located in the Student Center and provides an opportunity for refreshments at popular prices.
SCHOOL OF HEALTH PROFESSIONS
Degrees Offered:

The Department of Allied Health Sciences offers the degree of Master of Science in Health Professions with specializations in Allied Health Education, Allied Health Management and Allied Health Research. Generally the specialization consists of 21 hours, with a minor of 15 hours or a split minor of 9 hours and 6 hours. There is no thesis requirement but there is a required internship. To be eligible for admission to the program one must have served for at least one year in a generally recognized area of allied health care.
DEPARTMENT OF ALLIED HEALTH SCIENCES

GRADUATE FACULTY

Green, Don Carroll, Associate Professor of Biology and Dean of the School of Health Professions. B.S., M.S., Sam Houston State University; Ph.D., Texas A&M University.

Mooney, Bob T., Assistant Professor of Allied Health Sciences. B.S., M.Ed., Texas A&M University.

Smith, William Edwin, Associate Professor of Allied Health Sciences. B.S., West Chester State College; M.S., Indiana University; Ed.D., Arizona State University.

Winfield, Darwin Eugene, Assistant Professor of Allied Health Professions, B.S., Louisiana State Polytechnic Institute; M.S., Northwestern State University.

Courses Offered:

5111 Topics in Allied Health Science. (1-0) Credit, 1 hour. An indepth study of a singular topic or a related problem being faced by practicing managers and educators in the rapidly changing health care industry. Special emphasis will be placed on the topic's current relevance and its utilitarian value to the participant. Course may be repeated if the topic studied is different.

5211 Topics in Allied Health Science. (2-0) Credit, 2 hours. An indepth study of a narrow range of topics or related problems being faced by practicing managers and educators in the rapidly changing health care industry. Special emphasis will be placed on the topic's current relevance and its utilitarian value to the participant. Course may be repeated if the topic studied is different.

5310 Seminar in Allied Health Science. (3-0) Credit, 3 hours. Current trends and problems in Allied Health. Designed to place emphasis in selected areas such as Administration, Management, and Education. A research paper and presentation is required of each student. Course may be repeated if the areas studied are different.

5311 Topics in Allied Health Science. (3-0) Credit, 3 hours. An indepth study of selected problems being faced by health care managers and educators on the local and national scene. Emphasis will be placed on a presentation of projected solutions to stated problems. This course may be repeated once if areas studied are different.

5312 Clinical Teaching. (3-0) Credit, 3 hours. The study and practice of teaching competencies unique to instruction in the clinical setting with emphasis on teaching methodologies. Special attention will be placed on the evaluation of instructional competence in the clinical setting.

5313 Classroom Teaching. (3-0) Credit, 3 hours. The foundations, prin-
ciples, and objectives of Allied Health education with emphasis on lesson plan construction, teaching methods, and classroom management.

5314 Departmental Administration. (3-0) Credit, 3 hours. Duties and problems of hospital department heads. The overall principles of administration of hospital departments and practical problems that occur in organizing, installing, and administering a department.

5315 Health Care Management. (3-0) Credit, 3 hours. A study of selected external forces that routinely affect the decisions of health facility managers in operational planning. Emphasis will be upon the effects of federally and state legislated programs including Title XVIII Medicare, Title XIX Medicaid, Comprehensive Health Planning agencies and accreditation as established by the Joint Commission on Accreditations of Hospitals.

5440 Practicum Internship A. (8-0) Credit, 4 hours. The first half of a graduate practicum for students who are technically trained at a Baccalaureate level. Students with a specialization in management will participate in hospital based practicum while students specializing in education will participate in an education based practicum. Experiences providing opportunities for observation, participation, and practical application of administrative or management skills in the hospital setting or an experience providing the student with the opportunity to take part in didactic and clinical teaching experiences in Allied Health.

5441 Practicum Internship B. (8-0) Credit, 4 hours. The second half of the graduate practicum. The student is allowed more participation during this practicum period to develop managerial or education skills.

Prerequisite: AHS 5440
SCHOOL OF CREATIVE ARTS

Departments, Degrees:

The Department of Art offers work in minor fields but not in major programs. The Department of Music offers the degree of Master of Education. The degree allows considerable flexibility for majors in Music, Music and Education, or Music Education. The degree program consists of a major of at least 21 hours and a minor of at least 15 hours, with numerous combinations of Music and Music Education in the major. The Department of Speech and Drama offers a degree of Master of Arts with majors in Speech or Drama. Majors in one area may minor in the other, or in areas outside the department. The degree usually consists of a major of at least 21-24 hours, including a thesis, and a minor of 6-9 hours.
DEPARTMENT OF ART

GRADUATE FACULTY:

Bakke, Jacques Roland, Instructor in Art. B.S., M.F.A., University of Minnesota.

Suckle, Charles John, Professor of Art and Chairman of the Department of Art. B.S. in Ed., Western New Mexico University; M.A., New Mexico Highlands University.

COURSES OFFERED:

5321 Painting Studio. (3-3) Credit, 3 hours. Studio course urging independent involvement in a specialized area of painting.
Prerequisite: 6 hours of painting.

5323 Research in Art Theory and Practice for the Elementary Grades. (3-0) Credit, 3 hours. Research in art literature, studio and teaching practices.
Prerequisite: Art 3323 or teaching experience.

5325 Research in Art Theory and Practice for Art beyond the Elementary Grades. (3-0) Credit, 3 hours. Research in art literature, studio and teaching practices.
Prerequisite: Admission to Graduate School in Education.

*5327 Ceramic Problems. (3-3) Credit, 3 hours. In-depth exploration of expressive and technical aspects of clay and glazes. Kiln stacking and firing techniques.
Prerequisite: Art 4327
DEPARTMENT OF MUSIC

GRADUATE FACULTY:

Bek, Anton John, Associate Professor of Music. B.M., M.M., DePaul University.

Belisle, John Michael, Associate Professor of Music. B.M., Oklahoma City University; M.M.Ed., D.Mus., Indiana University.


Callahan, Maurice Moore, Associate Professor of Music. B.M., Bethany College; M.A., Colorado State College.

Ham, Harry Candidus (Harry Wayne), Assistant Professor of Music. B.M., M.M., North Texas State University.

Harrel, John Ralph, Professor of Music and Dean of the School of Creative Arts. B.M., Bethany College; M.A., Ed.D., Columbia University Teachers College.

Hiebert, Arlis John, Associate Professor of Music and Chairman of the Department of Music. B.M., University of Oklahoma; M.M., Ph.D. George Peabody College.

Riepe, Russell Casper, II, Assistant Professor of Music. B.M., Southern Illinois University; M.A., Ph.D., Eastman School of Music, University of Rochester.

Wiehe, Douglas Dean, Associate Professor of Music. B.M., M.A., North Texas State University; D.M.E., University of Oklahoma.

Whalin, John Robert, Associate Professor of Music. B.M., Oberlin College; M.M., D.Mus., Indiana University.

Wolverton, Byron Adams, Associate Professor of Music. B.Mus., M.A., University of Missouri; Ph.D., Indiana University.

COURSES OFFERED:

5136, 5236 Graduate Music Workshop. Workshops in music are scheduled at periodic intervals with emphasis in varying subject areas. One hour credit per each week of workshop study is available. No more than four hours can be used toward a degree.

5310 Music Literature of the Baroque. (3-0) Credit, 3 hours. Style characteristics and literature of the music of 1600-1750, with special emphasis on Bach and Handel.

Prerequisite: Music 3237 or permission of the instructor.

*5313, *5317 Problems in Music Education. (3-0) Credit, 3 hours each. Study of one or more problems in music education that hold special interest or offer opportunity for professional improvement and growth.

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5320 Music Literature, Viennese Classical. (3-0) Credit, 3 hours. Style analysis of music literature from 1750 to 1830, with emphasis on Haydn, Mozart, and Beethoven. 
Prerequisite: Music 3239 or permission of the instructor.

5334 Introduction to Graduate Study in Music. (3-0) Credit, 3 hours. Techniques and materials of research, emphasizing bibliography, library usage, collection and interpretation of data.

*5336 Seminar in Music Education. (3-0) Credit, 3 hours. A seminar course designed to acquaint the student with research techniques and procedures in music education. Formulation of a research problem, definition, design, procedure; technique for location, collection, quantification and treatment of data. Each student is expected to carry out a practical or creative project or investigation.

5340 Music Literature, 19th Century Romantic. (3-0) Credit, 3 hours. Music literature of the period from 1830 to 1910, with analysis of styles. 
Prerequisite: 3239 or permission of the instructor.

5350 Musical Styles. (3-0) Credit, 3 hours. Developing a broader musical understanding, technical analyses, and written assignments in various musical styles, including the late classical, romantic, and present eras.

**APPLIED MUSIC**

*5101 Applied Music: Graduate Organ. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5102 Applied Music: Graduate Organ. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5105 Applied Music: Graduate Orchestral Instruments. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5106 Applied Music: Graduate Orchestral Instruments. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5111 Applied Music: Graduate Piano. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5112 Applied Music: Graduate Piano. (1-0) Credit, 1 hour. Private instruction in music through performance.

*5115 Applied Music: Graduate Voice. (1-0) Credit, 1 hour. Private instruction in music through performance.

*5116 Applied Music: Graduate Voice. (1-0) Credit, 1 hour. Private instruction in music through performance.

*5201 Applied Music: Graduate Organ. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5202 Applied Music: Graduate Organ. (0-1) Credit, 1 hour. Private instruction in music through performance.
*5205 Applied Music: Orchestral Instruments. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5206 Applied Music: Graduate Orchestral Instruments. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5211 Applied Music: Graduate Piano. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5212 Applied Music: Graduate Piano. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5215 Applied Music: Graduate Voice. (0-1) Credit, 1 hour. Private instruction in music through performance.

*5216 Applied Music: Graduate Voice. (0-1) Credit, 1 hour. Private instruction in music through performance.

5301, 5302 Graduate Organ. (0-1) Credit, 3 hours. Private instruction in music through performance.

5305, 5306 Graduate Orchestral Instruments. (0-1) Credit, 3 hours. Private instruction in music through performance.

5311, 5312 Graduate Piano. (0-1) Credit, 3 hours. Private instruction in music through performance.

5315, 5316 Graduate Voice. (0-1) Credit, 3 hours. Private instruction in music through performance.

*May be repeated once with different emphasis for additional credit.
DEPARTMENT OF SPEECH AND DRAMA

GRADUATE FACULTY:

Abernathy, Elton, Professor of Speech and Drama. B.A., Abilene Christian College; M.A., Ph.D., State University of Iowa.

Alley, Anne Gabbard, Assistant Professor of Speech and Drama. B.A., University of Kentucky; M.A., Texas Woman's University; Ph.D., Southern Illinois University.

Baergen, John Darrel, Associate Professor of Speech and Drama. A.B., Oklahoma Baptist University; M.A., Baylor University; Ph.D., University of Denver.

Barton, James Gabriel, Professor of Speech and Drama. B.F.A., Nebraska State Teachers College; M.A., University of Michigan.

Coulson, James Peter, Associate Professor of Speech and Drama. B.F.A., M.A., University of Arizona; Ph.D., University of Kansas.

Flemming, David George, Assistant Professor of Speech and Drama. B.A., Adelphi College; M.A., Cornell University.

Gratz, Robert D., Assistant Professor of Speech and Drama and Chairman of the Department of Speech and Drama. B.S., Lamar State University; M.A., Ph.D., Bowling Green State University.

March, Frederick Joe, Assistant Professor of Speech and Drama. B.A., M.A., Texas Tech University.

Porter, Mary Erin, Assistant Professor of Speech and Drama. B.A., M.A., Ph.D., The University of Texas at Austin.

Schilling, Lester Lorenzo, Jr., Professor of Speech and Drama. B.S., Western Michigan University; M.A., Columbia University; Ph.D., University of Wisconsin.

COURSES OFFERED:

5310 Descriptive Linguistics. (3-0) Credit, 3 hours. Narrow phonetics transcription, allophones, phonemes, morphemes, and the internal structure of spoken language.

*5315 Problems in Speech. (3-0) Credit, 3 hours. A course, corresponding to Speech 4315, with the same title, to be offered to certain graduates to allow for independent study in a specific area for which a regular course is not available.

5320 Seminar in Speech and Drama. (3-0) Credit, 3 hours. A course providing for small group attention to selected research in speech and drama.
5321 Communication Evaluation. (3-0) Credit, 3 hours. An indepth study of such evaluation techniques in the field of oral communication as speech criticism and statistical and experimental measurements, designed to qualify the prospective teacher to make critical judgments of his students' efforts.

5322 Rhetorical Theory. (3-0) Credit, 3 hours. A study of the history and works of rhetorical theorists from classical to twentieth century.

5325 Seminar in Human Communication Theory. (3-0) Credit, 3 hours. An examination of non-rhetorical theories of speech-communication, including a survey of recent experimental evidence on human communication.

5333 Theories of Argumentation. (3-0) Credit, 3 hours. A study of the theories of argumentation pertinent to present-day forensic speaking.

5341 British Public Address. (3-0) Credit, 3 hours. A study of the history of British public speaking and speakers from the eighteenth century to the present.

5343 Contemporary Public Address. (3-0) Credit, 3 hours. The historical and critical study of the style, effect, and uses of modern speeches and speaking.

5347 Leadership and Group Communication. (3-0) Credit, 3 hours. An advanced course in group communication designed to examine in detail the phenomenon of leadership in groups. Various approaches to group leadership will be surveyed, and methods of leadership training will be investigated.

Prerequisite: Speech 2330 or consent of the instructor.

5351 Descriptive Phonetics. (3-0) Credit, 3 hours. A study to develop the student's skill in using the International Phonetic Alphabet to describe variant patterns of oral English.

5361 Performance Techniques for Oral Interpretation. (3-0) Credit, 3 hours. A study of interpretation technique and program building for the individual reader, with emphasis on performance.

DRAMA

5337 Studies in Theories and Techniques of Acting. (3-2) Credit, 3 hours. A study of the theories of acting with practical application designed to further the development of the student's acting ability, and to prepare him to teach acting. Practical experience in University productions is required for one semester.

5349 Studies in Advanced Technical Theatre Production Techniques. (3-2) Credit, 3 hours. The study of advanced contemporary staging, construction, and lighting techniques, with attention given to the use and operation of theatre equipment. Practical experience in University productions as required for one semester.
5360 Problems in Theatre. (3-0) Credit, 3 hours. Designed to give supervised experience to qualified advanced students in theatre history, playwriting, directing, acting, technical, or other theatre problems. Research problems or actual production problems may be chosen.

5366 Seminar in Theatre History and Literature. (3-0) Credit, 3 hours. This seminar will concentrate on one significant period, locality or trend in world theatre history and literature. The area covered will be chosen on the basis of general student need and interest.

5367 Studies in Dramatic Theory and Criticism. (3-0) Credit, 3 hours. The study of dramatic theory and criticism from Aristotle to the present.

5368 American Theatre and Drama. (3-0) Credit, 3 hours. Studies in the development of the American theatre and drama from colonial days to the present.

