



1992-1993 BULLETIN



ODESSA COLLEGE

Volume Forty-Six

Spring 1992

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An Equal Opportunity College

HISTORY:

Odessa College Opened in 1946

The past of Odessa College is interwoven with growth and progress. A review of the history of the college reveals a success story of a public institution that has maintained the community college spirit and has grown by serving the people of Ector County and the Permian Basin.

Beginning with 184 students in 1946, the enrollment of the college, its programs and its services have grown steadily through the last 46 years. The various curricula, programs and services offered by Odessa College now enroll more than 21,000 people during a single school year. In the fall of 1991, approximately 5,000 students enrolled in the university-parallel and occupational-technical credit courses. During the same semester thousands of other students enrolled in continuing education courses.

Many university-parallel courses are offered for students planning to complete four-year degrees at senior colleges or universities. Most university-parallel courses are freely transferable to four-year and upper-level institutions. Former Odessa College students have a phenomenal record of success in the fields of accounting, law, medicine, music, public administration and teaching.

More than 30 occupational/technical programs are offered at the college and additional ones are planned to meet the needs of citizens who want to learn new or improve existing skills. Approximately one-half of the students are enrolled in occupational/technical programs.

Initially housed in temporary quarters in the old Odessa High School, the first classes of Odessa College were conducted after public school hours in late afternoons and evenings. Ector County taxpayers purchased a five-acre plot in the 2500 block of the Andrews Highway and in 1949 authorized the building of Baskin Hall, the first permanent structure for the institution.

The campus grew to 15 buildings on a 35-acre plot by 1960. Today, the \$50 million campus spreads over 80 acres and includes some 25 buildings that house more than 150 classrooms, laboratories and other facilities.

A \$7 million Sports Center with more than 110,000 square feet of floor space was opened in 1984 to house athletics, physical education and community recreation activities.

In 1986, KOCV-TV, Channel 36, carried on Channel 13 by the local cable company, officially signed on the air with quality public television programs. In 1989, KOCV-FM, the college's radio station, began airing National Public Radio programming.

The latest addition is the W.D. Noel Center, donated by the Rexene Corp. in 1989 and located in downtown Odessa. With more than 40,000 square feet, Noel Center houses Adult Basic Education and Business Incubator.

As the college has grown, so has its effectiveness. Quality education and academic excellence have long been hallmarks of Odessa College. As community needs change, Odessa College will restructure its programs to better serve its constituents.

Odessa College is a mature college with a youthful spirit, and the institution is proud of its heritage. It sees its successful past as a strong foundation for an even greater future.



ODESSA

City of Progress

Odessa College is located in Odessa, Texas, a progressive West Texas city of more than 100,000 people midway between Fort Worth and El Paso.

Odessa is a cultural, recreational, educational, medical, retail and wholesale trading center for a region as large as several Eastern Seaboard states combined. Two hospitals provide a wide variety of medical services for the region, and the Texas Tech Regional Medical School is adjacent to Medical Center Hospital, providing additional health opportunities.

Odessa boasts a daily newspaper, five television stations, 20 radio stations and more than 150 churches. Students completing their studies at Odessa College may continue their education at the University of Texas of the Permian Basin (UTPB), which offers baccalaureate and master's degree programs. Numerous cultural, intellectual and recreational activities are available for the area's citizens.

Odessa is a growing, progressive city where friendly people heartily support Odessa College and its efforts. Newcomers find Odessa a good place to live and to raise a family, as well as an enjoyable place to study and to work.

ODESSA COLLEGE'S MISSION

Our mission as trustees, administrators, faculty, and staff at Odessa College is to provide the finest educational opportunities possible for all Ector County area residents. As a comprehensive community college, OC provides a full range of educational services within the limits of available financial, physical, and human resources. Educational programs and services are designed to help people achieve their individual potential, to enrich their lives, and to become responsible and productive members of society.

To achieve our primary mission, we are committed to providing a quality academic program that offers 1) the first two years of college and pre-professional programs to prepare students within a field of study for further education, 2) occupational-technical training to provide students with the comprehensive skills and knowledge required in specialized fields, 3) general and developmental education to prepare students for effective involvement in society, 4) a continuing education division that quickly responds to local needs and desires, and 5) personal enrichment. At OC we demonstrate our ongoing commitment to academic excellence by employing a qualified faculty and staff; by providing adequate facilities, equipment, and learning resources; by providing small personalized classes; and by having successfully prepared thousands of students to move on to universities and employment.

Since OC serves an increasingly diversified society, our admissions policy assures educational opportunities for every person who has the desire and capacity to profit from post-secondary education, regardless of race, religion, gender, handicap, or economic status. We also are committed to reflect local diversity among our students, faculty, and staff in order to create a climate that responds to and enriches our varied student body.

We realize that college life is not limited to the academic area. We care about the comprehensive development of students and want to be involved in student success in the broadest possible sense. To help ensure our students achieve this success, we try to maintain a nurturing environment, and we dedicate a substantial portion of the college's resources to a qualified counseling staff that provides academic, career, and personal guidance. Moreover, we provide financial aid services, health services, sports facilities, and a variety of activities including intercollegiate and intramural athletics, art exhibits, concerts, dances, and speakers.

As part of the commitment to our primary mission, we recognize the essential role our institution must play in the cultural and intellectual life of the general community. OC maintains a long-standing tradition of involvement in the greater community and has served a remarkable proportion of the population over the years. Attesting to our tradition of community involvement is OC's sponsorship of Adult Basic Education, which provides adult literacy programs, GED, the high school diploma, English as a second language, preparation for U.S. citizenship, and other training. Our Continuing Education division provides short-term vocational training tailored to meet specific local business needs, updates training for professional and vocational occupations, and provides other training in other nonvocational and practical skills required for keeping up with rapid technological advances in the community as well as for personal enrichment and well-being. Furthermore, we provide off-campus extension centers and instructional telecourses to meet post-secondary needs of the outlying Permian Basin, public radio and television stations, and an intercollegiate athletics program. We also extend a standing invitation to all Permian Basin residents to share OC's facilities and cultural events.

At OC, our educational philosophy grants all faculty members the liberty to conduct instruction as they judge most appropriate within the bounds of instructional effectiveness and academic responsibility. To protect faculty members and their individuality, we subscribe to a clearly stated policy of academic freedom.

As part of OC's mission, we also accept a responsibility to college employees. To this end, the college offers staff development, wellness and retirement programs, employee health and disability insurance, access to cultural and sporting events and facilities, and vacation and sick leave. Additionally, as resources allow, we are committed to identifying new and innovative ways of stimulating professional and personal development of all OC employees.