5369 Contemporary World Theatre and Drama. (3-0) Credit, 3 hours. Studies of current trends in world theatre and drama.

5370 Studies in Advanced Creative Dramatics for Children. (3-0) Credit, 3 hours. Studies of the methods of creative dramatics and their use in the classroom. Attention is given to creativity and creative teaching.

5371 Seminar in Children's Theatre. (3-0) Credit, 3 hours. Production techniques and problems in the performance of plays for children, with special emphasis on play selection; designed specifically for the elementary education student.

5377 Studies in Advanced Theatre Directing. (3-0) Credit, 3 hours. A study of directors, theories, and problems of directing in the contemporary theatre.

*5380 Seminar in Playwriting. (3-2) Credit, 3 hours. A continuation of Drama 3355 with a study of advanced techniques of playwriting and with emphasis on the writing of plays. The graduate student's work must culminate in the writing of a full-length play worthy of production.

Prerequisite: Evidence of competence in playwriting and consent of the instructor.

5387 Directing Practicum. (3-0) Credit, 3 hours. A study of, and experience in choosing, preparing and directing a theatre production from analysis to performance. A production in the University's Studio theatre is required. Attention will be given to theatre organization and management.

SPEECH OR DRAMA

5300 Problems in Speech and Drama Research. (3-0) Credit, 3 hours. An examination of problems and research techniques in speech and drama. Historical, critical, descriptive, and experimental research approaches will

*May be repeated once with different emphasis for additional credit.
be surveyed, and basic procedures in research report writing will be considered.

5310 Teaching of Speech and Drama. (3-0) Credit, 3 hours. Designed to meet the needs of teachers in the public schools. Emphasis is placed on a well-developed speech and drama program for the grades and high school and consideration of methods and materials for the diagnosing and improving of speech and drama. Enrollees in 5310 will be more especially concerned with teaching speech or drama at the college level.

*5320 Directing Speech and Drama Activities. (3-0) Credit, 3 hours. Designed to assist any teacher, whether of speech and drama or some other subject, in directing the speech and drama activities. During the course those in the class will actually direct debate, plays, declamation, and other activities.

5350 Readers Theatre Techniques. (3-0) Credit, 3 hours. A study of methods in script development and production techniques for Readers Theatre.

5399 or 5699 Speech or Drama Thesis. Credit, 3 or 6 hours.

*May be repeated once with different emphasis for additional credit.
SCHOOL OF LIBERAL ARTS
SCHOOL OF LIBERAL ARTS

Departments, Degrees:

The Department of English offers the Master of Arts degree consisting of at least 21-24 hours of English, including a thesis, and 6-9 hours in a minor field.

The Department of Geography offers neither a graduate major nor a graduate minor. Graduate hours are offered in support of graduate programs in Political Science and Education.

The Department of History offers the Master of Arts degree and the Master of Education degree. Normally, the Master of Arts consists of 24 hours of History, including thesis, and 6 hours of graduate work from a minor field. The Master of Education degree consists of at least 21 hours of History and 15 hours of work from a minor field or a split minor with 9 hours from one field and 6 hours from a second field.

The Department of Modern Languages offers the degree of Master of Arts in Teaching Modern Languages. The program consists of 15 hours in French, German, or Spanish; 9 hours of linguistics; 6 hours in a minor which may be from a field outside of Modern Languages; 6 hours of study abroad; and reading knowledge of a second language.

The Department of Political Science offers a choice of three degree programs. The Master of Arts degree consists of 21-24 hours of Political Science, including the thesis, and a 6-9 hours minor. The Master of Education degree consists of 21 hours of Political Science and a 15 hour minor, or a split minor of 9 and 6 hours. The degree of Master of Public Administration consists of a major concentration of 27 hours in Political Science, including a 9 hour resource area in Administration of Criminal Justice, Public Finance Administration, Public Personnel Administration, and Urban Planning. Admission to the program requires an undergraduate G.P.A. of 3.0 or a 2.5 G.P.A. coupled with at least one year's service in a responsible administrative position in government.

The Department of Sociology currently offers a split minor concentration in support of degrees in Secondary Education and Counseling and Guidance, and also offers a number of support courses for several degree programs.
DEPARTMENT OF ENGLISH AND PHILOSOPHY

GRADUATE FACULTY:

Brasher, Thomas Lowber, Professor of English. B.A., M.A., Hardin-Simmons University; Ph.D., Louisiana State University.

Brunson, Martha Luan, Associate Professor of English and Chairman of the Department of English and Philosophy. B.S., Northwestern University; M.A., Ph.D., Texas Tech University.

Clarke, Donald Lloyd, Assistant Professor of English. A.A., Santa Barbara City College; B.A., University of California at Santa Barbara; M.A., Ph.D., Texas Christian University.

Gravitt, Garland Jack, Assistant Professor of English. B.A., Baylor University; M.A., Southwest Texas State University; Ph.D., Southern Illinois University.

Grayson, Nancy Jane, Associate Professor of English. B.A., Texas Christian University; M.A., Ph.D., The University of Texas at Austin.

Gross, Dalton Harvey, Assistant Professor of English. B.A., Luther College; M.A., Ph.D., Southern Illinois University.

Hayes, Elizabeth Gentry, Professor of English. A.B., San Jose State College; M.A., Ph.D., Stanford University.

Heaberlin, Dickie Maurice, Assistant Professor of English. B.A., M.A., North Texas State University; Ph.D., The University of Texas at Austin.

Houston, Ralph Hubert, Professor of English. B.A., North Texas State University; M.A., Ph.D., The University of Texas at Austin.

Laird, Edgar Stockton, Associate Professor of English. B.A., M.A., Southwest Texas State University; Ph.D., Rutgers, The State University.

Lynch, Vernon Eugene, Professor of English. B.A., Sam Houston State University; M.A., Ph.D., The University of Texas at Austin.

Meathenina, Jack Charles, Assistant Professor of English. B.S., M.A., West Texas State University; Ph.D., Duke University.

Medford, Floyd Chester, Assistant Professor of English. B.A., Abilene Christian College; B.D., The University of the South; Th.D., The School of Theology at Claremont, California; Ph.D., The University of Texas at Austin.

Miller, Judith Caldwell, Assistant Professor of English. B.A., University of Texas at Arlington; M.A., North Texas State University; Ph.D., University of Arizona.

Peterson, Norman Clair, Associate Professor of English. B.A., M.A., The University of Texas at Austin; Ph.D., University of Iowa.
Ronan, Clifford John, Assistant Professor of English. B.A., Amherst College; M.A., Ph.D., University of California at Berkeley.

Speer, Diane Parkin, Assistant Professor of English. B.A., Lewis and Clark College; M.A., Bowling Green State University; Ph.D., University of Iowa.

Stedman, Nathan Alexander, III, Assistant Professor of English. B.B.A., The University of Texas at Austin; M.A., Texas Christian University; Ph.D., Florida State University.

Stevens, David Ranald, Professor of English. B.A., M.A., Ph.D., The University of Texas at Austin.

Waltz, Robert Warren, Professor of English. A.B., Newark College of Rutgers University; A.M., Ph.D., College for Men, Rutgers University.

COURSES OFFERED:

5300 Language Problems in a Multicultural Environment. (3-0) Credit 3 hours. An introduction to the study of multicultural and/or multilingual language and linguistics, with special emphasis on the descriptive, psychological, social, and semantic aspects. Prerequisite, 24 hours in English and graduate standing.

5310 Applied Linguistics (3-0) Credit, 3 hours. A study of the English language with particular emphasis on structural linguistics and transformational grammar; American dialects, lexicography, phonology, intonation, morphology, and syntax.

*5321 Contemporary Fiction. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

5323 Eminent Lives in Literature. (3-0) Credit, 3 hours. A study of selected works in autobiography and biography with special attention to the art forms used in these works.

5325 Reflections of Life in the Lore and Literature of the Southwest. (3-0) Credit, 3 hours. A study of the literature of Texas and the surrounding territory as it reflects the cultural and social inheritance of the Southwestern region: various types of non-fictional prose, fiction, and verse.

*5331 Studies in American Poetry. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

*5332 Studies in American Prose. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

5351 Chaucer and His Time. (3-0) Credit, 3 hours. Selected studies in the more important works of Chaucer, with an attempt to realize his significance as creator and social critic in an important literary and social era.

*May be repeated once with different emphasis for additional credit.
*5353 Studies in Medieval English Literature. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

5354 Studies in English Renaissance Literature. (3-0) Credit, 3 hours. Selected drama, poetry, and/or prose from the waning of the Middle Ages until the advent of Neoclassicism. Prerequisite: 24 hours in English and graduate standing.

5355 The Later Shakespeare. (3-0) Credit, 3 hours. The later period from the problem comedies through the tragedies to the serenity of the plays of the final years; emphasis on reading in depth of the plays, significant critical material, and selected plays by Shakespeare's contemporaries.

5358 Milton. (3-0) Credit, 3 hours. Milton's thought expressed in the longer poems and most important prose writing, especially as his thought affected the ideas of the writers and thinkers in the centuries following him.

*5359 Studies in Eighteenth Century Literature. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

*5364 Studies in the English Romantic Movement. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

*5366 Studies in Victorian Poetry. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

*5368 Studies in Victorian Prose. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

5371 Studies in British Poetry: 1880-1940. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

5381 Studies in Modern British and American Drama: 1900-Present. (3-0) Credit, 3 hours. Prerequisite, 24 hours in English and graduate standing.

*5395 Problems in Literary Criticism. Credit, 3 hours. Open to graduate students on an individual basis by arrangement with the department.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

*May be repeated once with different emphasis for additional credit.
GRADUATE FACULTY:

Harrison, James Douglas, Assistant Professor of Geography. B.A., M.A., University of Denver; Ph.D., University of Oklahoma.

Heilman, Allen David, Professor of Geography and Chairman of the Department of Geography. B.A., Michigan State University; M.A., Ph.D., The University of Michigan.

COURSES OFFERED:

5310 Advanced Regional Studies. (3-0) Credit, 3 hours. Emphasis is on human geography with special attention to environmental factors in current world problem areas. This course is recommended for former students and classroom teachers desiring to update their geographic training.

5311 Advanced Physical Geography. (3-0) Credit, 3 hours. Selected topics of landform development, weather and climates, hydrology, and natural vegetation will be examined in view of their inter-relationship and their meaning to human activities. This course is designed for students desiring additional work in the physical-systematics and classroom teachers who wish to up-date their geographic training.

5312 The Planning Function and Process. (3-0) Credit, 3 hours. The nature, purpose, and scope of planning in the United States, with emphasis on city and town planning. Selected topics for discussion will include community inventory and analysis, the formulation of goals and policies in the development of the comprehensive plan, and plan implementation.

5320 Seminar in Planning Problems of the Urban Area. (3-0) Credit, 3 hours. A critical and in-depth examination of several of the critical problem areas currently facing the city planner.
DEPARTMENT OF HISTORY

GRADUATE FACULTY:

Anderson, William Woodrow, Associate Professor of History. B.A., Baylor University; M.A., Ph.D., The University of Texas at Austin.

Broussard, James Hugh, Assistant Professor of History. A.B., Harvard College; M.A., Ph.D., Duke University.

Brunson, Billy Ray, Professor of History. B.A., M.A., Ph.D., Texas Tech University.

Craddock, Emmie, Professor of History and Director of the Honors Program. B.A., Rice University; M.A., Ph.D., The University of Texas at Austin.

Dawson, Jerry Floyd, Professor of History and Dean of the Graduate School. B.A., Mississippi College; M.A., Ph.D., The University of Texas at Austin.

Dunn, Dennis John, Assistant Professor of History. B.A., M.A., John Carroll University; Ph.D., Kent State University.

Hill, Elston John, Assistant Professor of History. B.A., Azusa Pacific College; M.A., University of California at Los Angeles; Ph.D., University of North Carolina.

Jager, Ronald Burke, Assistant Professor of History. B.S., University of Miami; LL.B., M.A., The University of Houston; Ph.D., University of Texas at Austin.

Josserand, Frank Butler, Professor of History. A.B., M.A., Baylor University; Ph.D., The University of Texas at Austin.

Kissler, Betty Jane, Associate Professor of History and Supervisor of Student Teaching. B.A., University of Colorado; M.A., Colorado State College; Ph.D., The University of Texas at Austin.

Liddle, William David, Assistant Professor of History. B.A., George Peabody College for Teachers; M.A., Ph.D., Claremont Graduate School.

Pohl, James William, Associate Professor of History. B.A., M.A., North Texas State University; Ph.D., The University of Texas at Austin.

Pool, William Clayton, Professor of History. B.A., M.A., Ph.D., The University of Texas at Austin.

Swinney, Everette, Professor of History and Chairman of the Department of History. B.A., Ohio Northern University; M.A., Pennsylvania State University; Ph.D., The University of Texas at Austin.

Wilson, James Arthur, Associate Professor of History. B.A., M.A., Ph.D., University of Arizona.
COURSES OFFERED:

5310 Problems in Modern European History. (3-0) Credit, 3 hours. A seminar based upon selected topics in the history of Europe since 1870.

5313 Problems in Early American History: The Age of the American Revolution. (3-0) Credit, 3 hours. A seminar based upon selected topics in the Revolutionary and Early National periods of American history.

5317 Nationalism in Modern Europe. (3-0) Credit, 3 hours. A seminar based on selected topics in the history of nationalism in modern Europe.

5318 Eighteenth Century England: From the Glorious Revolution to Waterloo. (3-0) Credit, 3 hours. A seminar based upon selected topics in political, social, intellectual and economic history of England from 1688 to 1815.

5321 Seminar in the National Period of Latin American History. (3-0) Credit, 3 hours. The history of Latin American countries from the period of their independence to the present. Topics will vary, allowing both a study by country (or countries) and an institutional treatment of the general area.

5322 Seminar in Colonial Latin American History. (3-0) Credit, 3 hours. The colonial history of Latin America approached through a study of the following aspects: aboriginal and Iberian backgrounds; discovery and exploration; political, economic, social institutions of the Ibero-American empires; the independence movements.

5330 Problems in the History of Asia. (3-0) Credit, 3 hours. A seminar based upon selected topics in the History of Asia.

5335 Twentieth Century Russia. (3-0) Credit, 3 hours. A seminar based on selected topics in recent Russian history.

5342 Problems in the Social and Intellectual History of the United States. (3-0) Credit, 3 hours. A seminar based upon selected topics in the intellectual and social history of the United States.

5347 Problems in Texas History. (3-0) Credit, 3 hours. A seminar based upon selected topics in the history of Texas.

5348 Problems in the Diplomatic History of the United States to 1898. (3-0) Credit, 3 hours. A seminar based upon selected topics in the early diplomatic history of the United States.

5349 Problems in the Diplomatic History of the United States since 1898. (3-0) Credit, 3 hours. A seminar based upon selected topics in recent American diplomatic history.

5350 Problems of the Frontier in American History. (3-0) Credit, 3 hours. A seminar based upon selected topics in the history of the frontier in American development.

5351 Problems in Modern American History. (3-0) Credit, 3 hours. A seminar based upon selected topics in United States history since 1877.
5353 Problems in Greater Southwestern History. (3-0) Credit, 3 hours. A seminar based upon selected topics in the history of the Greater American Southwest.

5355 Problems in Southern History. (3-0) Credit, 3 hours. A seminar based upon selected topics in Southern United States history.

5357 The Gilded Age. (3-0) Credit, 3 hours. A seminar based upon selected topics in late nineteenth century American history.

5360 American Historiography. (3-0) Credit, 3 hours. A study of the literature of American history with some attention to the philosophies of history and the principles of historical research.

5362 Problems in American Military History. (3-0) Credit, 3 hours. A seminar based upon selected topics in the military history of the United States.

5365 Seminar in Problems of Contemporary Europe. (3-0) Credit, 3 hours. An intensive study of problems of Europe since 1919, based on independent research and writing by the student.

5367 Problems in the American Civil War. (3-0) Credit, 3 hours. A seminar based upon selected topics in the American Civil War.

5368 The Era of Reconstruction, 1865-1877. (3-0) Credit, 3 hours. A seminar based upon selected topics in post-Civil War American history.

5370 Minority Groups in American History. (3-0) Credit, 3 hours. A seminar based upon selected topics in the history of the various ethnic and racial groups within American society.

5390 Problems in Historical Research. (3-0) Credit, 3 hours. This course is open to graduate students on an individual basis at any time only by arrangement with the division.

5399 or 5699 Thesis. Credit, 3 or 6 hours.
DEPARTMENT OF MODERN LANGUAGES

GRADUATE FACULTY:

Brister, Louis Edwin, Associate Professor of German and Chairman of the Department of Modern Languages. B.A., Mississippi State University; M.A., Ph.D., The University of Texas at Austin.

Davis, Richard Lee, Associate Professor of Spanish. B.A., M.A., Ph.D., The University of Texas at Austin.

Galvan, Robert Arispe, Professor of Spanish. B.A., Trinity University; M.A., The University of Texas at Austin; Ph.D., Tulane University.

Heudier, Jean-Pierre, Assistant Professor of French. B.A., University of Montana; M.A., Brigham Young University; Ph.D., University of Colorado.

Kremkus, Manfred, Assistant Professor of German. A.B., A.M., Ph.D., University of Michigan.

McCoy, Ingeborg Ruberg, Assistant Professor of Spanish. A.A., San Antonio College; B.A., Southwest Texas State University; M.A., Ph.D., The University of Texas at Austin.

Reeves, Dona Rae, Professor of German. B.A., M.A., Ph.D., The University of Texas at Austin.

COURSES OFFERED:

LINGUISTICS AND LANGUAGE LEARNING

5311 Applied Linguistics. (3-0) Credit, 3 hours.
5313 Language Media and Testing. (3-0) Credit, 3 hours.
5315 Psycholinguistics. (3-0) Credit, 3 hours.
5600 Internship and Foreign Study. (6-0) Credit, 6 hours. An independent study project of at least six weeks duration at a foreign institution consisting of lectures, observations, and interviews relevant to the student's major and the interests of the language teacher.
Prerequisite: Completion of all course requirements for the Master of Arts in Teaching Modern Languages.

FRENCH

*5304 Studies in French Philology. (3-0) Credit, 3 hours.
*5805 Studies in Literary Genres. (3-0) Credit, 3 hours.
*5806 Early French Literature and Civilization. (3-0) Credit, 3 hours.
*5807 Modern French Literature and Civilization. (3-0) Credit, 3 hours.

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5390 Individual Studies in French Literature. (3-0) Credit, 3 hours. Students pursue a program of research in periods, genres, authors, or literary criticism in line with their own initiative and interest. Intensive reading and individual research.

Prerequisite: Approval of the Chairman of the Department of Modern Languages.

GERMAN

*5304 Studies in German Philology. (3-0) Credit, 3 hours. A descriptive and historical investigation of the German language, encompassing a) Structure of Modern German, and b) History of the German language.

*5305 The Age of Goethe. (3-0) Credit, 3 hours. The intellectual background and significant works of the major writers of this period, including Goethe, Schiller and the Romantics.

*5306 Foundations of German Literature and Civilization. (3-0) Credit, 3 hours.

*5307 Modern German Culture and Thought. (3-0) Credit, 3 hours.

5360 German Epic and Lyric. (3-0) Credit, 3 hours. An intensive study of the German epic from its beginning; a study of the development of verse forms through the best works of Germany's most representative poets.

5390 Individual Studies in German Literature. (3-0) Credit, 3 hours. Students pursue a program of research in periods, genres, authors, or literary criticism in line with their own initiative and interest. Intensive reading and individual research.

Prerequisite: Approval of the Chairman of the Department of Modern Languages.

SPANISH

*5304 Studies in Spanish Philology. (3-0) Credit, 3 hours.

*5306 Foundations of Spanish Literature. (3-0) Credit, 3 hours.

*5307 Twentieth Century Hispanic Literature. (3-0) Credit, 3 hours.

*5308 Modern Spanish Culture and Thought. (3-0) Credit, 3 hours.

5330 The Spanish-American Novel. (3-0) Credit, 3 hours. The most representative novels in the literary history of Spanish-America.

5390 Individual Studies in Spanish and Spanish-American Literature. (3-0) Credit, 3 hours. Students pursue a program of research in periods, genres, authors, or literary criticism in line with their own initiative and interest; intensive reading and individual research.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

*May be repeated once with different emphasis for additional credit.
DEPARTMENT OF POLITICAL SCIENCE

GRADUATE FACULTY:

Bland, Randall Walton, Assistant Professor of Political Science. B.A., Texas A&M University; M.A., Ph.D., University of Notre Dame.

De Shazo, Elmer Anthony, Professor of Political Science; University Coordinator, International Programs. B.B.A., M.A., Texas Tech University; Ph.D., Indiana University.

Henderson, Richard Beveir, Professor of Political Science. B.A., Southwest Texas State University; M.A., Ph.D., The University of Maryland.

Rankin, Jerry, Assistant Professor of Political Science. B.A., Texas Tech University; M.A., University of Houston; Ph.D., University of Arizona.

Rich, Francis Marion, Jr., Professor of Political Science and Chairman of the Department of Political Science. J.D., Ph.D., University of Georgia.

Shapek, Raymond Anthony, Assistant Professor of Political Science. B.A., San Fernando Valley State College; B.A., University of Maryland; M.P.A., Ph.D., University of Colorado.

Stouffer, Willard Brewer, Jr., Assistant Professor of Political Science. B.A., Northwestern University; M.A., Miami University; Ph.D., Duke University.

Sullivan, Alfred Burke, Associate Professor of Political Science. B.A., Dartmouth College; M.A., University of Rhode Island; Ph.D., University of Utah.

Wineberger, George, Assistant Professor of Political Science. B.A., Temple University; M.P.A., D.P.A., University of Georgia.

COURSES OFFERED:

*5301 Problems in American Foreign Relations. (3-0) Credit, 3 hours. A seminar based on selected topics in American foreign policy and United States involvement in international relations.

*5304 Problems in Political Theory and Methodology. (3-0) Credit, 3 hours. A seminar for the exploration of problems in political theory and/or the methodology of contemporary political science.

*5305 Problems in Comparative Government and Politics. (3-0) Credit, 3 hours. The intensive study of selected areas in comparative political institutions.

5307 Scope and Methods of Political Science. (3-0) Credit, 3 hours Critical examination of history, scope and important concepts of political

*May be repeated once with different emphasis and professor for additional credit.
science. Introduction to behavioralism, behavioral techniques, and various fields of political science. Consideration of important research topics and procedures. Course is designed especially for entering graduate students.

5309 The Public Management Profession: Theory and Practice. (3-0) Credit, 3 hours. Concepts of organization and management; planning and organizing work; supervising work; principles for improving methods of work; principles for the selection and orientation of employees; the development and maintenance of discipline; importance of supervisory counseling; employee evaluation; interorganizational cooperation; and the importance of public relations. An examination of the ethics of Public Management.

*5310 Problems in Public Administration. (3-0) Credit, 3 hours. Such matters as the organization and management of the machinery for executing public policies, bureaucracy, the civil service, span of control, and Hoover Commission-type inquiries.

5312 Seminar in Public Finance. (3-0) Credit, 3 hours. Advanced study of public expenditures and their effects on economic growth in conjunction with an intensive look at the theories of taxation and tax incidence.

5313 Problems in Public Finance Administration. (3-0) Credit, 3 hours. A seminar for the exploration of such topics as financial policy determination, responsibility for public finance administration, concepts of budgeting, budget administration, accounting and financial reporting, auditing, treasury and tax administration and debt administration.

5315 Problems in Public Personnel Administration. (3-0) Credit, 3 hours. Analyses and evaluations of major personnel management problems in government; employee-management relation; inter-agency and inter-governmental relationship. Impact of automation. Evaluation of personnel systems.

5316 Collective Bargaining in the Public Service. (3-0) Credit, 3 hours. An examination of the historical development of public employee unions and the reaction of public employers. The legal position of public laws concerning collective bargaining arguments as well as an analysis of organizing procedures and strategy on the part of public managers will be covered. The effect of collective bargaining agreements on personnel policy development.

*5320 Problems in State and Local Government. (3-0) Credit, 3 hours. Exploring the areas of urban affairs, metropolitan politics, inter-state relations, intra-state relations, county problems, and local affairs.

*5330 Problems in Public Law. (3-0) Credit, 3 hours. Problems in the areas of constitutional interpretations, court cases, judicial processes, and general matters of law.

5331 Police Management Theories. (3-0) Credit, 3 hours. Special study

*May be repeated once with different emphasis and professor for additional credit.
in the application of management theories to the police service. Emphasis on organization, management processes, innovation, use of the computer, operations research, and future developments.

5332 Decision Making in the Police Service. (3-0) Credit, 3 hours. A study of the methods of decision making by the chief administrator in the complex of personnel management, budgeting, delegation of authority, police development, resource management, and accounting within a law enforcement agency.

*5340 Problems in American Public Policy. (3-0) Credit, 3 hours. Problems arising in the areas of political decision-making, executive-legislative relationships, functions of government, and regulatory activities of the government.

*5350 Problems in American Politics. (3-0) Credit, 3 hours. Problems arising with respect to parties, legislation, the presidency, and political behavior.

*5360 Problems in International Politics. (3-0) Credit, 3 hours. A course dealing with selected topics in the field of international politics.

*5361 Problems in International Law and Organization. (3-0) Credit, 3 hours. A course dealing with selected topics in international law and/or international organization.

5370 Internship in Government. (3-0) Credit, 3 hours. Practical experience in the ongoing work of a selected governmental unit. The student will be assigned to a unit of state, federal, regional or local government. A research paper dealing with the internship experience and written under the direction of a faculty member will be a course requirement. Evaluation will be based upon the research paper and work performance. Course may be repeated one time for additional internship credit.

*5380 Economic and Social Problems of International Relations. (3-0) Credit, 3 hours. A course dealing with selected topics in the economic and social fields of international relations.

5382 Problems in World Political Geography. (3-0) Credit, 3 hours. A course dealing with selected topics in geopolitics and world political geography.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

*May be repeated once with different emphasis for additional credit.
DEPARTMENT OF SOCIOLOGY

GRADUATE FACULTY:

Corrie, Walter Samuel, Jr., Professor of Sociology. B.A., M.A., Baylor University; Ph.D., State University of Iowa.

Newsom, Rollo Kern, Instructor in Sociology. B.S., The University of Texas at Austin; M.S., North Texas State University.

Matlock, Donald Thomas, Assistant Professor of Sociology. B.S., M.S., North Texas State University; Ph.D., The University of Texas at Austin.

O'Connell, John Joseph, Assistant Professor of Sociology. A.B., M.A., S.T.B., St. Louis University; Ph.D., Loyola University.

Schultz, Clarence Carven, Associate Professor of Sociology and Chairman of the Department of Sociology-Anthropology. B.S., M.A., Southwest Texas State University; Ph.D., University of Texas at Austin.

Short, Alvin Phillip, Assistant Professor of Sociology. B.S., Southwest Missouri State College; M.A., Ph.D., Emory University.

COURSES OFFERED

5319 Seminar in Social Psychology. (3-0) Credit, 3 hours. A critical appraisal of the major theories and theorists found in Social Psychology with emphasis on their application to contemporary social and psychological issues.

5320 Seminar in Demography. (3-0) Credit, 3 hours. A seminar in the study of population with emphasis on sources of demographic data, techniques of demographic analysis, and population composition and forecasts.

5353 Seminar in the Community. (3-0) Credit, 3 hours. A study of contemporary urban society with emphasis on understanding the social structure as a prerequisite to planning and problem solving at the community level.

5360 Seminar in Social Change. (3-0) Credit, 3 hours. An intensive examination of social change in selected problematic areas of current social concern, relating these changes to broader theories of social change, and giving attention to major research studies in these areas.
SCHOOL OF SCIENCE
SCHOOL OF SCIENCE

DEPARTMENTS, DEGREES:

Four degree options are available to students in the departments of Biology, Chemistry, Mathematics, and Physics.

The Master of Arts degree consists of a minimum of 30 hours, including a science major or at least 24 hours including the thesis, and a minor which may be from the sciences.

The Master of Science degree consists of a minimum of thirty hours, including the thesis, or a minimum of 36 hours without a thesis. Both the major and the minor must be from the sciences.

The Master of Education degree consists of a minimum of 36 hours without the thesis and the minor generally must be taken outside of the sciences. (No M.Ed. is available in Physics.)

In addition to the minimum degree requirements, departmental advisors may also require students to take one-hour research seminars each semester.
DEPARTMENT OF BIOLOGY

GRADUATE FACULTY:

Alexander, Mary Louise, Professor of Biology. B.A., M.A., Ph.D., The University of Texas at Austin.

Ballard, Ruie Dale, Assistant Professor of Biology and Supervisor of Student Teaching. B.S., Southwest Texas State University; M.Ed., Ph.D., The University of Texas at Austin.

Benjamin, Caroline Pitcher, Assistant Professor of Biology. B.A., Harper College; M.A., Ph.D., Indiana University.

Brown, Roger Fulton, Assistant Professor of Biology. B.S., Ph.D., Colorado State University.

Carter, Neil Enoch, Instructor in Biology. B.S., M.S., Oklahoma State University.

Davis, William King, Associate Professor of Biology. B.S., M.A., Southwest Texas State University.

Edwards, Sidney William, Professor of Biology. B.S., M.A., George Peabody College for Teachers; Ph.D., Vanderbilt University.

Elissalde, Marcel Howell, Jr., Assistant Professor of Biology. B.S., Lamar State College of Technology; M.S., Ph.D., Texas A&M University.

Emery, William Henry Perry, Professor of Biology. B.S., Rhode Island State College; M.S., University of Connecticut; Ph.D., The University of Texas at Austin.

Gary, Roland Thacher, Professor of Biology and Supervisor of Student Teaching. B.S., M.A., Southwest Texas State University; Ph.D., George Peabody College for Teachers.

Hannan, Herbert Herrick, Professor of Biology and Chairman of the Department of Biology. B.S. in Ed., Southwest Texas State University; Ph.D., Oklahoma State University.

Huffman, David G., Assistant Professor in Biology. A.B., West Virginia University; M.S., Marshall University; Ph.D., University of New Hampshire.