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COLLEGE CALENDAR 1992-1993

Summer 1992

(During the summer, Odessa College operates on a four-day week and closes on Friday)

First Term

Early Registration April 13-17 (Mon-Fri)
 Holiday (Memorial Day) May 25 (Mon)
 Registration May 26-28 (Tues-Thurs)
 Classes Begin June 1 (Mon)
 Late Registration/Schedule Changes June 1-2 (Mon-Tues)
 Fourth Class Day June 4 (Thurs)
 Last Day to Drop or Withdraw With A "W" June 25 (Thurs)
 Last Class Day July 7 (Tues)
 Final Exams, End of Term July 8 (Wed)

Second Term

Early Registration April 13-17 (Mon-Fri)
 Registration July 9 (Thurs)
 Classes Begin July 13 (Mon)
 Late Registration/Schedule Changes July 13-14 (Mon-Tues)
 Fourth Class Day July 16 (Thurs)
 Last Day to Drop or Withdraw With A "W" Aug. 6 (Thurs)
 Last Class Day Aug. 18 (Tues)
 Final Exams, End of Term Aug. 19 (Wed)

Fall 1992

Early Registration April 13-17 (Mon-Fri)
 Early Registration (Continued) July 22-Aug. 13 (Wed-Thurs)
 Nine Month Faculty Return Aug. 24 (Mon)
 Registration for New Students Only Aug. 24 (Mon)
 Registration for Returning Students Aug. 25 (Tues)
 Classes Begin at 5:00 p.m. Aug. 26 (Wed)
 Late Registration/
 Schedule Changes Aug. 27-Sept. 8 (Thur-Tues)
 Holiday (Labor Day) Sept. 7 (Mon)
 Mid-Semester Oct. 19 (Mon)
 Deadline for Fall Degree Application Nov. 6 (Fri)
 Last Day to Drop or Withdraw With A "W" Nov. 13 (Fri)
 Early Registration for Spring
 and Midwinter Nov. 23-Dec. 10 (Mon-Thurs)
 Thanksgiving Holiday
 (Begins at 5 p.m., Wed. Nov. 25) Nov. 25-28 (Wed-Sat)
 Last Class Day Dec. 11 (Fri)
 Final Exams Dec. 14-17 (Mon-Thurs)
 End of Semester Dec. 18 (Fri)

COLLEGE CALENDAR

1992-1993

Midwinter Session 1992-93

Registration	Nov. 23-Dec. 10 (Mon-Thurs)
Late Registration, Classes Begin	Dec. 28 (Mon)
Holiday (New Year's Day)	Jan. 1 (Fri)
Last Day to Drop or Withdraw With "W"	Jan. 8 (Fri)
Last Class Day	Jan. 12 (Tues)
Final Exams, End of Term	Jan. 13 (Wed)

Spring 1993

Early Registration	Nov. 23-Dec. 10 (Mon-Thurs)
Offices Reopen, Twelve Month Faculty Return	Jan. 4 (Mon)
Nine Month Faculty Return	Jan. 11 (Mon)
Registration for New Students Only	Jan. 12 (Tues)
Registration for Returning Students	Jan. 14 (Thurs)
Holiday (Martin Luther King Day)	Jan. 18 (Mon)
Classes Begin	Jan. 19 (Tues)
Late Registration/Schedule Changes	Jan. 19-28 (Tues-Thurs)
Deadline for Spring Degree Application	Feb. 19 (Fri)
Mid-Semester	March 10 (Wed)
Spring Break	March 15-19 (Mon-Fri)
Holiday (Easter)	April 10-11 (Sat-Sun)
Last Day to Drop or Withdraw With A "W"	April 9 (Fri)
Early Registration for Fall	April 26-30 (Mon-Fri)
Last Class Day	May 7 (Fri)
Final Exams	May 10-13 (Mon-Thurs)
Graduation Day	May 14 (Fri)

Summer 1993

First Term

Registration	May 27 (Thurs)
Holiday (Memorial Day)	May 31 (Mon)
Classes Begin	June 1 (Tues)
Late Registration/Schedule Changes	June 1-2 (Tues-Wed)
Last Day to Drop or Withdraw With A "W"	June 24 (Thurs)
Last Class Day	July 6 (Tues)
Final Exams, End of Term	July 7 (Wed)

Second Term

Registration	July 8 (Thurs)
Classes Begin	July 12 (Mon)
Late Registration/Schedule Changes	July 12-13 (Mon-Tues)
Last Day to Drop or Withdraw With A "W"	Aug. 5 (Thurs)
Last Class Day	Aug. 17 (Tues)
Final Exams, End of Term	Aug. 18 (Wed)

1993

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In fulfilling its commitment to provide a high quality educational program to the citizens of the Ector County area, Odessa College is authorized by the state of Texas to provide instruction leading to a variety of degrees and certificates. The college also offers courses in some subject areas -- accounting, anthropology, earth science, economics, engineering, geography, philosophy, religion, theater, etc. -- as an enhancement to the general education requirements for other disciplines.

Degree Programs

Associate in Arts

The associate in arts is awarded to students who complete curriculum requirements of the first two years of study of a standard baccalaureate program, primarily in the liberal arts, fine arts or business fields. Known as the A.A., the degree is not designed to provide students with specific vocational skills. The associate in arts is available in the following areas:

Art	Mass Communication
Business Administration	Radio/Television
General Studies* (no major)	Psychology
Humanities	Sociology
Education (Elementary/Secondary)	Social Science
English	Speech
Foreign Language	

*Please refer to page 174 of this catalog for requirements. By following these basic requirements and selecting electives in the area of the anticipated baccalaureate, students can earn the A.A. designed to meet specific degree and transfer requirements for a designated institution. See your counselor or departmental advisor for specific information.

Associate in Science

The associate in science is awarded to students who complete curriculum requirements of the first two years of study of a standard baccalaureate program, primarily in the fields of mathematics or science. Known as the A.S., the degree is not designed to provide students with specific job skills. The associate in science is available in the following disciplines:

Biology	Mathematics
Chemistry	Physical Education
General Studies*	Physics
Geology	Computer Science

*Please refer to page 175 of this catalog for requirements. By following these basic requirements and selecting electives in the area of the anticipated baccalaureate, students can earn the A.S. designed to meet specific degree and transfer requirements for a designated institution. See your counselor or departmental advisor for specific information.

Pre-Professional Courses of Study

In those areas classified as pre-professional -- dentistry, engineering, medicine, optometry, pharmacy, veterinary medicine -- students are advised to pursue the degree plan for the associate in science without a declared major. Pre-law students should follow the general degree plan for the associate in arts. Courses not specifically required should be selected according to the requirements of the institution that will eventually grant the degree.

Associate in Applied Science

The associate in applied science degree is awarded to students who complete the prescribed degree plan in a designated technical studies area. Known as the A.A.S., this degree is designed to provide students with the comprehensive skills and knowledge in a specialized field, with the goal of employment in that field. The degree is not designed to be a "transfer" degree, but some institutions do offer an inverted baccalaureate degree in occupational education, applied technology, etc. See your counselor or faculty advisor for more information. Odessa College awards the A.A.S. degree in the following areas:

Auto Body Repair	Maintenance Technology
Automotive Technology	Management (General Management, Marketing Management, Fashion Merchandising, Industrial Supervision)
Building Trades	Nursing
Child Development	Office Education
Clinical Laboratory Sciences	Petroleum Technology
Computer Information Systems	Photography
Cosmetology	Radio/Television
Diesel Mechanics	Physical Therapy Assistant
Drafting	Radiologic Technology
Educational Aide	Real Estate
Electrical and Electronics	Refrigeration and Air Conditioning
Emergency Medical Technology	Respiratory Care
Fire Technology	Surgical Technology
Human Services (Alcohol and Drug Abuse)	Welding Technology
Law Enforcement/Criminal Justice	
Machine Technology	

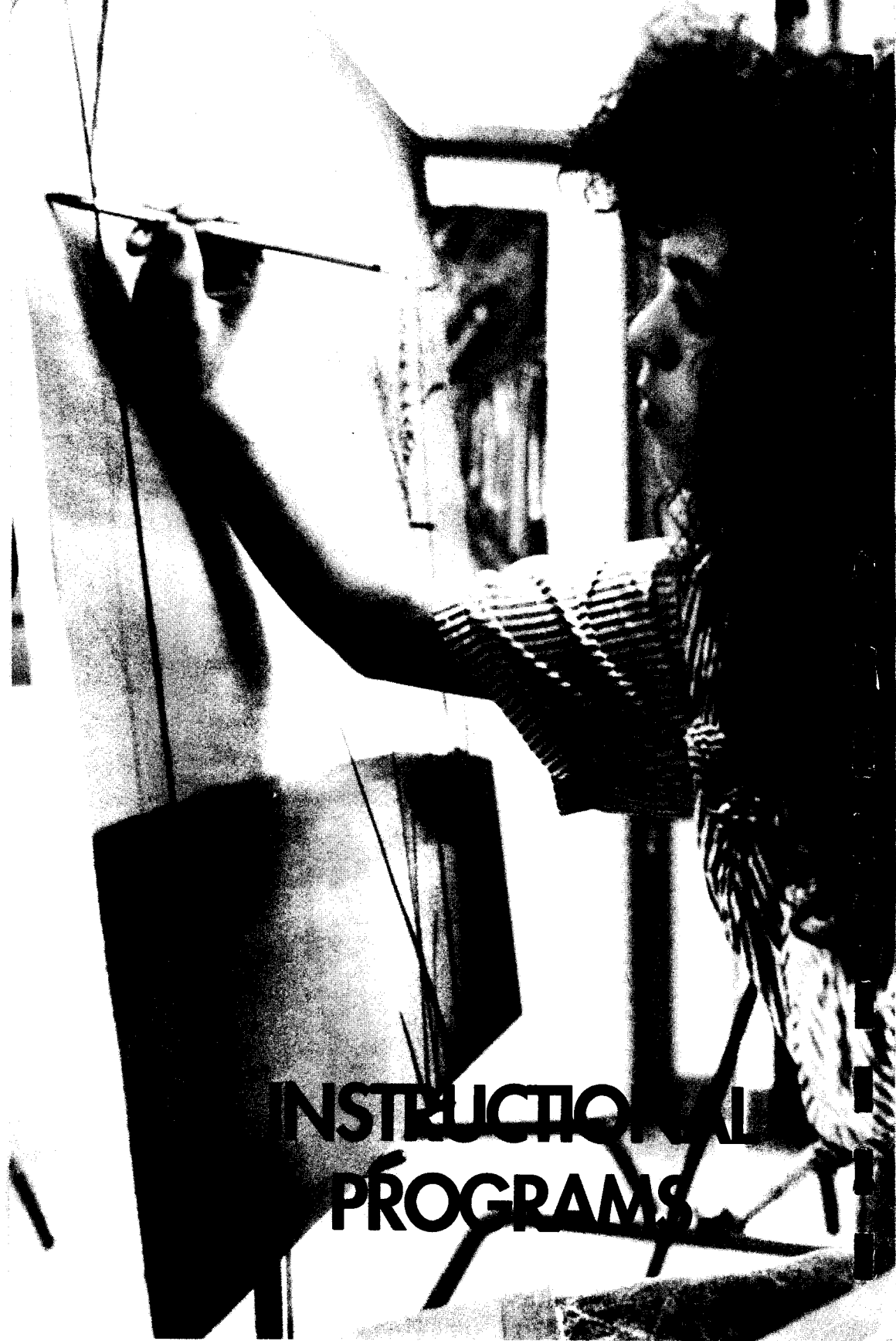
Certificate of Technology

In the technology fields, it is not uncommon for a student to want to learn the skills necessary for employment without earning the A.A.S. To indicate both completion and technical competency, Odessa College awards a certificate of technology in the following fields (refer to individual departmental sections for course/semester hour requirements):

Auto Body Repair	Machine Technology
Automotive Technology	Maintenance Technology
Building Trades	Management
Child Development	Nursing (Vocational)
Cosmetology	Office Education
Diesel Mechanics	Petroleum Technology
Drafting	Real Estate
Electrical/Electronics	Refrigeration and Air Conditioning
Fire Technology	Respiratory Care
Human Services	Surgical Technology
Law Enforcement/Criminal Justice	Welding
Law Enforcement Academy	

Certificate of Completion

The certificate of completion is given by Odessa College after completion of a designated course of study that concentrates on a specific job skill, licensure requirement or subject matter mastery. Certificates of completion are offered in many occupational programs, but they also are available in certain academic areas of study as well. Check with the respective program or department chairman for information on these certificates.



**INSTRUCTIONAL
PROGRAMS**

Agriculture

Faculty: Dr. John Lesmeister, chairman.

Courses offered in the agriculture department are directed toward providing the student majoring in an agriculture science or a related field with a broad and sound foundation for advanced study at an upper-level institution or pre-professional preparation in veterinary medicine or wildlife management.

Course of Study for Associate in Science Degree

	Semester Hrs
General Education Requirements	51
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra or More Advanced	3
Math 1343 Plane Trigonometry or More Advanced	3
*PE (Any two one-hour activity courses)	2
Chem 1301/1101 General Inorganic Chemistry/Fundamentals of Chemistry Laboratory I	4
Chem 1302/1102 General Inorganic Chemistry II/Fundamentals of Chemistry Laboratory II	4
Biol 1401 General Biology I	4
Biol 1402 General Biology II	4
Elective	3
Major Requirements	15-17
Agr 1101 The Agricultural Industry	1
Agr 1401 Animal Science	4
Agr 1402 Agronomy	4
**Agr Elective	3 or 4
**Agr Elective	3 or 4
Total Semester Hours	66-68

*PE 1100 should be the first course taken in physical education.