Green, Don Carroll, Associate Professor of Biology and Dean of the School of Allied Health Professions. B.S., M.S., Sam Houston State University; Ph.D., Texas A&M University.

Horne, Francis Ray, Associate Professor of Biology. B.S., Texas Tech University; M.S., Ph.D., The University of Wyoming.

Koehn, Robert Dean, Assistant Professor of Biology. B.S., Bethel College; M.S., Kansas State Teachers College; Ph.D., The University of Texas at Austin.
Longley, Glenn, Assistant Professor of Biology. B.S., Southwest Texas State University; M.S., Ph.D., University of Utah.

Meyer, George Herbert, Assistant Professor of Biology. B.S., Baylor University; M.A., The University of Texas at Austin.

Norris, William Elmore, Jr., Professor of Biology, Dean of the College of Arts and Sciences, and Associate Vice President for Academic Affairs. B.S., Southwest Texas State University; Ph.D., The University of Texas at Austin.

Olson, Karl Edwin, Assistant Professor of Biology. B.A., M.A., Ph.D., The University of Texas at Austin.

Sissom, Stanley Lewis, Associate Professor of Biology. B.S., M.S., North Texas State University; Ph.D., Texas A&M University.

Tuff, Donald Wray, Associate Professor of Biology. B.A., San Jose College; M.S., Washington State University; Ph.D., Texas A&M University.

Whitenberg, David Calvin, Associate Professor of Biology. B.S., M.S., Ph.D., Texas A&M University.

Whiteside, Bobby Gene, Associate Professor of Biology. A.S., Eastern Oklahoma A&M College; B.S., M.A., Ph.D., Oklahoma State University.

Young, Willard Cooper, Associate Professor of Biology. B.S., M.A., The University of Texas at Austin; Ph.D., University of Colorado.

COURSES OFFERED:

5110 Seminar in Biology. (1-0) Credit, 1 hour. A graduate student majoring in biology is required to absolve a minimum of two semester hours in this course in addition to the standard requirements for the advanced degree. (S, F)

5301 Evolution. (3-2) Credit, 3 hours. Basic genetic principles applied in the interpretation of such phenomena as natural selection, adaptation, genetics of populations, speciation and man's future. Consideration is given to the origin of life, nature of chromosomal variation, evolution of genetic systems, and certain other selected topics. Laboratory is by special arrangement, averaging about two hours per week. Open to students who have completed Biology 3450 or its equivalent. (S, SS)

5305 Nature Study. (3-3) Credit, 3 hours. Planned for elementary teachers who wish to use nature materials in the teaching of elementary science; local environmental resources; the study of birds, insects, trees, flowers, and elementary astronomy. May not be credited toward a biology major or minor or secondary teaching field. (F, S)

5310 Field Biology of Plants. (2-3) Credit, 3 hours. Basic ecological relationships and natural history of plants, including geomorphology, historical geology, and plant geography; special emphasis on plant-soil-water relationship to develop better conservation concepts, and on the soils,
vegetational regions, and surface geology of central Texas. The laboratory will include field trips to observe and study the nature of different vegetational regions. Students will make a permanent representative collection of plant groups. (F, SS)

5312 Radiation Biology. (2-3) Credit, 3 hours. A review of the physical theory of ionizing radiation important to living organisms. Survey of the effects of ionizing radiations on biological systems. Lectures and demonstrations on the effects of ionizing radiations on organisms. The use of radioactive materials in experimental biology will be introduced. (F)

5313 Parasitology. (3-3) Credit, 3 hours. A study of the biology and biological significance of the common parasites of man and animals. (S)

5315 Ichthyology. (2-3) Credit, 3 hours. An introduction to the study of morphology, taxonomy, natural history, and evolution of fish. Field trips will be made to collect study specimens, and laboratory periods will be devoted to morphological and systematic analyses. (F, SS)

5319 Topics in Ecology. (3-3) Credit, 3 hours. Significant concepts of ecology are studied in depth in areas that are still unknown or yet to be fully understood.

5320 Field Biology of Animals. (2-3) Credit, 3 hours. Basic environmental relationships and natural history of invertebrate and vertebrate animals; special emphasis upon taxonomy, aspects of speciation and biotic provinces. The laboratory will include field trips for the study and collection of animals in their natural habitats. Students will assemble a permanent representative collection of animal groups. (S, SS)

5325 Biometry. (3-0) Credit, 3 hours. Basic principles of statistical methods as applied to biological problems such as sampling techniques, analysis of data, experimental design and population dynamics. Emphasis will be on practical application. (S, SS)

Prerequisite: One year of mathematics.

5330 Experimental Techniques. (2-3) Credit, 3 hours. Methods applicable in biological investigations; special emphasis on respiratory techniques and other methods specifically related to cell physiology; library work, as well as the reporting of scientific data. May be repeated for credit in different biological subject-matter areas.

5335 Fisheries Management. (2-4) Credit, 3 hours. An introduction to techniques and principles involved in the management of fisheries. Laboratory and lecture will include the study of artificial habitats; effects of physicochemical factors on fish; stocking rates; reproduction; carrying capacity; productivity; sampling procedures; population estimates; mortality, survival, and growth rates; commercial and sport fisheries. (S)

Prerequisite: Biology 4315-5315 or permission of instructor.

5340 Cell Physiology. (3-3) Credit, 3 hours. Principles basic to cell physiology (Colloidal systems, surface phenomena, osmotic pressure, permeability, etc.), and a discussion of protoplasm.
5345 Advanced Genetics. (3-2) Credit, 3 hours. The course includes the study of inheritance of biochemical and physiological characteristics, medical genetics and modifications of genetic systems by radiations and chemicals. The genetic systems of various organisms are included but reference and application to the genetic system of humans are of special interest.
Prerequisite: Biology 3450 and a sufficient background in physiology. Suggest Biology 4301-5301 and biochemistry.

5350 Topics in Physiology. (3-1) Credit, 3 hours. Selected topics in plant, microbial, and animal physiology. Laboratory is by special arrangement. May be repeated for credit in different biological subject-matter areas.

5360 Comparative Physiology. (2-3) Credit, 3 hours. Attention is given to the way in which different organisms perform similar functions. May be repeated for credit in different biological subject-matter areas. (F)

5361 Biology of Water Pollution. (2-3) Credit, 3 hours. Biological aspects of water pollution and purification will be stressed. Special attention given to the response of aquatic communities to changes in water quality. Current pollution problems, toxicity bioassays, biological techniques, and methods for monitoring pollution. (F)
Prerequisite: Biology 2360 and Chemistry 3410 or consent of instructor.

5365 General Entomology. (3-3) Credit, 3 hours. A survey of the basic principles of morphology, physiology, and taxonomy of terrestrial arthropods with major emphasis on insects. Considerable laboratory time will be devoted to a taxonomic study of the common Orders and Families of insects. (F)

5370 Limnology (3-3) Credit, 3 hours. A study of the physical, chemical, and biological factors, affecting productivity in lakes, ponds, and streams. Limnological sampling methods, chemical and biological analysis of samples, and hydrographic surveying are included in the laboratory. (F, SS)
Prerequisite: Biology 2360 and Chemistry 3410, or consent of the instructor.

5380 Cytology and Microtechnique. (3-3) Credit, 3 hours. Microscopic and ultra microscopic cellular structures, their origin, development, and function. Typical and atypical nuclear and cellular reproduction. Various cytological techniques will be demonstrated, including histochemical methods, staining techniques, fluorescent microscopy, and autoradiographic methods. (S)

5390 or 5690 Problems in the Biological Sciences. Credit, 3 or 6 hours. Open to graduate students on an individual basis at any time by arrangement with the faculty member concerned; problems in the areas of systematics and environmental biology, physiology and biophysics, and cytology and genetics.
*5395 Fundamentals of Research. (2-3) Credit, 3 hours. This course is designed to acquaint the beginning graduate student with materials and methods of research in the biological sciences.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

5610 Natural History Expedition. Credit 6 hours. The course work consists primarily of a five-week field trip preceded by a brief period of preparation and followed by a day of final disposition on the campus. The course is normally conducted during the summer school sessions. Expeditions are made to Mexico, the southwestern deserts, northeastern United States, northwestern United States and Canada. The preparatory sessions involve a brief review of geology, geography, climate, flora, and fauna of the area to be visited. Participants prepare and assemble expedition equipment and supplies. During the trip emphasis will be on the collecting and preparation of biological specimens and group discussions of regional ecology. Type specimens will be placed in the Natural History collection of Southwest Texas State University. Participants are urged but not required to prepare personal collections. Open, by permission, to Graduate biology majors. Enrollment: 8 students. Field trip expenses are to be shared by participants.

*This course may be repeated one time for credit.
DEPARTMENT OF CHEMISTRY

Graduate Faculty:

Cassidy, Patrick Edward, Assistant Professor of Chemistry. B.S., M.S., Ph.D., University of Iowa.

Compton, Ross David, Associate Professor of Chemistry. B.S., M.S., North Texas State University; Ph.D., The University of Texas at Austin.

Cude, Willis Augustus, Jr., Associate Professor of Chemistry. B.S. in Ch.E., The University of Texas at Austin; M.S., Ohio State University; Ph.D., The University of Texas at Austin.

Fitch, John William, III, Associate Professor of Chemistry. B.S., Ph.D., The University of Texas at Austin.

Lippmann, David Zangwell, Associate Professor of Chemistry. B.S. in Chem., M.A., The University of Texas at Austin; Ph.D., University of California at Berkeley.

Parks, Archie Oliver, Professor of Chemistry and Dean of the School of Science. B.S., Sul Ross State University; M.A., Southwest Texas State University; Ph.D., Louisiana State University.

Perry, Reeves Baldwin, Associate Professor of Chemistry. B.S., East Texas State University; M.S., North Texas State University; Ph.D., The University of Texas at Austin.

Willms, Charles Ronald, Professor of Chemistry and Chairman of the Department of Chemistry. B.A., The University of Texas at Austin; M.A., Southwest Texas State University; Ph.D., Texas A&M University.

Yager, Billy Joe, Professor of Chemistry. B.S., Southwest Texas State University; M.S., Ph.D., Texas A&M University.

COURSES OFFERED:

5110 Seminar in Chemistry. (1-0) Credit, 1 hour. A graduate student majoring in chemistry is required to absolve a minimum of two semester hours in this course in addition to the standard requirements for the advanced degree.

5325 Selected Topics in Physical Chemistry. (3-0) Credit, 3 hours. Topics are chosen from Chemical Thermodynamics, Chemical Kinetics, Colloid Chemistry, Electrochemistry, Spectroscopy, Nuclear Chemistry, or Quantum Mechanics with the specific topic to be discussed agreed upon prior to registration. Course may be repeated once for additional credit providing a different topic is to be covered. (S, SS-II)

Prerequisite: Chemistry 3340.
5345 Chemical Bonding and Structure. (3-0) Credit, 3 hours. A study of modern theories of chemical bonding in both organic and inorganic systems. Topics include both valence bond and molecular orbital approaches. Huckel molecular orbital theory and ligand field theory are included. 
Prerequisite: Chemistry 1420 and Mathematics 3372.

5350 Selected Topics in Organic Chemistry. (3-0) Credit, 3 hours. Topics are chosen from Mechanisms of Organic Reactions, Effect of Structure on Reactivity, Polymer Chemistry, Petroleum Chemistry, or Heterocyclic Chemistry, with the specific topic to be discussed agreed upon prior to registration. This course may be repeated one time for additional credit providing a different topic is to be covered.
Prerequisite: Chemistry 2420.

5360 Selected Topics in Analytical and Inorganic Chemistry. (3-0) Credit, 3 hours. Topics are chosen from Organic Reagents in Inorganic Analysis, Spectroscopic Methods of Analysis, Chemical Applications of Group Theory, Organometallic Chemistry, Transition Metals, Boron and Other Electron Deficient Compounds, Analytical Instrument Circuitry, Nonmetallic Elements, Radiation Chemistry, with the specific topic to be discussed agreed upon prior to registration. This course may be repeated one time for additional credit providing a different topic is to be covered.
Prerequisite: Chemistry 3410, 4440.

5370 Problems in Chemistry. Credit, 3 hours. Open to graduate students on an individual basis at any time by arrangement with the faculty member concerned. May be repeated one time for credit.

5380 Selected Topics in Biochemistry. (3-0) Credit, 3 hours. Topics are chosen from Protein and Enzyme Chemistry, Intermediary Metabolism, Vitamins and Hormones, or Physical Biochemistry, with the specific topic to be discussed agreed upon prior to registration. This course may be repeated one time for additional credit providing a different topic is to be covered.
Prerequisite: Chemistry 4475-5475 or 4485-5485.

5395 Fundamentals of Research. (2-3) Credit, 3 hours. This course is designed to acquaint the beginning graduate student with materials and methods of chemical research.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

5412 Analysis and Synthesis of Organic Compounds. (2-6) Credit, 3 hours. A laboratory study with lectures on the principles and techniques used for the identification and synthesis of organic compounds. Some time is also given to quantitative analysis and glass blowing.
Prerequisite: Chemistry 2420.

5475 Biochemistry. (3-3) Credit, 4 hours. A course devoted to a study of the chemistry of carbohydrates, lipids, proteins, enzymes, and nucleoproteins. A study of enzyme kinetics and thermodynamics of coupled reactions is included. (F, SS-I)
Prerequisite: Chemistry 2420, 3340 or permission of the department.
5485 Biochemistry. (3-3) Credit, 4 hours. A study of digestion, absorption, vitamins, intermediary metabolism and respiration. (S, SS-II).
Prerequisite: Chemistry 2420 and six hours of biology.
This course is intended for students majoring in either biology or chemistry and minoring in the other.
DEPARTMENT OF MATHEMATICS

Graduate Faculty:

Borm, Alfred Ervin, Associate Professor of Mathematics. B.S., The University of Texas at Austin; M.A., University of Washington; Ph.D., The University of Texas at Austin.

Carlisle, Washington Homer, III, Assistant Professor of Mathematics. B.A., M.A., Ph.D., Emory University.

Chatfield, John Albert, Associate Professor of Mathematics. B.S., MA., Southwest Texas State University; Ph.D., The University of Texas at Austin.

Crossley, Sterling Gene, Assistant Professor of Mathematics. B.A., Rice University; M.S., Ph.D., Texas Tech University.

Doerr, Roy Frederic, Assistant Professor of Mathematics and Supervisor of Student Teaching. B.S. in Ed., Southwest Texas State University; M.A., The University of Texas at Austin.

Early, Grady Gaston, Assistant Professor of Mathematics. B.A., Arlington State College; M.S., Ph.D., Texas A&M University.

Edgell, John James, Jr., Assistant Professor of Mathematics and Supervisor of Student Teaching. B.S., Lamar State College of Technology; M.A., Sam Houston State University.

Fry, Morris Aaron, Associate Professor of Mathematics. B.S., M.S., The University of Houston.

Hazelwood, Donald Gene, Assistant Professor of Mathematics. B.A., The University of Texas at Austin; M.A., Ph.D., Syracuse University.

Helton, Burrell Washington, Professor of Mathematics. B.S., United States Military Academy; B.B.A., M.A., Ph.D., The University of Texas at Austin.