** Second-year requirements for agriculture electives may be fulfilled by taking any combination of the following courses: Agr 2301, Agr 2401, and Agr 2402. Choice of any elective may depend upon the students plans for future study. Students should consult with the agriculture faculty for information regarding these courses.

Agr 1101 The Agriculture Industry (AGRI 1131)

(1-0) 1 hour

An introductory course to the field of agriculture and the relationship of the sciences and other fields of agriculture. Prerequisite: None.

Agr 1401 Animal Science (AGRI 1419)

(3-3) 4 hours

An introduction to the importance of the livestock industry in the United States, with emphasis in the state of Texas. Includes a study of the types and breeds of livestock and the market classes as well as grades of beef cattle, dairy cattle, sheep, swine and horses. Consideration is given to the value of heredity and breeding for improvement, judging, care and management. Prerequisite: None

Agr 1402 Agronomy (AGRI 1407)

(3-3) 4 hours

A basic study of the classification and distribution of farm crops. Includes a study of the importance of good varieties and good seed, crop improvement, seed bed preparation, soils, soil erosion and conservation techniques, commercial fertilizers, crop rotation, crop tillage, harvesting, meadow and pasture management, pesticides, weeds and grasses, and irrigation systems. Prerequisite: None

- Agr 2301 Agriculture Economics (AGRI 2317)**
 (3-0) 3 hours
 A study of the basic concepts and theory of the present economic system. Includes an analysis of farm and ranch firms as well as commercial industry, their organization and management, the structure and operation of the marketing system, and political economic policy setting. Functional and institutional aspects of agricultural finance and state and federal farm programs are covered. Prerequisite: None.
- Agr 2401 Economic Entomology (AGRI 1413)**
 (3-3) 4 hours
 A study of the principal insects and pests of crops and livestock, including life history, methods of attack, damage and control. Integrated pest management and biological controls are stressed. Collection and mounting of insects is required. Prerequisite: None.
- Agr 2402 Horticulture (AGRI 1415)**
 (3-3) 4 hours
 This course familiarizes the student with the fields of horticulture and the place of the horticulture in American agriculture. It includes the study of the structure, growth and development of horticulture plants. Emphasis is placed on the control of environment and plant growth with considerations of biological competition and progressive improvement of crops. Principles of propagation, green-house production of horticultural crops, pruning, pest control and landscaping are included. Prerequisite: None.

Art and Photography

Faculty: Delmos Hickmott, chairman; Steve Goff, photography; Barry Phillips, art; Barry Phillips III, art.

The department of art and photography provides an opportunity for all members of the community to explore and develop their creative potential. Art courses are designed to provide quality instruction for those students seeking professional and semi-professional art degrees and careers. Photography courses train students in the basics of photography as a subject, in photography as a profession and in photographic technology.

The course of study for art utilizes the core curriculum of art instruction recommended by the Texas Association of Schools of Art and approved by the Texas Higher Education Coordinating Board. These core courses are transferable to all accredited Texas colleges and universities as they apply to the student's particular art major. In addition to a professionally-active, full-time art faculty, the art program includes well-equipped multi-purpose labs for all areas of studio art—drawing, painting, ceramics, sculpture, jewelry and printmaking.

Providing students the opportunity to exercise their creative talents, the photography curriculum offers a variety of courses, including professional portraiture, lab technology, commercial technique and various aspects of color. Following completion of the photography degree plan, students will be prepared for entry positions in the photographic industry.

Course of Study for Associate in Arts Degree (Art)

	Semester Hrs
General Education Requirements	35-37
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Foreign Language, Math or Science	6 or 8
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
*PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication or Spch 2340 Business and Professional Speech	3

Major Requirements	27
Art 1300 Art Appreciation (Self-Paced)	3
Art 1311 Drawing I	3
Art 1321 Design I	3
Art 1371 Art History Survey I	3
Art 1312 Drawing II	3
Art 2323 Figure Drawing I	3
Art 1372 Art History Survey II	3
Art 1322 Design II	3
Elective	3
Total Semester Hours	62-64

*PE 1100 should be the first course taken in physical education.

Art 1300 Art Appreciation (Self Paced) (ARTS 1301)

(3-0) 3 hours
 Introduces visual arts. Open to all college students. Presents psychological foundations of creative behavior, aesthetic theory and philosophy. Analyzes principles, problems and techniques of the artists. Focus varies from semester to semester to include African Art, Mexican Art, and Studies in Contemporary Art and Contemporary Film Appreciation (honors). May be taken more than once when topic changes. Prerequisite: None.

Art 1311 Drawing I (ARTS 1316)

(2-4) 3 hours
 Develops skills in drawing from life and nature. Includes pictorial composition, perspective, line, value and wash drawings in a variety of media. Emphasizes development of hand-eye coordination. Prerequisite: None.

Art 1312 Drawing II (ARTS 1317)

(2-4) 3 hours
 A continuation of Drawing 1311 with additional emphasis on developing sensitivity to art elements in the environment. Prerequisite: Art 1311.

Art 1321 Design I (ARTS 1311)

(2-4) 3 hours
 Introduces principles and elements of design. Develops sensitivity to principles and elements of design as they exist in the environment. Prerequisite: None.

Art 1322 Design II (ARTS 1312)

(2-4) 3 hours
 A continuation of Design 1321. Emphasizes creation of three-dimensional art products. Prerequisite: Art 1321.

Art 1371 Art History Survey I (ARTS 1303)

(3-0) 3 hours
 Surveys Western man's art heritage from the prehistoric era through the Middle Ages. Stresses relationship of greatworks of art to their respective culture and civilization. Uses variety of audio-visual media to illustrate various periods, styles and personalities. Prerequisite: None.

Art 1372 Art History Survey II (ARTS 1304)

(3-0) 3 hours
 A continuation of Art History 1371. Includes Western man's art heritage from the Renaissance to the present. Emphasizes gaining understanding of varied forms of modern art through their relationship to contemporary society. Prerequisite: None.

Art 2311 Watercolor Painting I (ARTS 2366)

(2-4) 3 hours
 Explores various watercolor techniques and their applications to a wide range of subject matter. Stresses development of basic skills in watercolor expression. Prerequisites: Art 1311 or its equivalent or consent of the instructor.

Art 2312 Watercolor Painting II (ARTS 2367)

(2-4) 3 hours
 A continuation of Art 2311. Emphasizes aesthetic factors, style and creative approaches. Prerequisite: Art 2311.

12 Art

Art 2321 Painting I (ARTS 2316)
(2-4) 3 hours
Introduces various painting media (acrylic or oils) and modes of expression. Emphasizes development of basic painting skills and aesthetic sensibilities. Prerequisite: Art 1311 or Art 1321 or their equivalent or consent of the instructor.

Art 2322 Painting II (ARTS 2317)
(2-4) 3 hours
A continuation of Art 2321. Emphasizes aesthetic factors, style and creative approaches. Prerequisite: Art 2321 or its equivalent.

Art 2325 Design III (ARTS 2311)
(2-4) 3 hours
Further investigates problems of two- and three-dimensional concepts. Emphasizes individual expression. May be repeated when topic changes. Prerequisite: Art 1321 or 1322.

Art 2323 Figure Drawing I (ARTS 2323)
(2-4) 3 hours
Develops skill in drawing the human figure. Stresses handling of form, movement and proportion. Presents a variety of drawing techniques and media. Prerequisite: Art 1311 or its equivalent.

Art 2324 Figure Drawing II (ARTS 2324)
(2-4) 3 hours
A continuation of Art 2331. Emphasizes aesthetic factors, style and creative approaches. Prerequisite: Art 2323.

Art 2341 Jewelry I (ARTS 2341)
(2-4) 3 hours
Gives the student the opportunity to create original, functional jewelry. Uses a variety of techniques, media and shop practices. Lab fee required. Prerequisite: None.

Art 2342 Jewelry II (ARTS 2342)
(2-4) 3 hours
Designed to further the student's ability to produce original jewelry by emphasizing exploration of jewelry techniques, casting and more complex construction. Lab fee required. Prerequisite: Art 2341.

Art 2361 Printmaking I (ARTS 2333)
(2-4) 3 hours
Survey of basic printmaking process. Includes relief, intaglio, lithography and screen printing. Emphasizes creative problem solving to develop imagery. Prerequisite: Art 1311 and Art 1321 or consent of the instructor.

Art 2362 Printmaking II (ARTS 2334)
(2-4) 3 hours
Permits and encourages in-depth exploration of selected printmaking processes. Emphasizes development of personal creative images. Prerequisite: Art 2361.

Art 2381 Pottery I (ARTS 2346)
(2-4) 3 hours
Includes coil, slab and wheel methods of creating original pottery form and refining of native clays. Also includes bisque and glaze firings, plus raku, sawdust firings and mixing and applying pottery glazes. Lab fee required. Prerequisite: None.

Art 2382 Pottery II (ARTS 2347)
(2-4) 3 hours
A continuation of Art 2381. Emphasizes aesthetic factors, style and advanced wheel work. Lab fee required. Prerequisite: Art 2381.

Art 2391 Sculpture I (ARTS 2326)

(2-4) 3 hours
 Concerns basic instruction in principles and techniques of sculpture. Explores a variety of materials including clay, metal, wood and plastics, as well as basic techniques of casting, welding, moulding and assembling. Lab fee required. Prerequisite: Art 1321 or consent of the instructor.

Art 2392 Sculpture II (ARTS 2327)

(2-4) 3 hours
 A continuation of Art 2391. Emphasizes advanced sculpture techniques and design concepts. Lab fee required. Prerequisite: Art 2391.

Photography

Photography courses at the college seek to train the student in the basics of photography as a subject, in photography as a profession and in photographic technology. A variety of courses is offered, including professional portraiture, lab technology, commercial technique, the history of photography and various aspects of color. Opportunities are provided for students to exercise their creative talents.

Following completion of the photography curriculum, students will be prepared for entry positions in the photographic industry.

**Course of Study for Associate in Applied Science Degree
 (Photography)**

	Semester Hours
General Education Requirements	29
Art 1321 Design I	3
BA 1304 Elementary Accounting	3
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature or Spch 2340 Business and Professional Speech	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
Math--College Level	3
*PE (Any two one-hour activity courses)	2
Phil 2302 Introduction to Philosophy II (Ethics)	3
Spch 1310 Introduction to Speech Communication or Spch 2340 Business and Professional Speech	3
Major Requirements	39
Phot 1331 Basic Photography I	3
Phot 1332 Basic Photography II	3
(Phot 1331 and 1332 may be taken in the same semester.)	
Phot 1361 Photo Lab Technique I	3
Phot 1362 Photo Lab Technique II	3
(Phot 1361 and 1362 may be taken in the same semester.)	
Phot 2370 History of Photography	3
Phot 2371 Color Photography I	3
Phot 2372 Color Photography II	3
**Approved Electives	15
Total Semester Hours	62

* PE 1100 should be the first course taken in physical education.

**Approved electives: CIS 1401, Jour 1313, Mgt 1301 or Mgt 2303, Phot 1350, Phot 2200, Phot 2311, Phot 2312, Phot 2331, Phot 2332, Phot 2340, Phot 2360, Phot 2380, Phot 2390 and Phot 2399.

Phot 1331 Basic Photography I

(2-4) 3 hours
 Introduces basic applied and aesthetic aspects of photography. Includes basic theories of film, exposure, development, filters and printing. Lab fee required. Prerequisite: None.

Phot 1332 Basic Photography II

(2-4) 3 hours
 A continuation of Phot 1331. Designed for additional experience in the photographic medium. Lab fee required. Prerequisite: Phot 1331.