McClung, Harry Byrom, Assistant Professor of Mathematics. B.A., M.S., Ph.D., West Virginia University.

McEwen, Henry Nylon, Professor of Mathematics. B.S., M.Ed., Hardin-Simmons University; Ph.D., The University of Texas at Austin.

Northcutt, Robert Allan, Associate Professor of Mathematics and Chairman of the Department of Mathematics. B.A., M.A., Ph.D., The University of Texas at Austin.

Poirot, James Louis, Assistant Professor of Mathematics. B.S., M.S., Ph.D., Texas Tech University.

Porter, Milton Beverly, Associate Professor of Mathematics. B.A., Southwest Texas State University; M.A., The University of Texas at Austin.
Ratliff, Ernest Francis, Jr., Assistant Professor of Mathematics. B.S., McNeese State College; M.A., Ph.D., University of Oklahoma.

Tulloch, Lynn Hardyn, Professor of Mathematics. B.A., Baylor University; M.A., Brown University; Ph.D., The University of Texas at Austin.

COURSES OFFERED:

5301 Partial Differential Equations. (3-0) Credit, 3 hours. The theory and application of partial differential equations; deduction of the differential equation; use of vector and tensor methods; equations of the first order; wave equations; vibrations and normal functions; Fourier series and integral; Cauchy's method, initial data; methods of Green; potentials; boundary problems; methods of Riemann-Volterra; characteristics. May be repeated once for additional credit.
   Prerequisite: Mathematics 3323 and consent of the instructor.

5303 History of Mathematics. (3-0) Credit, 3 hours. A study of the development of mathematics and of the accomplishments of men who contributed to its progress. Cannot be used on degree plan of a student who takes Mathematics 5399 or 5699.

5305 Advanced Course in Probability and Statistics. (3-0) Credit, 3 hours. Advanced topics in probability and statistics. May be repeated once for credit.
   Prerequisite: Mathematics 4305.

5307 Modern Algebra. (3-0) Credit, 3 hours. Topics in modern algebra. Materials will be adapted to the needs of the class. May be repeated once for credit.
   Prerequisite: Mathematics 4307 or consent of instructor.

5309 Foundations of Analysis. (3-0) Credit, 3 hours. A critical study of the bases of mathematical analysis. Material will vary according to the needs of the class. May be repeated once for credit.
   Prerequisite: Mathematics 4315 or consent of the instructor.

5311 Foundations of Differential Equations. (3-0) Credit, 3 hours. A critical study of the foundations of derivation equations, operator spaces, and such basic topics. Recent developments in this field will be investigated and independent investigation will be encouraged. May be repeated once for credit.
   Prerequisite: Mathematics 3323 and consent of the instructor.

5312 Functions of a Complex Variable. (3-0) Credit, 3 hours. Modern developments in the field of functions of a complex variable. May be repeated once for credit.
   Prerequisite: Mathematics 4315 or 4373, or consent of the instructor.

5317 Problems in Advanced Mathematics. (3-0) Credit, 3 hours. Open to graduate students on an individual basis by arrangement with the
mathematics department. A considerable degree of mathematical maturity is required. May be repeated once for additional credit.

5319 The Theory of Integration. (3-0) Credit, 3 hours. A course in the theory of integration, with special emphasis on Lebesgue integrals. A course in the theory of real variables, with a knowledge of point set theory, is desirable as a background for this course. A considerable amount of mathematical maturity is required.

Prerequisite: Mathematics 4313 or 4373, and consent of the instructor.

5330 Topics in Topology. (3-0) Credit, 3 hours. Selected topics in topology. Material will be varied according to the needs and interests of the class. May be repeated once, with a different emphasis.

Prerequisite: Mathematics 4330.

5373 Theory of Functions of Real Variables. (3-0) Credit, 3 hours. This course pre-supposes a year's course of calculus and preferably an elementary course in differential equations or in advanced calculus. The course discusses those topics which will enable the student to obtain a better grasp of the fundamental concepts of the calculus of real variables and the more recent developments of this branch of analysis.

5380 Topics in Ordinary Differential Equations. (3-0) Credit, 3 hours. Selected topics dealing with the theory and solution of ordinary differential equations. Material will be varied according to the needs and interests of the class. May be repeated once for credit.

Prerequisite: Mathematics 3329 or Mathematics 4306.

5399 or 5699 Thesis. Credit, 3 or 6 hours.
DEPARTMENT OF PHYSICS

GRADUATE FACULTY:

Anderson, Robert Ernest, Professor of Physics and Chairman of the Department of Physics. B.S., M.S., Texas A&I University; Ph.D., The University of Texas at Austin.

Crawford, James Robert, Assistant Professor of Physics. B.S., Phillips University; M.S., University of Arkansas; Ph.D., Kansas State University.

Jackson, William Roy, Jr., Associate Professor of Physics. B.A., Columbia College; M.A., Ph.D., Rice University.

Michalk, Victor Edward, Associate Professor of Physics. B.S., M.S., Texas A&I University; Ph.D., Texas A&M University.

Spear, Arthur Walsh, Associate Professor of Physics. B.A., M.A., Southwest Texas State University.

COURSES OFFERED:

5311 Nuclear Physics. (3-0) Credit, 3 hours. The study of radioactivity, nuclear structure, binding energies, and particle accelerators. (S)
Prerequisite: Physics 3312 and Mathematics 3372.

5312 Quantum Mechanics, Part II. (3-0) Credit, 3 hours. A continuation of Quantum Mechanics, Part I, Physics 4312. Topics covered include time independent and time dependent perturbation theory, multiparticle systems and the Pauli exclusion principle.
Prerequisite: Physics 4312, or approval of instructor.

5320 Solid State Physics. (3-0) Credit, 3 hours. An introductory course in the theory of solids.
Prerequisite: Mathematics 3323.

5325 Elementary Concepts of Physics. (3-0) Credit, 3 hours. This course is designed to up-grade the physics background of elementary school teachers. The emphasis is placed on concepts of physics rather than using the mathematical approach. Special attention will be given to recently developed concepts which are of interest in the elementary schools.
Prerequisite: Major in elementary education.

5330 Electromagnetic Field Theory, Part II. (3-0) Credit, 3 hours. A continuation of the introduction to electromagnetic field theory presented in Physics 4310. Topics covered include Maxwell's equations and applications, special theory of relativity, electrodynamics.
Prerequisite: Physics 4310 or approval of the instructor.

5340 Advanced Dynamics, Part II. (3-0) Credit, 3 hours. Classical mechanics at an advanced level. Topics covered include special relativity in
classical mechanics, Hamilton equation of motion, canonical transformations and Hamilton-Jacobi theory.

Prerequisite: Physics 4313 or approval of the instructor.

*5370 Problems in Advanced Physics. (3-0) Credit, 3 hours. Open to graduate students on an individual basis by arrangement with the Department of Physics.

5395 Fundamentals of Research. (2-6) Credit, 3 hours. This course is available to graduate students only upon the invitation of the department. It may be repeated on the same basis.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

*May be repeated once with different emphasis for additional credit.
SCHOOL OF BUSINESS
SCHOOL OF BUSINESS

The School of Business offers the degree of Master of Business Administration consisting of a minimum of 30 hours of study including a thesis or 36 hours of study without a thesis. All hours may be taken within the curriculum of the School of Business with no minor requirements. Background normally consists of a baccalaureate degree in Business Administration or 30 hours in the field to include the following courses or their equivalents: accounting, 6 hours; economics, 6 hours; business law, 3 hours; finance, 6 hours; management, 3 hours; marketing, 3 hours; statistics, 3 hours.
DEPARTMENT OF BUSINESS ADMINISTRATION

GRADUATE FACULTY:

Abrahamson, Royce Lynnwood, Professor of Business Administration and Chairman of the Department of Administrative Management. B.S. in Ed., M.Ed., Ph.D., The University of Texas at Austin.

Bishop, Bill Joe, Professor of Business Administration. B.B.A., M.B.A., North Texas State University; Ph.D., The University of Texas at Austin, C.P.A.

Erickson, Maurice Jacob, Professor of Economics and Chairman of the Department of Economics. A.B., Kansas University; M.A., University of Nebraska; Ph.D., The University of Texas at Austin.

Humphrey, Joseph Lee, Assistant Professor of Business Administration, B.B.A., M.B.A., D.B.A., Texas Tech University.

Johnson, Jesse Breland, Professor of Business Administration. B.A., M.A., Baylor University, Ph.D., The University of Texas at Austin.

Johnston, Marvin Autry, Associate Professor of Business Administration. B.B.A., M.B.A., D.B.A., Texas Tech University, C.D.P.

Morgan, Celia Ann, Assistant Professor of Economics. A.A., Lamar State College of Technology; B.B.A., The University of Texas at Austin; M.A., Ph.D., University of Houston.

Reese, Otis Grant, Associate Professor of Business Administration. B.B.A., M.A., Southwest Texas State University, C.P.A.

Shields, Mayron, Professor of Business Administration. B.S., Stephen F. Austin State University; M.B.A., Ed.D., North Texas State University.

Stevenson, Robert Mahaffey, Professor of Business Administration. B.A., Duke University; M.A., Pennsylvania State University; D.B.A., Indiana University, C.P.A., C.L.U.

Wilson, Wilton Leland, Professor of Business Administration and Dean of the School of Business. B.B.A., M.S., Texas A&I University; Ph.D., University of Arkansas.

COURSES OFFERED:

5311 Current Developments in Marketing. (3-0) Credit, 3 hours. Advanced study of marketing functions and institutions; marketing structures, strategies, policies, and problems. Each student will be given an opportunity to examine developments of special interest to him.

5312 Seminar in Management. (3-0) Credit, 3 hours. Study and analysis of management theory; managerial functions; management principles; philosophies of management; analysis of nature and problems and
approaches to planning, organizing, decision making, and controlling through the study of recent relevant literature and selected cases.

5313 Administrative Policy. (3-0) Credit, 3 hours. An integrative approach to policy formulation and administration (decision making) to achieve organization objectives.

5314 Organization Behavior and Human Relations. (3-0) Credit, 3 hours. The analysis of interpersonal behavior in organizations through the study of the inter-relationship and impact of human, technical, economic, and social factors in business administration.

5321 Seminar in Marketing. (3-0) Credit, 3 hours. A study of the planning and co-ordination of marketing functions; marketing policies, and the analysis of marketing administration.

5320 Industrial Relations. (3-0) Credit, 3 hours. A study of current developments and practices in industrial relations, including executive development programs; employee communications; wage administration; labor force and labor market; employee services; human relations and productivity; the labor agreement; settlement of labor disputes and current contributions to personnel theory.

5332 Quantitative Methods. (3-0) Credit, 3 hours. This course will review mathematical procedures, probability, sampling, and sampling distributions. Model building and simulations will be studied with topics to include simplex, MODI, transportation, index and ratio-analysis methods; applications to production management and marketing problems along with capital investment decisions; Monte Carlo method; waiting lines; incremental and total value analysis; and statistical quality control; computer applications will be introduced.

Prerequisite: Six hours of Business Administration Statistics.

*5333 Problems in Business Administration. Credit, 3 or 6 hours. The student is here given the opportunity to work in the field of his special interest, particularly in the subject of accounting, business law, marketing, statistics, finance, and insurance. The course will be conducted by conferences between the student and instructors concerned. Problems will be assigned as nearly as possible for the needs of the individual student.

5340 Seminar for Computer Science in Business. (3-0) Credit, 3 hours. The design, construction, and programming of computer solutions in the fields of business and economics.

5361 Advanced Accounting Theory. (3-0) Credit, 3 hours. An examination of the theory of business income, evaluated in the light of criticisms implicit in other concepts of income. The social significance of accounting; valuation principles and presentation of financial statements.

5362 Cost and Managerial Accounting Theory. (3-0) Credit, 3 hours. A study of recent developments and controversial topics in the area of cost

*May be repeated once with different emphasis for additional credit.
and managerial accounting. Includes a discussion of quantitative techniques and their applicability to accounting problems.

5363 Contemporary Accounting Theory. (3-0) Credit, 3 hours. A study of the development of current accounting theory including pronouncements by the Accounting Principles Board. Emphasis is placed on currently controversial topics.

5367 Advanced Seminar in Finance. (3-0) Credit, 3 hours. An advanced study of financial analysis including contemporary problems and methods used in financing business enterprise, both internally and externally; interest rate trends, government regulation of securities markets, taxation and the public debt; sources of information useful for research in solving financial problems.

5373 Comparative Economic Systems. (3-0) Credit, 3 hours. An analysis of the basic theories and institutions of economic systems, including a comparison of the American Economic System with the socialistic and communist economies.

5378 Advanced Economic Theory. (3-0) Credit, 3 hours. This course treats the vital function of an economic system to sustain a satisfactory rate of economic growth consonant with social goals reflected in economic stabilization goals and policy. A brief historical review of theories of development, comparative means of effecting economic integration and solving economic problems, delineation of the scope and method of a theory of development, the role of aggregate economics in analysis of growth, its measurement, and providing policy-making premises; emphasis upon intersectional and interregional economic relations, and the role of price in furnishing "coefficients of choice" to guide policy-making. A corollary goal is to present monetary theory, which overlaps both micro- and macro-economics, as the "bridge" between these two major areas of economic theory.

5387 Financial Control. (3-0) Credit, 3 hours. A study of the financial framework within which businesses operate and the principles governing operational decisions and the flow of funds through the individual company. Topics include accounting principles and conventions, price level problems related to accounting data, limitations associated with financial statements, basic procedures for statement analysis and interpretation, evaluation of alternate methods of business financing, and controls effected through budgets and accounting reports.

Prerequisite: Business 5361 or consent of the graduate adviser.

5390 Business Research Methods. (3-0) Credit, 3 hours. Designed to aid graduate students in analyzing reports and evaluating research and in planning research reports. Selection of research problems, sources of data, analysis, presentation, report writing, directed reading, class reports, and a research problem.

5399 or 5699 Thesis. Credit 3 or 6 hours.
SCHOOL OF EDUCATION
SCHOOL OF EDUCATION

DEPARTMENTS, DEGREES:

The Department of Agriculture offers in conjunction with the Department of Education the degree of Master of Education with a concentration in Agricultural Education. This degree consists of 18 hours of Education, 6 hours of Agricultural Education, and 18 hours of Agriculture.

The Department of Education offers a variety of degrees and programs. Before proceeding into any field of Education at SWTSU, the degree applicant should inquire as to certification requirements associated with, or prerequisite to the degree. One must constantly keep in mind that certification requirements and graduate degree requirements may not be related in any way and that the satisfactory completion of degree requirements may not always lead directly to certification.

In general, majors in any field of education who have not completed student teaching must complete this course as a background requirement or obtain a waiver from the Department of Education on the basis of teaching experience.

While it is possible to earn the degree of Master of Arts in all areas of Education with a minimum of 30 semester hours including the thesis, professional certification requirements generally lead the candidate to select the Master of Education degree.

The degree of Master of Education usually consists of 36 hours without the thesis, with several variations of hours within the major and minor/minors. A major in Counseling and Guidance consists of 21 hours of Education and an academic minor of 15 hours, or a split minor of 9 hours and 6 hours. The most generally accepted minor is a split program of Psychology and Sociology. A major in Special Education consists of at least 36 hours with areas of concentration in Language/Learning Disabilities, Speech/Hearing Therapy, Mental Retardation, and the Emotionally Disturbed.

A major in Secondary Education usually consists of an Education major of 18 hours, an Academic Specialization of 12 hours, and an academic resource area of 6 hours. In conjunction with administration programs the degree often requires 24 hours of education, 6 hours of academic specialization, and 6 hours of academic resource area. A major in Elementary Education usually consists of at least 21 hours of Elementary Education and 15 hours from an academic field or 15 hours of a composite Methods and Materials minor.

In addition to degrees offered by the Department of Education, there are a number of graduate level endorsements and programs which are of interest to graduate students. The 45 hour program in administration is offered in conjunction with the degree in Secondary Education. Generally speaking, all inquiries concerning specializations such as reading and certification as counselor, supervisor, guidance associate, early child-
hood, and visiting teacher should be directed to the Department of Education.

The Department of Health and Physical Education offers the degree of Master of Arts and the degree of Master of Education. The degree of Master of Arts consists of at least 30 hours, including a thesis, with a major of 18-24 hours in Physical Education. The degree of Master of Education consists of a minimum of 36 hours, with a major of 21 hours in Physical Education. It is permissible in either instance to major in Physical Education and Minor in Health Education.

The Department of Psychology does not presently offer a major. A large number of graduate programs include a Psychology minor or a split minor of Psychology and Sociology.

The Department of Special Education offers the Degree of Master of Education with Special Education concentrations in: Language/Learning Disabilities, Speech/Hearing Therapy, The Emotionally Disturbed, and Mental Retardation.

The Department of Industrial Arts offers the degree of Master of Arts and Master of Education. The Master of Arts consists of at least 30 hours, with a major of 18-24 hours including a thesis, and a minor of 6-12 hours. The Master of Education consists of at least 36 hours, with a major of 21 hours without a thesis and a minor of 15 hours.
DEPARTMENT OF AGRICULTURE

GRADUATE FACULTY:

Buie, Tollie Raymond, Professor of Agriculture. B.S., East Texas State University; M.S., Texas A&M University; Ed.D., Michigan State University.

Elliott, James Denton, Professor of Agriculture. B.S., M.S., Oklahoma State University; Ph.D., Cornell University.

Gregg, Cecil Manren, Professor of Agriculture. B.S., East Texas State University; M.Ed., Texas A&M University; Ph.D., Michigan State University.

Miller, Roy V. Jr., Professor of Agriculture and Chairman of the Department of Agriculture. B.S., Texas Tech University; M.S., Ph.D., Colorado State University.

Rydl, Glen Myrlin, Assistant Professor of Agriculture. B.S., M.S., Ph.D., Texas A&M University.

Shell, Lon Ray, Assistant Professor of Agriculture. B.S., M.S., Ed.D., Oklahoma State University.

COURSES OFFERED:

5313 Advanced Problems in Farm Crop Production. (3-0) Credit, 3 hours. Intensive study of the latest research in the production and harvesting of crops. Comparative study of the characteristics of the most recently recommended varieties of the chief farm crops grown in Texas. (SS)

5321 Advanced Range Management. (2-3) Credit, 3 hours. Advanced problems in range management such as range and ranch economics, control, and proper stocking. (S)

5347 Conservation of the Natural and Agricultural Resources. (3-0) Credit, 3 hours. A study of resources related to farm and community life, special emphasis on the conservation of soil, water, forest, range land, wildlife, minerals, health, and safety. Visiting consultant in the above fields will be used.

5370 Problems in Technical Agriculture. Credit, 3 to 6 hours. A conference course. Problems will be selected to meet the needs of the individual student.

5426 Classification and Management of Range Soils. (3-2) Credit, 4 hours. Classification and Management of range soils in Texas. The physical relationships of soil moisture, temperature, penetrability, and aeration to plant growth. Range condition classes, range sites, land classes, and problem areas as they affect management. (S)
AGRICULTURAL EDUCATION

5314 Problems in Teaching Vocational Agriculture. Credit, 3 to 6 hours. The student is given the opportunity to work on problems of special interest and need in teaching high school vocational agriculture. If taken for three semester hours credit, this course may be repeated for additional credit.

5318 Administration and Supervision of Vocational Education. (3-0) Credit, 3 hours. Problems of organization, administration, and supervision of vocational education. Study of the Smith-Hughes, the George-Barden, the National Defense Education, and other national and state laws that govern vocational education.
DEPARTMENT OF INDUSTRIAL ARTS

GRADUATE FACULTY:

Ballard, John Roger, Professor of Industrial Arts. B.S., M.A., Southwest Texas State University; Ed.D., Texas A&M University.

Bowers, Victor Lee, Professor of Industrial Arts and Chairman of the Department of Industrial Arts and Supervisor of Student Teaching. B.A., East Texas State University; M.A., Ph.D., Ohio State University.

Deck, William Luther, Professor of Industrial Arts. B.S., M.A., Southwest Texas State University; Ph.D., Ohio State University.

Walker, Joe Wayne, Assistant Professor of Industrial Arts. B.S., M.Ed., Ed.D., North Texas State University.

Windham, Billy Lee, Assistant Professor of Industrial Arts. B.S. in Ed., M.A., Southwest Texas State University; Ed.D., Texas A&M University.

COURSES OFFERED:

5381 Industrial Methods and Production Technique. (3-0) Credit, 3 hours. This course will furnish industrial arts teachers selected information regarding the structure of modern manufacturing methods and techniques. Students gain insight into enlightened industrial practices. Selected examples of the technology of a specific industry and analysis of its methods so that basic principles of production and selected techniques may be brought to students in the typical school situation.

5382 Housing and Industrial Arts. (3-0) Credit, 3 hours. Policies and practices in construction and allied industries, and their relationships to the production of housing; development of teaching materials dealing with selected aspects of housing as a community, family, and individual problem; determination of housing studies within the framework of industrial arts.

5384 Technical Problems in Industrial Arts. (3-0) Credit, 3-6 hours. A course for the industrial arts teacher who needs to become acquainted with new developments within the industrial arts curriculum and for the graduate student who desires to strengthen certain experiences initiated in undergraduate courses. Plans will be developed upon an individual basis.

5385 Modern Industries. (3-0) Credit, 3 hours. A course to assist teachers of industrial arts with the problem of guiding high school students to sources of information on technical, social, and economic aspects of modern industries. Individual and group studies will be made. Results will be submitted in a form suitable for publication.

5387 Planning Advanced Industrial Arts Laboratories. (3-0) Credit, 3 hours. Studies in depth of architectural, engineering, and educational problems encountered in designing, equipping, arranging, and specifying facility
requirements for advanced industrial arts courses at the senior high school level.

5388 New Developments in Industrial Arts. (3-0) Credit, 3 hours. Study of new concepts appearing in industrial arts since 1950 as a result of the increasing importance of technology.

5389 Curriculum Construction in Industrial Arts. (3-0) Credit, 3-6 hours. Techniques and procedures in selection, organization, and production of teaching materials for use in junior and senior high school courses. Course may be repeated once with different emphasis for additional credit.

5390 Research in Industrial Arts. (3-0) Credit, 3 hours. Identification, analysis, and evaluation of significant research in industrial arts education. Explanation of research techniques applicable to problems. Preparation of research reports with a view to publication.

5396 Technology for Teachers of Elementary Grades. (3-2) Credit, 3 hours. Course is composed of lectures, demonstrations, group and individual work, reports, laboratory work, term papers, in keeping with graduate course requirements. Experiences in the use of materials, tools, and projects adapted to the activity center of the elementary classroom.

5399 or 5699 Thesis. Credit, 3 or 6 hours.
DEPARTMENT OF EDUCATION

GRADUATE FACULTY:

Blythe, Hal Tucker, Associate Professor of Education. B.S.E., M.S.E., State College of Arkansas; Ph.D., East Texas State University.

Bowles, Delbert Richard, Associate Professor of Education. B.S., Southern Methodist University; M.Ed., Ph.D., The University of Texas at Austin.

Boyd, Dorothy Lucille, Associate Professor of Education. B.S., M.Ed., Ph.D., The University of Texas at Austin.

Brown, William Frank, Professor of Education. B.S., Trinity University; M.A., Ed.D., The University of Texas at Austin.

Bynum, James Lowell, Assistant Professor of Education. B.S., McMurry College; M.Ed., West Texas State University; Ed.D., Texas Tech University.

Conoley, Colleen Wyatt, Associate Professor of Education. B.A., University of Arkansas; M.A., Ph.D., The University of Texas at Austin.

Dorsey, Oslar Lee, Professor of Education and Dean of the College of Professional Schools. A.A., Angelo State University; B.S., Abilene Christian College; M.Ed., Ph.D., Texas A&M University.

Garland, James Jasper, Professor of Education and Chairman of the Department of Education. B.S., M.A., Ed.D., Baylor University.

Hardesty, Walton Duane, Assistant Professor of Psychology. B.S., M.S., Texas A&M University; Ed.D., The University of Houston.

Hefner, Robert Lee, Assistant Professor of Education. B.S., East Texas State University; M.Ed., North Texas State University; Ph.D., Texas A&M University.

Henry, William Gammon, Jr., Associate Professor of Education and Director of Audio-Visual Aids. B.M., North Texas State University; M.S.Ed., Ph.D., Indiana University.

Hopson, Naomie, Assistant Professor of Education. B.S., M.Ed., West Texas State University; Ed.D., Western Colorado University.

Juel, Martin Oliver, Professor of Education. B.A., St. Olaf College; M.Ed., Ph.D., University of Minnesota.

McCane, Hazel Beatrice, Professor of Education. B.S., M.S., North Texas State University; Ph.D., Northwestern University.

McDaniel, Elizabeth Logan, Assistant Professor of Education. B.A., University of California at Los Angeles; M.S., University of Illinois; Ph.D., The University of Texas at Austin.
Miller, Damon J., Assistant Professor of Education. B.S., M.Ed., Howard Payne College; Ph.D., The University of Texas at Austin.

Moore, Joe Midge, Associate Professor of Education. B.S., M.Ed., Ed.D., North Texas State University.

Newberry, William Clarke, Associate Professor of Education. B.S., Southwest Texas State University; M.Ed., Stephen F. Austin State University; Ed.D., The University of Texas at Austin.

Nicosia, Ralph Timothy, Assistant Professor of Education. B.S., M.Ed., Ed.D., North Texas State University.

Smith, Milton Lloyd, Associate Professor of Education. B.S., University of Corpus Christi; M.S., Texas A&I University; Ph.D., The University of Texas at Austin.

Sparks, Rebecca Lewis, Assistant Professor of Education. B.A., Baylor University; B.S., Texas Woman's University; Ed.D., North Texas State University.

Stevens, Paul Lester, Associate Professor of Education. B.S., Texas A&M University; M.Ed., The University of Houston; Ph.D., Texas A&M University.

Stone, Jerome Wilson, Professor of Education. A.B., Southeast Missouri State College; M.A., University of Arizona; Ed.D., University of Southern California.

Thomas, Jerry Leon, Assistant Professor of Education. B.S., M.S., Western New Mexico University; Ph.D., The University of Texas at Austin.

Williamson, Bobby Lee, Associate Professor of Education. B.S., Texas A&M University; M.Ed., Southwest Texas State University; Ed.D., Colorado State College.

Worley, Stinson Ezell, Professor of Education. B.A., Baylor University; M.Ed., Ed.D., North Texas State University.

Zunker, Vernon George, Professor of Education and Director of the Counseling Center. B.S., Texas Lutheran College; M.Ed., Trinity University; Ed.D., University of Houston.

COURSES OFFERED:

5201 Methods in Secondary Aviation/Aerospace. (2-0) Credit, 2 hours. One of the two courses for qualifying as teacher of Aviation/Aerospace Education in the secondary school. Deals with means of implementing the secondary program, and with techniques, methods, and resources for the secondary course.

5305 Group Testing. (3-2) Credit, 3 hours. Problems of administering and interpreting educational tests for group administration; utilization of educational measurements—aptitude, achievement, attitude, and adjust-
ment—in national, state and local programs; elementary statistical methods and test construction problems; laboratory activities in test construction, administration, scoring and interpretation.

5306 Evaluative Techniques for the Classroom Teacher. (3-0) Credit, 3 hours. An indepth study of the objectives of evaluation, teacher-made tests, interpretation of standardized test results, self-evaluation, school evaluation, sociometric techniques and their use, and reporting to parents.

5313 Human Growth and Development I. (3-0) Credit, 3 hours. Training for teachers (elementary or secondary), counselors, supervisors, and administrators to improve their professional effectiveness through the direct study of individual pupils according to an organizing framework of scientific knowledge of human growth and development; emphasis on the physical processes, the affectional processes, and peer relationship.

This course is offered as a workshop in the summer session, with two hours of laboratory each week by arrangement.

5314 Human Growth and Development II. (3-0) Credit, 3 hours. For teachers (elementary or secondary), counselors, supervisors, and administrators to increase their understanding of the motivation, the developmental level, and the abilities of individual pupils by a direct study of individuals in the classroom; emphasis upon increasing scientific knowledge of culture, self-development, and self-adjusive areas of development.

This course is offered as a workshop in the summer session, with two hours of laboratory each week, by arrangement.

Prerequisite: Education 5313 or approval of the instructor.

5319 Curriculum and the Young Child, I (Kindergarten). (3-0) Credit, 3 hours. Organization and evaluation of programs for young children. Translating developmental knowledge into effective practices which may be employed in the total education of young children.

5320 Psychology in Teaching Reading. (3-0) Credit, 3 hours. A detailed study of the psychological bases of the reading process: the perceptual nature of reading, learning principles, sensory aspects, physiological correlates, phonemegrapheme correspondence, personality factors, concept formation.

5321 The Improvement of Reading Instruction. (3-0) Credit, 3 hours. This course attacks two problems: (1) the improvement of the basic reading program; (2) the correction of reading difficulties, in individuals or in groups; the psychology of reading; factors involved in reading, characteristics of a good reading program; determination of the development of readiness; development of basic reading abilities; diagnosis of reading difficulties; improvement of recognition techniques; vocabulary, comprehension, and interest.

5323 Diagnosis of Reading Problems. (3-0) Credit, 3 hours. A study of the nature and causes of reading problems including observations, demonstrations, and supervised practice in the techniques of diagnosis. Attention
is given to interview procedures, diagnostic instruments, standard and informal tests, and report writing.

5325 Workshop in Corrective Reading for Elementary Teachers. Credit, 3 hours. Lectures, demonstrations, group and individual work, and laboratory practice; types, causes, and analysis of reading difficulties; the choice and preparation of remedial materials, and procedures in their use; the planning of preventive and corrective programs. Laboratory sessions include opportunity to apply analytic corrective techniques.

5326 The Elementary School Curriculum. (3-0) Credit, 3 hours. Principles of curriculum development and organization, selection of curriculum experiences, planning of various types of units, and overview of curriculum outcomes in various areas, guiding school experiences and unit activities, and actual practice in preparing curriculum materials.