- Phot 1350 Photojournalism**
(2-4) 3 hours
Introduces basic aspects of newspaper photography. Emphasizes photojournalism. Lab fee required. Prerequisite: Phot 1331 or consent of the instructor.
- Phot 1361 Photo Lab Technique I**
(2-4) 3 hours
Designed to give experience in darkroom printing and developing procedures. Successful completion qualifies student to work as a black and white lab technician in photographic industry. Includes projection printing, contact printing, black and white print finishing, toning and mixing photographic chemistry. Lab fee required. Prerequisite: Phot 1332.
- Phot 1362 Photo Lab Technique II**
(2-6) 3 hours
A continuation of Phot 1361. Designed to give additional experience in photo lab work. Lab fee required. Prerequisite: Phot 1361 or consent of the instructor.
- Phot 2200 Print Finishing and Negative Retouching**
(1-2) 2 hours
Concerned with print finishing and negative retouching. Majority of time spent in color work since major emphasis of present-day studio work is in color. Lab fee required. Prerequisite: None.
- Phot 2311 Commercial Photography I**
(2-6) 3 hours
Gives the student working knowledge in specialized field of commercial photography. Emphasizes use of large negative format and the view camera. Includes such photographic problems as magazine article illustration, product photography, fashion, architectural studies and window displays. Lab fee required. Prerequisite: Phot 1332 and Phot 1362.
- Phot 2312 Commercial Photography II**
(2-6) 3 hours
A continuation of Phot 2311. Provides additional experience in commercial field. Lab fee required. Prerequisite: Phot 2311.
- Phot 2331 Portrait Photography I**
(2-4) 3 hours
Deals basically with professional studio-type portraits. Practice gained by making photographs through actual work with adult and child models. Lab fee required. Prerequisite: Phot 1332.
- Phot 2332 Portrait Photography II**
(2-4) 3 hours
A continuation of Phot 2331. Offers additional experience in area of studio portraiture. Emphasizes outdoor portraiture. Lab fee required. Prerequisite: Phot 2331
- Phot 2340 Salon Photography**
(2-4) 3 hours
Requires extensive portfolio of semester's work. Includes making salon prints. Uses landscapes, classical portraits, environmental photography, character studies, and documentary photography as subjects. Lab fee required. Prerequisite: Phot 1332.
- Phot 2360 Expressive Photography**
(2-4) 3 hours
Offers opportunity to explore formal, personal and individual uses of photography. Aims at goal of personal development of the art of seeing and capturing that seen in photographic process. Lab fee required. Prerequisite: Phot 1332.
- Phot 2370 History of Photography**
(3-0) 3 hours
A survey course that emphasizes technical and aesthetic developments in a historical perspective. Includes beginning of the medium, inventors, development of photographic equipment, styles of creative masters, aesthetic trends, and social impact of photography. Prerequisite: None.
- Phot 2371 Color Photography I**
(2-4) 3 hours
Consists of taking photographs with color film, both negative and transparency. Introduces basics of color printing. Lab fee required. Prerequisite: Phot 1332.

Phot 2372 Color Photography II

(2-4) 3 hours
 A continuation of Phot 2371. Includes additional work in sensitometry and advanced lab technique. Lab fee required. Prerequisite: Phot 2371.

Phot 2380 Photographic Problems

(1-5) 3 hours
 Allows, with approval by and under supervision of the instructor, pursuit of a particular project or theme utilizing the photographic process. Weekly progress reports mandatory. Offered alternately with Phot 2340 and Phot 2360. Lab fee required. Prerequisite: Phot 1332 and Phot 1362.

Phot 2390 Graphics

(2-4) 3 hours
 A one-semester course designed to teach advanced copying work and use of special copy cameras. Includes copying continuous tone and line drawings, as well as layout, makeup and use of specialized films and developers. Lab fee required. Prerequisite: Phot 1332.

Phot 2399 Special Topics in Photography

(2-12) 3 hours
 Photography internship program which provides photography majors with practical experience in specialized applications of photography. Areas covered include such topics as ophthalmic photography which presents fluorescein angiography, fundus photography, slit lamp photography, external photography, surgical photography and audiovisual production. Lab fee required. Prerequisite: Phot 1331 and consent of the instructor.

Auto Body Repair

Faculty: Dave Atherton, chairman.

The auto body repairman has before him a challenge which constantly affords variety and interest. With the increasing costs of automobiles, higher insurance rates and required coverage, and traffic congestion the auto body repairman can be assured of an excellent income as well as a multitude of job opportunities. Employment opportunities exist with automotive dealers, independent auto body repair shops, leasing agencies, insurance firms, airlines and other companies that maintain car or truck fleets. The program emphasizes development of necessary skills and knowledge to function successfully in the auto body repair field. The use of modern materials, the application of advanced techniques and the development of unique craftsmanship to express individual talents are just a few of the many factors which favor the auto body repair student.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Math--College Level	3
Govt 2301 U.S. and Texas Government	3
*PE (Any two one-hour activity courses)	2
**General Education Elective	3
Major Requirements	40
AB 1501 Auto Body Repair I	5
AB 1502 Auto Body Repair II	5
AB 1503 Auto Paint Refinishing I	5
AB 1504 Auto Body Component Alignment and Frame Straightening	5
AB 2501 Shop Maintenance and Management	5
AB 2503 Auto Paint Refinishing II	5
AB 2504 Auto Body Repair Estimating	5
AB 2506 Special Projects	5

Related Requirements	6
Mgt 1304 Employee-Management Relationships	3
Elective	3
Total Semester Hours	63

*PE 1100 should be the first course taken in physical education.

**Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

Students not desiring the A. A. S. degree may receive a certificate of technology by completing a minimum of 45 semester hours in AB courses.

AB 1501 Auto Body Repair I

(2-6) 5 hours
Teaches skill in the use of tools, equipment and materials of the body shop. Emphasizes metal working techniques and shop safety. Lab fee required. Prerequisite: None.

AB 1502 Auto Body Repair II

(2-6) 5 hours
A continuation of Auto Body Repair I. Emphasizes sheet metal replacement and welding fundamentals. Stresses MIG welding. Lab fee required. Prerequisite: AB 1501 or consent of the department chairman.

AB 1503 Auto Paint Refinishing I

(2-6) 5 hours
Emphasizes use of sandpapers, primer-surfacers, sealers and paints. Includes instruction on spray gun techniques and usage. Stresses spray booth safety. Lab fee required. Prerequisite: None.

AB 1504 Auto Body Component Alignment and Frame Straightening

(2-6) 5 hours
Presents auto body component assembly procedures. Emphasizes alignment techniques. Includes gauging, straightening and alignment of both Unibody and Frame vehicles. Prerequisite: None.

AB 2501 Shop Maintenance and Management

(2-6) 5 hours
Presents procedures and practices for operation of an auto body shop. Includes equipment cost estimates, equipment selection, supply selection, employee safety and health, customer relations and quality control. Includes improvement of skills in areas of weakness and/or specialization. Lab fee required. Prerequisite: Consent of the department chairman.

AB 2503 Auto Paint Refinishing II

(2-6) 5 hours
A continuation of Auto Paint Refinishing I. Stresses techniques used in multi-colored paint schemes, special paints, ... color matching and predelivery detailing. Lab fee required. Prerequisite: AB 1503.

AB 2504 Auto Body Repair Estimating

(2-6) 5 hours
Presents procedures used in determining accurate repair cost estimates. Emphasizes proper use of auto body crash books and methods of preparing and presenting estimates. Lab fee required. Prerequisite: Consent of the department chairman.

AB 2506 Special Projects

(2-6) 5 hours
An intensive study in selected topics of auto body repair. Requires prior approval of department chairman for individual projects. Lab fee required. Prerequisite: AB 1502, 2502, 2503 or consent of the department chairman.

Automotive Technology

Faculty: Jurl O. Davis, chairman; Steve Mapes.

Maintaining and servicing automobiles is a thriving business and a very important activity in the American economy. The automotive service field is so widespread and fast growing that many excellent career opportunities are open to the person with the proper qualifications.

The associate in applied science degree provides the necessary educational background for advancing to positions of even greater responsibility in the industry.