5327 Principles and Practices in the Elementary School. (3-0) Credit, 3 hours. This course defines and interprets the newer trends in elementary school practices; the philosophy and objectives of the elementary school, and procedures for implementing these objectives; classroom organization and management, the principles of unified learning as applied to school experiences, procedures for planning and developing experiences, meeting individual needs, and evaluation.

5328 Elementary Social Studies: Curriculum Problems. (3-0) Credit, 3 hours. Development and purposes of the social studies curriculum; contributions of the social sciences to the social studies curriculum; relation of the social studies to the total elementary program; curriculum construction, supervision, and evaluation; current issues and trends.


5330 Curriculum and the Young Child, II (Kindergarten). (3-0) Credit, 3 hours. Advanced study of curriculum and materials used in educational programs for young children.
Prerequisite: Senior standing or above.

5333 The Secondary Curriculum. (3-0) Credit, 3 hours. A brief history of curriculum development with special emphasis upon the Texas curriculum program; basic principles of curriculum making, and techniques of curriculum construction and installation; aims and purposes of the curriculum as a function in perpetuating and improving democratic ideals; attention to significant researches in curriculum development.
5334 Public School Curriculum Leadership. (3-0) Credit, 3 hours. This course is an examination of educational leadership as it relates to curriculum development and improvement. Consideration is given to the administrator's role in identifying and implementing innovations in curriculum construction at all levels, furnishing leadership in coordinating educational offerings in elementary and secondary schools; diagnosing and prescribing learning activities for all students' needs; planning and evaluating curriculum content and changes; and designating personalized programs in specific skill areas such as reading.

5340 Public School Administration. (3-0) Credit, 3 hours. The overall principles of administration of public schools, preliminary to courses with more intensive study of specific problems; relations with the board of education, problems concerning the school plant, business and finance, pupil personnel activities, the curriculum, supervision of instruction, personnel, and public relations.

5341 Supervision of Instruction. (3-0) Credit, 3 hours. Fundamental problems of the supervision of instruction in the small and moderately sized public schools; the nature and organization of supervision, supervisory plans and principles; teacher participation in forming educational policies; effect of recent educational practices upon supervision, duties, relationships, and training of supervisory officials; standards for judging teachers; methods of improving instruction; case studies in supervision; the use of conferences, teacher's meetings, demonstration teaching, visitation, and research studies as supervisory agencies.

5342 Supervision of the Elementary School. (3-0) Credit, 3 hours. The general organization of the elementary school; problems of classification, grouping, promotion and progress, school and community relations; the principal's routines; in-service training and guidance of teacher growth; the improvement of other factors in the teacher-learning situation.

5343 Supervision of the Secondary School. (3-0) Credit, 3 hours. Such problems as the organization of the secondary school; classification, promotion, and progress; co-curricular activities; duties of the principal; school and community relations; in-service training and the guidance of teacher growth; supervisory principles and plans; standards for judging teaching; methods of improving instruction; methods of follow-up on both drop-outs and graduates.

5344 School-Community Relations. (3-0) Credit, 3 hours. The development of concepts and methods of value in bringing closer integration of the school and the community; the contribution of the teacher, supervisor, guidance worker, and administrator to the improvement of school-community relations; emphasis upon ways to promote better community relationships; bridges between the school and community; importance of community life in the educative process; role of the school in building better communities; and the community school concept—its meaning and outstanding examples of its practice.
5346 The Principalship. (3-0) Credit, 3 hours. Duties at both elementary and secondary levels; elements common to all; work in areas where functions are sharply differentiated at various levels. Consideration of such topics as these: The place of the principal in the administrative organization, community relationships, his business and personnel functions, office management, scheduling, administration of the curriculum, the library and other auxiliary services, the extra-curricular program, the guidance program, the school plant.

5348 The Nature and Supervision of Student Teaching. (3-0) Credit, 3 hours. Consideration is to be directed to the problems and practices of educators who accept the responsibility of supervision and participation in the student teaching program. A seminar approach is designed to aid the current as well as the prospective supervising teacher in reviewing appropriate literature; understanding program procedures; analyzing current practices and techniques; and developing materials which will aid in the effective implementation of the program.

5349 Interpersonal Behavior. (3-0) Credit, 3 hours. Process in interpersonal behavior through formal and informal groups. Role performance in interpersonal transactions. Status in group structure. Parameters on behavior created by personality organizational structure, and leadership considerations. Organizational change and group behavior.

5350 Organization and Administration of a Guidance Program. (3-0) Credit, 3 hours. Practical problems in organizing, installing, and administering a guidance program. Units on (1) principles and purposes underlying guidance; (2) the present status of guidance; (3) relationships between the administrator, guidance director, and counselors; (4) functions of the classroom teacher in the program; (5) supervision of the program; and (6) evaluation of the program.

5354 Counseling Techniques for Personnel Workers. (3-0) Credit, 3 hours. Techniques for counseling individuals and groups; the brief interview, the counseling interview, and psychological counseling in the light of both directive and non-directive techniques; the use of supplementary aids such as records, reports, sociometric techniques, and referrals; techniques of group therapy, verbal and non-verbal. All procedures are studied in reference to practical situations.

5355 Vocational Guidance. (3-0) Credit, 3 hours. An introduction to the nature and use of occupational information in counseling and special group guidance classes; sources of information, methods of developing information through job analysis, and community surveys.

5357 Individual Testing. (3-2) Credit, 3 hours. Problems of administering and interpreting psychological tests designed for individual administration; the utilization of intelligence, proficiency and projective tests in evaluation, classification and prediction. Laboratory activities in test administration, scoring and interpretation of the Wechsler Intelligence Scales. Prerequisite: Ed 5305 or Ed 5306
5358 Group Procedures in Guidance. (3-0) Credit, 3 hours. A presentation of the materials and techniques of group approaches to vocational, education, emotional, and social guidance. Part of the course is devoted to the theories and techniques of group therapy in the treatment of emotional and educational maladjustment. Techniques for the utilization of the home room, career days, field trips, and the incorporation of group guidance in the curriculum are explored.

5359 Individual Testing (Stanford-Binet). (3-0) Credit, 3 hours. Problems of administering and interpreting the Stanford-Binet. Study of the utilization of individual intelligence, proficiency, and projective tests in evaluation, classification and predictions. Laboratory activities in test administration, scoring and interpretation.
Prerequisite: Ed 5305 or Ed 5306

5370 Psychology of Learning. (3-0) Credit, 3 hours. A study of the basic problems in the acquisition of responses, treating with such constructs as reinforcement, extinction, retention, forgetting, problem solving motivation, and punishment. Major theories are treated through attention to classical experiments, but greatest emphasis is given contemporary research. See Psychology 5370.

5372 Philosophical Foundations of Education. (3-0) Credit, 3 hours. An overview of the field of educational philosophy as related to the spectrum of human events and the educative process in particular. Designed for Master's Degree students without previous graduate work in philosophy or philosophy of education.
Prerequisite: Graduate standing.

5374 Administration of Special Problems. (3-0) Credit, 3 hours. Analysis of legal, academic, and administrative requirements for special programs in the public schools. Emphasis is on special, vocational-technical and career education. Attention will be given to current state and federally funded programs requiring special administrative skills.

5375 The School Plant. (3-0) Credit, 3 hours. A study of plans for determining the extent and character of present and future building and equipment needs of a school unit; efficiency of present plant; operation and maintenance, planning the building program.

5378 Problems in Education. (3-0) Credit, 3 hours. Individual problems not related to thesis or research problems. Designed to place emphasis on selected areas of study. A number following the course title on the permanent record will indicate the area of emphasis according to this code: (1) Administration, (2) Counseling, (7) Supervision, (8) Elementary, (9) Secondary, (10) School Psychology. For graduates only.

5385 Psychological Services in the School. (3-0) Credit, 3 hours. Concepts and procedures utilized in the prevention, diagnosis, treatment or referral, and rehabilitation of academic and behavior problems among children and adolescents; consultation with school personnel regarding...
pupil placement, curriculum design, the mental health of students and educational experiments.

5386 Professional Problems in School Psychology. (3-0) Credit, 3 hours. The role of the school psychologist in relation to the school administrators, guidance and counseling personnel, teachers, and parents. Professional development. The ethical position of the school psychologist.

5389 Internship Practicum. Credit, 3-6 hours. Offered separately for administrators, counselors, supervisors and those who are candidates for positions in various areas of special education; will vary with the field chosen. A practicum is included for all like candidates for planning purposes, for discussions, and for evaluation. When taught out of town, a special fee is charged. A number following the course title on the permanent record will indicate the area, according to this code: (1) Administration, (2) Counseling, (7) Supervision, (10) School Psychologists.

5390 Research Seminar in Elementary Education. (3-0) Credit, 3 hours. A course in which each student will be given an opportunity to choose for study special problems to fit his particular needs and interests; research procedures needed in the preparation of a thesis or other research reports; to demonstrate his mastery of these procedures, the student will present a research paper on a selected problem.

Credit may be applied toward certification as elementary principal, or as a teacher of the mentally retarded, when an appropriate research problem is chosen.

A number following the course title on the permanent record will indicate the area, according to this code: (1) Administration, (4) Mental Retardation, (7) Supervision.

5391 Research Seminar in Secondary Education. (3-0) Credit, 3 hours. Problems in secondary education; emphasis on research procedure; a research paper is required of each student.

Credit may be applied toward certification as a secondary principal or as a counselor, or for credit in supervision when an appropriate research problem is chosen.

A number following the course title on the permanent record will indicate the area, according to this code: (1) Administration, (2) Counseling.

5392 The Community Junior College. (3-0) Credit, 3 hours. An introduction to the community junior college and to its roles and functions in American education. Special attention will be directed to the evolution, development, patterns of organization, purposes, programs, personnel, and current issues of the community junior college.

5393 Community Junior College Curriculum. (3-0) Credit, 3 hours. A study of curriculum development in the community junior college with special emphasis upon current trends and issues relating to technical-
vocational, adult and continuing education, community services, college transfer, and remedial functions of the curriculum.

5394 Teaching in the Community Junior College. (3-0 Credit, 3 hours)
A study of the junior college instructional program with emphasis upon the instructor, his preparation, qualifications, and performance. Instructional strategies appropriate to the needs of junior college students, including adults, will be studied.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

5401 Aeronautics for Secondary Teachers. (3-2) Credit, 3 hours. One of the two courses for qualifying as teacher of Aviation/Space Education in the secondary school. Deals with the fundamentals of aeronautics: the science of flight, aircraft systems and instruments, meteorology, navigation, and air traffic control and communications.

6340 Public School Administration. (3-0) Credit, 3 hours. The over-all principles of administration of public schools. Consideration of such topics as these: The processes of administration, organization—federal, state, local districts, instructional personnel and staff, relations with staff and school board.

6342 Organization, Administration, and Supervision of the Elementary School. (3-0) Credit, 3 hours. Duties and problems of the elementary school administrator. Consideration of such topics as these: The place of the elementary principal in the administrative organization, community relationships, organizational duties, problems of pupil personnel, instructional leadership. Special emphasis on supervision responsibilities of the elementary principal.

6343 Organization, Administration, and Supervision of the Secondary School. (3-0) Credit, 3 hours. Duties and problems of the secondary school administrator. Consideration of such topics as these: The place of the secondary principal in the administrative organization, community relationships, organizational duties, problems of pupil personnel, instructional leadership. Special emphasis on supervision responsibilities of the secondary principal.

6344 Educational Leadership through Human Relations. (3-0) Credit 3 hours. An examination of human relations concepts involved in educational administration. Consideration of such topics as the relationships involved in the social setting and educational environment; personal qualities of leadership conducive to good human relations; decision making; techniques of effective communications, group dynamics.

6346 Administrative Theory. (3-0) Credit, 3 hours. Major emphasis on administrative theory as related to decision-making: the first half of the course devoted to the consideration of administrative theories and principles, and the second half to the practical application of theory and principle to recent and/or continuing problems of school administration. De-
cision-making is emphasized as being the nature and substance of administration.

6347 The Superintendency. (3-0) Credit, 3 hours. The basic issues of problems confronting the superintendent, such as school buildings: planning, contracting, financing, equipping; fiscal and business management; taxation; budgeting, accounting; administering special services; transportation, food services, custodial services; management of personnel.

6348 Public School Laws. (3-0) Credit, 3 hours. Constitutional provisions, statutory laws, court decisions, and regulations governing public schools, with special reference to State and federal relationships.

6349 School Finance and Business Management. (3-0) Credit, 3 hours. Study of school funds on local, state, and federal level; budgeting, data processing; other systems of accounting, and reporting. Supply management as related to school efficiency. Maintenance of buildings, grounds, and equipment.

6378 Problems in Education. (3-0) Credit, 3 hours. Individual problems not related to thesis or research problems. Designed to place emphasis on selected areas of study. A number following the course title on the permanent record will indicate the area of emphasis according to this code: (1) Administration, (2) Counseling, (7) Supervision, (8) Elementary, (9) Secondary, (10) School Psychology. For post-graduates only.

6647 Studies in the Humanities and Sciences. (6-0) Credit, 6 hours. An interdisciplinary approach to furnish administrative candidates with greater depth in the social sciences, humanities, and science. Although offered under the auspices of the Department of Education, the course is taught by a team of two or more members from the arts and sciences, supplemented by visiting lecturers. The aim is to give insight on a man and his world, dealing with such sub-topics as Man in a Scientific Age, Man and Society, Man and Communication Media.
DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION

GRADUATE FACULTY:

Avent, Henrietta Hempstead, Professor of Health and Physical Education. B.A., University of Kentucky; M.A., New York University; D.P.E., Indiana University.

Hoffman, Keith Farrell, Assistant Professor of Health and Physical Education. B.S. in Ed., Southwest Texas State University; M.S. in Ed., Texas A&I University; Ph.D., North Texas State University.

Hughes, James Marshall, Professor of Health and Physical Education and Supervisor of Student Teaching. B.S., M.S., North Texas State University; Ed.D., The University of Texas at Austin.

Juel, Martin Oliver, Professor of Education. B.A., St. Olaf College; M.Ed., Ph.D., University of Minnesota.

Keck, Theodore Frederick, Professor of Health and Physical Education and Chairman of the Department of Health and Physical Education. B.S., Minot State College; M.S., Ph.D., University of Oregon.

Lancaster, Dorothy Mearle, Professor of Health and Physical Education. B.A., Baylor University; M.Ed., The University of Texas at Austin; Re.D., Indiana University.

Patton, Robert Edward, Associate Professor of Health and Physical Education. B.S. in Ed., M.Ed., Southwest Texas State University; Ed.D., North Texas State University.

Scott, Charlotte Robinson, Assistant Professor of Health and Physical Education, B.S., M.A., Ph.D., Texas Woman's University.

Smith, Jean Amelia, Professor of Health and Physical Education. B.S., M.S., McMurry College; D.P.E., Indiana University.

COURSES OFFERED:

PHYSICAL EDUCATION

5303 Advanced Athletic Training. (3-0) Credit, 3 hours. Advanced research into new methods concerning the prevention and care of athletic injuries, with special added emphasis on rehabilitation through use of physiotherapy techniques.

5304 Psychology for Motor Learning. (3-0) Credit, 3 hours. The nature of scientific research, theories of behavior development, learning and acquisition of motor skills, empirical principles of learning in relation to motor learning, and structural, physiological, and other factors in relation to motor skill performance.