Course of Study for Associate in Applied Science Degree

	Semesters Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
*PE (Any two one-hour activity courses)	2
**General Education Elective	3
Major Requirements	48
AT 1501 Introduction to Automotive Technology	5
AT 1502 Automotive Engines	5
AT 1503 Transmissions and Power Trains	5
AT 1504 The Automotive Chassis	5
AT 2501 Automotive Electrical System	5
AT 2502 Heating and Air Conditioning	5
AT 2503 Automotive Fuel and Emissions	5
AT 2504 Automotive/Diesel Electronics I	5
AT 2505 Automotive/Diesel Electronics II	5
***Automotive Elective (minimum 3 semester hours)	3
Related Requirements	3
Elective	3
Total Semester Hours	68

*PE 1100 should be the first course taken in physical education.

**General education electives: Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

***AT 1301, Specialized Electronics Math; AT 1505, Automotive Diesel; or DM 1505, Automotive Diesel. Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 48 semester hours in AT courses.

AT 1301 Specialized Electronics Mathematics

(3-0) 3 hours
 Designed to provide an understanding of mathematics principles, reinforce fundamental electronic theories and present problems encountered by technicians. Develops awareness of electronic symbols, schematic reading and component terminology. Prerequisite: One year of high school algebra or Math 1335 or more advanced or consent of the department chairman.

AT 1501 Introduction to Automotive Technology

(4-4) 5 hours
 Introduces basic automobile maintenance schedules and procedures necessary for reliability and dependability. Presents instruction on how to recognize unsafe operating conditions as related to the automobile. Emphasizes fundamentals of efficiency and economy of most automotive systems. Lab fee required. Prerequisite: None.

AT 1502 Automotive Engines

(4-4) 5 hours
 Presents theory and practice in basic principles of repair and maintenance of internal combustion engines. Includes study of design characteristics of engines and their supporting systems. Requires rebuilding engines utilizing proper machine operations. Emphasizes tool usage. Lab fee required. Prerequisite: None.

AT 1503 Transmissions and Power Trains

(4-4) 5 hours
 Provides technical studies and practice in repair and maintenance of automotive transmissions, differentials and related assemblies. Lab fee required. Prerequisite: None.

AT 1504 The Automotive Chassis

(4-4) 5 hours
 Emphasizes repair procedures related to brakes, front-end alignment and suspension systems. Includes use of brake lathes, wheel balancing equipment and front-end alignment equipment. Includes theory as a primary element of the course. Lab fee required. Prerequisite: None.

- AT 1505 Automotive Diesel**
 (4-4) 5 hours
 Involves theory and practice in basic principles for repair and maintenance of the automotive diesel engine. Contrasts automotive and commercial diesels. Lab fee required. Prerequisite: None.
- AT 2501 Automotive Electrical Systems**
 (4-4) 5 hours
 Presents most elementary to most advanced electrical systems. Emphasizes testing and diagnostic procedures. Uses diagnostic equipment, ohmmeters, test lights and oscilloscopes. Lab fee required. Prerequisite: None.
- AT 2502 Heating and Air Conditioning**
 (4-4) 5 hours
 Presents physics of temperature change applicable to the automobile. Designed to instruct students in current diagnostic principles and repair procedures. Lab fee required. Prerequisite: None.
- AT 2503 Automotive Fuel and Emissions**
 (4-4) 5 hours
 Emphasizes fuels and emissions related to tune-up procedures. Various fuel system components and emission control systems studied. Emphasizes carburetor overhaul and adjustment. Exhaust emission test equipment used in conjunction with engine analyzer. Lab fee required. Prerequisite: None.
- AT 2504 Automotive/Diesel Electronics I**
 (4-4) 5 hours
 Introduces Ohm's law, power law, principles of direct current circuits, principles of alternating current and voltage, induction, capacitance, reactance, impedance and filters. Requires a scientific calculator. Lab fee required. Prerequisite: Math 1335 or more advanced or consent of the department chairman.
- AT 2505 Automotive/Diesel Electronics II**
 (4-4) 5 hours
 Introduces fundamentals of solid state devices such as FET's bipolar and unijunction transistors, zener diodes, LEDs, solid state regulators, electronic spark control and timing, linear amplifiers, buffers, SCRs, RAMS, PROMS, EPROMS, microprocessors and the automotive digital computer. Requires a scientific calculator. Lab fee required. Prerequisite: None.

**Automotive Technology
 (Flexible Entry Program)**

The flexible entry program is a personalized instructional system designed to offer the student a consolidated, individualized curriculum in basic skills. Classes meet four hours per day, 16 hours per week during the fall and spring semesters and four hours per day, 12 hours per week during the summer. A student may register at eight-week intervals during the fall and spring semesters and once during the summer. Enrollment may be limited to available space. A certificate of proficiency will be awarded to those students who successfully complete an individual course or group of courses. Detailed information is available in the office of the program director and in the counseling center.

Course Number	Course Name	Hours	Clock Hrs	Sem Weeks
AT 1541	Introduction to Automotive Technology	128	5	8
AT 1542	Automotive Engines	128	5	8
AT 1543	Transmissions and Power Trains	128	5	8
AT 1544	The Automotive Chassis	128	5	8
AT 2541	Automotive Electrical Systems	128	5	8
AT 2542	Heating and Air Conditioning	128	5	8
AT 2543	Automotive Fuel and Emissions	128	5	8
AT 2544	Automotive/Diesel Electronics I	128	5	8
AT 2545	Automotive Electronics/Diesel II	128	5	8
AT	*Electives (Minimum of 3)	48	3	16

*Automotive Electives: AT 1301, Specialized Electronics Mathematics; AT 1505, Automotive Diesel; AT 1545, Automotive Diesel; or DM 1505, Automotive Diesel.

Books and safety equipment will cost approximately \$100.

Students desiring the certificate of technology must successfully complete a minimum of 48 semester hours in automotive courses.

AT 1541 Introduction to Automotive Technology

[(8-8) for 8 Weeks] 5 hours
 Introduces basic automobile maintenance schedules and procedures necessary for reliability and dependability. Presents instruction on how to recognize unsafe operating conditions as related to the automobile. Emphasizes fundamentals of efficiency and economy of most automotive systems. Lab fee required. Prerequisite: None.

AT 1542 Automotive Engines

[(8-8) for 8 Weeks] 5 hours
 Presents theory and practice in basic principles of repair and maintenance of internal combustion engines. Design characteristics of engines plus their supporting systems studied. Engines rebuilt utilizing proper machining operations. Tool usage emphasized. Lab fee required. Prerequisite: None.

AT 1543 Transmission and Power Trains

[(8-8) for 8 Weeks] 5 hours
 Provides technical studies and practice in repair and maintenance of automotive transmissions, differentials and related assemblies. Lab fee required. Prerequisite: None.