5305 Advanced Course in Tests and Measurements in Physical Education. (3-0) Credit, 3 hours. Intensive study of existing tests in physical
education and the methods of test construction. Laboratory experiences are provided.

Prerequisite: Undergraduate course in tests and measurements or equivalent.

*5321 Workshop for Teachers in Physical Education. (3-0) Credit, 3 hours. Current problems in physical education, intramurals, curriculum, public relations, and athletics.

5345 Supervision of Health and Physical Education. (3-0) Credit, 3 hours. Basic principles of supervision as they apply to the field of health and physical education; the planning of programs and the techniques of supervision, such as interviewing, conferences, evaluation procedures, and visitations. Where possible, the students are given opportunities to practice these techniques.

5346 Literature and Research in Physical Education. (3-0) Credit, 3 hours. Directed reading, reports and discussions of the current literature in the field of physical education, a critical analysis of research techniques and the locations and securing of information, together with the steps necessary to the solution of research problems in this field.

5347 Problems in Health and Physical Education. (3-0) Credit, 3 hours. This course follows Physical Education 5346 and may be taken by a student who desires to work on a research problem. He gathers pertinent data and submits a report on the results of his research.

5348 Organization of the Physical Education Program for the Elementary School. (3-0) Credit, 3 hours. A course designed to help students overcome problems existing at the elementary level through program planning and organization. Discussions on problems of instruction, evaluation, philosophy and objectives to be attained; role of the teacher in sharing responsibility with all other teachers and administrators; the unique contribution of the physical education teachers in the educational process, the concept of the teacher as a community member, and suggestions for the improvement of the quality of professional education.

5353 Curriculum Development in Health and Physical Education. (3-0) Credit, 3 hours. The planning and operation of the total health and physical education program with special attention to overcoming difficulties peculiar to this field. Assistance will be given in preparing curriculum materials for specific purposes and situations.

5360 Administrative Problems in Health, Physical Education and Athletics. (3-0) Credit, 3 hours. Problems of organization and administration of the program in health, physical education, recreation, intramurals, extramurals, and competitive activities. The course brings together the phases of school administration and the relationship of the physical education program in the school and the community.

*May be repeated once with different emphasis for additional credit.
5390 Seminar in Athletic Coaching. (3-0) Credit, 3 hours. The logical basis underlying present techniques of coaching at all levels of the secondary schools.

5399 or 5699 Thesis. Credit, 3 or 6 hours.

HEALTH EDUCATION:

5310 History and Philosophy of Health Education. (3-0) Credit, 3 hours. An intensive study is made of the historical development of the school health program and the current political and public health issues and cultural changes which influence the school program.

5315 Evaluation and Test Construction in Health. (3-0) Credit, 3 hours. An intensive study is made of existing tests in health, of the methods of test construction, and of curriculum and program evaluation procedures. Laboratory experiences are provided.

5320 Foundation of Public Health. (3-0) Credit 3 hours. Indepth study of past and current public health programs. State Health Department personnel will appear as guest consultants to familiarize students with the many existing programs of health for the people of Texas.

5331 Seminar in Current Problems in Health Education. (3-0) Credit, 3 hours. Current national and international trends and problems in health which affect the school age. The course may be repeated once if the areas studies are different.

5340 Human Ecology. (3-0) Credit, 3 hours. This course deals with the biological relations between man, other living organisms and their environment. It is concerned with the relationships between the distribution of human groups with reference to material resources, and consequent social and cultural patterns.

5346 Literature and Research in Health Education. (3-0) Credit, 3 hours. A thorough study and critical analysis of health literature; special emphasis upon published and unpublished research studies. Types of research; development of research designs; procedures followed in the collection and treatment of data; general statistics for planning research designs, analyzing data and interpreting findings.

5347 Independent Study in Health Education Problems. (3-0) Credit, 3 hours. A course to be offered to graduate students to allow for independent study of one or more problems in health education that hold special interest or offer opportunity for professional improvement and growth. Open on an individual basis by special arrangement with the department chairman.

Prerequisite: Health Ed. 5346.

5399 or 5699 Thesis.
DEPARTMENT OF PSYCHOLOGY

GRADUATE FACULTY:

Hardesty, Walton Duane, Assistant Professor of Psychology. B.S., M.S., Texas A&M University; Ed.D., The University of Houston.

Merryman, Sandra Stroud, Assistant Professor of Psychology. B.A., George Peabody College of Teachers; Ph.D., Indiana University.

McMahan, Jack, Assistant Professor of Psychology. B.A., M.A., Ph.D., University of Houston.

Milstead, James Rand, Assistant Professor of Psychology. B.S., Texas Tech University; B.S., M.A., Ph.D., University of Houston.

Oles, Henry John, Assistant Professor of Psychology. B.A., Youngstown State University; M.A., Ph.D., University of Pittsburgh.

Sikes, Joseph Neville, Assistant Professor of Psychology. B.A., Carleton College; Ph.D, University of Texas at Austin.

Stimmel, David Theron, Associate Professor of Psychology and Chairman of the Department of Psychology. B.A., M.A., Southern Methodist University; Ph.D., University of Michigan.

Wheeler, Richard Wade, Assistant Professor of Psychology. B.S., M.A., Ph.D., The University of Houston.

COURSES OFFERED:

5315 Mental Hygiene. (3-0) Credit, 3 hours. Personality theory and development, and principles governing the development of human behavior; emphasis upon the various current theories of personality structure, experiences with the family, neighborhood, and school which are common to all individuals; especially designed for those majoring in counseling and special education.

5317 Group Processes and Interpersonal Dynamics. (3-0) Credit, 3 hours. A course designated to train future professionals in both the cognitive and personal issues related to group behavior.

5319 Techniques and Dynamics of Interviewing. (3-0) Credit, 3 hours. A survey of the principles and techniques of interviewing. Emphasis will be placed upon skills relative to the professional career aspirations of the student.

5320 Advanced Statistics. (3-0) Credit, 3 hours. A review of probability theory and parametric and non-parametric statistical techniques. Emphasis on the use of these techniques to interpret behavioral research studies.

Prerequisite: A course in undergraduate statistics.
5321 Experimental Design. (3-0) Credit, 3 hours. An overview of research methodology presented to develop an understanding of the essential characteristics of good behavioral research and to prepare students to conduct original research.

5322 Psychological Measurement Theory. (3-0) Credit, 3 hours. A broad survey of basic measurement theory including test reliability, validity, and the construction and interpretation of norms. Also includes a study of test construction practices and item selection techniques to enable the student to serve as a measurement consultant to the faculty of his school.

5323 Assessment in School Psychology. (3-0) Credit, 3 hours. An integration of information obtained from standardized tests and formal interviews in the diagnosis of problems presented by students. The course includes practical experience in meaningful report writing for use by other professional personnel and teachers.

5330 Psychology of Language. (3-0) Credit, 3 hours. A study of the development of language in children, with emphasis on language perception and production and the task of learning verbal behavior.

5331 The Emotional Problems of Childhood. (3-0) Credit, 3 hours. An examination of the social and biological factors that produce emotional disturbances in children. Special emphasis will be placed upon emotional factors bearing most directly upon adjustment in school.

5332 The Appraisal and Modification of Emotional Disturbances in Children. (3-0) Credit, 3 hours. Techniques of assessing types and extent of emotional disturbances. Emphasis will be placed upon procedures for modifying behavior so as to aid the child's adjustment to the school situation.

5370 Psychology of Learning. (3-0) Credit, 3 hours. A study of the basic problems in the acquisition of responses, treating with such constructs as reinforcement, extinction, retention, forgetting, problem solving, motivation, and punishment. Major theories are treated through attention to classical experiments, but greatest emphasis is given contemporary research.

5371 Learning Theory Applied to Behavior Modification. (3-0) Credit, 3 hours. Presents procedures for behavior modification developed from learning theory. Behavioral intervention and management techniques applicable to groups and individuals are covered, with special emphasis given to delinquency and school psychology. Procedures reviewed include contingency management routines, behavioral contracting, time-out methods, and aversive therapy plans.

Prerequisite: Psychology 5370 or equivalent.

The following are offered also as courses in Education. See the listings in the Education section for the respective course descriptions.

5313 Human Growth and Development I. (3-3) Credit, 3 hours.
5314 Human Growth and Development II. (3-3) Credit, 3 hours.

5354 Counseling Techniques for Personnel Workers. (3-0) Credit, 3 hours.

5357 Individual Testing. (3-2) Credit, 3 hours each.

The following course is offered also in the Department of Special Education. See the listing in the Special Education section for the description

5364 Psychological Problems of the Mentally Retarded. (3-0) Credit, 3 hours.
DEPARTMENT OF SPECIAL EDUCATION

GRADUATE FACULTY:

Brooks, Alta Rae, Assistant Professor of Special Education. B.A., M.A., University of Kansas; Ph.D., University of Wisconsin.

Dominguez, Olga Acevedo, Assistant Professor of Special Education. B.A., Texas A&I University; M.Ed., Southwest Texas State University.

Kelly, Ben Riley, Assistant Professor of Special Education. B.A., University of Florida; M.S., Florida State University; Ph.D., Case-Western Reserve University.

Toronto, Allen, Assistant Professor of Special Education. B.A., M.A., University of Utah; Ph.D., Northwestern University.

Ward, Doyle Glynn, Associate Professor of Special Education. B.A. Harding College; M.A., University of Illinois; Ph.D., University of Missouri.

Zedler, Empress Young, Professor of Special Education and Chairman of the Department of Special Education. B.A., M.A., Ph.D., The University of Texas at Austin.

COURSES OFFERED:

5301 Seminar in Speech Pathology. (3-0) Credit, 3 hours. Discussions of various areas of speech pathology with adaptation to individual needs and emphasis upon pilot studies.

5330 Language Learning Disabilities. (3-0) Credit, 3 hours. This is a course for the graduate student who did not have an introductory course in Language/Learning Disabilities at the undergraduate level, and who is seeking certification to teach Language/Learning Disabled pupils in the classroom. Language and learning models will be studied. Special emphasis will be given to the concept of developmental dyslexia.

5331 Seminar in Stuttering. (3-0) Credit, 3 hours. The course emphasizes description of the characteristics of stuttering at various stages of the disorder, and theories and research in the areas of etiology and management. Lecture and independent student review of literature.

5332 Cleft Palate and Voice Disorders. (3-0) Credit, 3 hours. The first part of the course deals with the anatomy and physiology of cleft palate and appropriate management techniques. The remainder deals with the characteristics and management techniques for other types of voice disorders.

5333 Language and Articulation Disorders in Children. (3-0) Credit, 3 hours. Normal development of speech and language contrasted with atypical development resulting in various types of articulation and language disorders. Articulation discussed as a phonological component of language.
5334 Diagnostic and Prescriptive Procedures for Disorders in Language/Learning and/or Behavior. (3-0) Credit, 3 hours. Procedures for evaluating and prescribing treatment for school children perceived as presenting problems in language/learning and/or behavior will be studied. Special emphasis will be placed upon developing sensitivity in observation of such children.

5341 Administration and Supervision of Special Education. (3-0) Credit, 3 hours. This course is to aid administrative and supervisory personnel responsible for organizing and improving programs in the area of special education. Topics of study will include (a) the current and projected Texas State Plan (TEA) for special education, (b) legal aspects and financing of special education, (c) planning a program, (d) administering special services, and (e) in-service improvement of instruction.

5342 Aphasia and Related Disorders. (3-3) Credit, 3 hours. A study of language disabilities in children and adults.

5343 Advanced Clinical Practice in Speech Pathology. (3-0) Credit, 3 hours. For graduate students completing their supervised clinical practicum in speech pathology. Supervised clock hours may be obtained with cases which stimulate an advanced level of specialized study. Special emphasis upon evaluative procedures.

5349 Phonetics of American English. (3-0) Credit, 3 hours. This is a course in phonology of the English language. It is for the graduate student who has not had a previous course in English phonetics. The phonemes and the intonation and stress patterns of American English and its dialects will be studied.

5360 The Education of Exceptional Children. (3-0) Credit, 3 hours. A survey course to orient students to the program and problems in the education of all types of exceptional children: the mentally retarded, slow learner, gifted, blind, partially sighted, deaf, hard of hearing, orthopedically handicapped, emotionally disturbed, socially maladjusted, brain-injured, and those with limited vitality, speech disorders, and language disorders. Field trips, lectures, and films supplement class lectures.

5362 Readings in Special Education. (3-0) Credit, 3 hours. A critical and thorough investigation of the literature in an area of audiology (section 3), mental retardation (section 4), physical handicaps (section 5), or speech pathology (section 6); language/learning disabilities (section 7), emotional disturbance (section 8), educational diagnostician (section 9); reported in a formal paper and discussed in seminar meetings with the appropriate instructor. Required of all graduate majors in Special Education who are candidates for the degree of Master of Education.

5363 Differential Diagnosis of Communication Problems. (3-0) Credit, 3 hours. This is a graduate course in the nature and causes of communicative problems designed especially for educational diagnosticians, teachers of language/learning disabilities, and speech pathologists who need ex-
perience in identifying, evaluating or prescribing therapy for persons with communication disorders.

5364 Psychological Problems of the Mentally Retarded. (3-0) Credit, 3 hours. A course dealing with the theories which attempt an explanation of intellectual deficiency. Etiologies and psychological mechanisms of mental retardation will be studied to provide bases for improvement in the performance of mentally retarded pupils.

5365 Education of the Neurologically Impaired. (3-0) Credit, 3 hours. Basic characteristics of physical disorders resulting in motor dysfunction and/or learning disabilities with special emphasis upon disorders deriving from neurological impairment; general principles for educating pupils with such impairments in public schools. Visiting lecturers from medical and para-medical fields will assist in teaching this course.

5368 Methods and Materials for Teaching Pupils With Specific Language Disabilities. (3-0) Credit, 3 hours. Methods and materials for teaching elementary classroom subject matter such as reading, spelling, and arithmetic to pupils with physical handicaps. Special emphasis upon teaching the child with cerebral palsy and related disorders.

5371 The Exceptional Child in the Family. (3-0) Credit, 3 hours. This course is to develop the understanding and professional skill of special education teachers and clinicians in counselling parents of exceptional children. Parents of children enrolled in demonstration classes or in the clinic will actively participate in the class. This class is for graduate students who have not had Psychology 5365 or its equivalent on the undergraduate level.

5373 Structured Language for the Slow Learner. (3-0) Credit, 3 hours. Basic factors of oral and written English: vocabulary, syntax, rhythm, and intonation, and sound elements that create academic difficulties for pupils with specific language disorders derived from environmental influences or neurological impairment.

5389 Internship Practicum. Credit, 3-6 hours. Laboratory and clinical teaching experiences in the areas of special education. When scheduled out of town, a special fee is charged. The area will be indicated according to this code, with the appropriate digit to be used as a section number; (3) hearing, (4) mental retardation, (5) physically handicapped, (6) speech therapy, (7) language/learning disabled, (8) emotionally disturbed, (9) educational diagnostician.

5399 or 5699 Thesis. Credit, 3 or 6 hours.