AT 1544 The Automotive Chassis

[(8-8) for 8 Weeks] 5 hours
 Emphasizes repair procedures related to brakes, front end alignment and suspension systems. Includes use of brake lathes, wheel balancing equipment and front end alignment equipment. Includes theory as a primary element of the course. Lab fee required. Prerequisite: None.

AT 1545 Automotive Diesel

[(8-8) for 8 Weeks] 5 hours
 Involves theory and practice in basic principles for repair and maintenance of the automotive diesel engine. Contrasts automotive and commercial diesels. Lab fee required. Prerequisite: None.

AT 2541 Automotive Electrical Systems

[(8-8) for 8 Weeks] 5 hours
 Presents most elementary to most advanced electrical system. Emphasizes testing and diagnostic procedures. Uses of diagnostic equipment, ohmmeters, test lights and oscilloscopes. Lab fee required. Prerequisite: None.

AT 2542 Heating and Air Conditioning

[(8-8) for 8 Weeks] 5 hours
 Presents physics of temperature change applicable to the automobile. Designed to instruct students in current diagnostic principles and repair procedures. Lab fee required. Prerequisite: None.

AT 2543 Automotive Fuel and Emissions

[(8-8) for 8 Weeks] 5 hours
 Emphasizes fuel and emissions related to tune-up procedures. Various fuel system components and emission control systems studied. Emphasizes carburetor overhaul and adjustment. Exhaust emission test equipment used in conjunction with engine analyzer. Lab fee required. Prerequisite: None.

AT 2544 Automotive/Diesel Electronics I

[(8-8) for 8 Weeks] 5 hours
 Introduces Ohm's law, power law, principles of direct current circuits, principles of alternating current and voltage, induction, capacitance, reactance, impedance and filters. Requires a scientific calculator. Lab fee required. Prerequisite: Math 1335 or more advanced or equivalent or consent of department chairman.

AT 2545 Automotive/Diesel Electronics II

[(8-8) for 8 Weeks] 5 hours
 Introduces fundamentals of solid state devices such as FET's bipolar and unijunction transistors, zener diodes, LEDs, solid state regulators, electronic spark control and timing, linear amplifiers, buffers, SCRs, RAMS, PROMS, EPROMS, microprocessors and the automotive digital computer. Requires a scientific calculator. Lab fee required. Prerequisite: None.

Biology

Faculty: Roger Corzine, chairman; Dr. Vincent Coffey, Dr. Clyde Smith.

Courses offered in the biology department are directed toward two objectives. First, they provide the student majoring in a biological science with a broad and sound foundation for advanced study at an upper-level institution or a professional school. The second objective provides the non-science major with information and concepts about himself and the living world around him to help him become a well-rounded citizen.

Courses of Study for Associate in Science Degree

	Semester Hrs
General Education Requirements	59
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra or More Advanced	3
Math 1343 Plane Trigonometry or More Advanced	3
*PE (Any two one-hour activity courses)	2
Chem 1301/1101 General Inorganic Chemistry I/ Fundamentals of Chemistry Laboratory I	4
Chem 1302/1102 General Inorganic Chemistry II/Fundamentals of Chemistry Laboratory II	4
Chem 2301/2101 Organic Chemistry I/Organic Chemistry Lab I	4
Chem 2302/ 2102 Organic Chemistry II/Organic Chemistry Lab II	4
Phys 1401 College Physics I	4
Phys 1402 College Physics II	4
Elective	3
Major Requirements	11-13
Biol 1401 General Biology I	4
Biol 1402 General Biology II	4
**Biology Electives	3-5
Total Semester Hours	70-72

*PE 1100 should be the first course taken in physical education.

**Requirements for biology electives may be fulfilled by taking any combination of the following courses: Biol 2301, General Ecology; Biol 2303, Marine Ecology; Biol 2401, Comparative Anatomy; or Biol 2403, Microbiology. Choice of an elective may depend upon students' plans for future study. Students should consult with the biology faculty for information regarding these courses.

Dentistry***

Entrance to a college of dentistry requires a minimum of 60 semester hours of acceptable college or university credit in addition to meeting special entrance requirements of the chosen college. A student may satisfy the 60 semester hours of college credit and qualify for the associate in science degree by following the suggested degree plans.

Medicine***

Most colleges of medicine recommend that a student complete a baccalaureate degree before entering the college of medicine. Since there is no baccalaureate degree in "premed," no particular major is specified so long as the courses required for entrance to the college of medicine are included. Provisions exist for students to be admitted to colleges of medicine upon completion of 90 semester hours of college credit provided they satisfy all other requirements for entrance to the college of medicine.

A student may complete specified courses in the first two years of college and qualify for the associate degree in science following the suggested degree plan.

Optometry***

Entrance to a college of optometry may be gained after completion of two years of college providing that the student has successfully completed required courses and can satisfy the special entrance requirements of the college of optometry.

A student may complete the two years of college required and qualify for the associate degree in science by following the suggested degree plan.

Pharmacy***

Entrance to a college of pharmacy may be gained after completion of two years of college providing that the student has successfully completed required courses and can satisfy the special entrance requirements of the college of pharmacy.

A student may complete the two years of college required and qualify for the associate degree in science by following the suggested degree plan.

Veterinary Medicine***

The minimum scholastic requirement for enrollment in the professional curriculum of veterinary medicine is the satisfactory completion of not less than 60 semester hours of acceptable college or university credit. In addition, the student must meet any special entrance requirements that may exist for the college of veterinary medicine.

Students may complete the required courses for the first two years and qualify for an associate degree in science by following the suggested degree plan.

***Students who expect to enter a profession in dentistry, medicine, optometry, pharmacy, veterinary medicine or some related profession that requires graduation from a specialized college should carefully check entrance requirements for the college to which they expect to transfer after two years at Odessa College.

Biol 1100 Medical Terminology (BIOL 1170)

(1-0) 1 hour
Introduces medical terminology for students planning health science careers. Consists of Latin and Greek roots, prefixes and suffixes, as well as proper pronunciation and spelling. Prerequisite: None.

Biol 1300 Principles of Biology (BIOL 1308)

(3-0) 3 hours
Emphasizes basic concepts of biology. Designed to provide students with a better understanding of their own bodies and the environment in which they live. Intended for non-science majors needing only one semester of biology. Prerequisite: None.

Biol 1401 General Biology I (BIOL 1408)

(3-3) 4 hours
A study of the organizational aspects of cells from molecular to organismic levels. Covers cell anatomy and cell biochemistry including cellular respiration, photosynthesis, cell reproduction, genetics and a taxonomic survey of the five kingdoms. Lab fee required. Prerequisite: None.

Biol 1402 General Biology II (BIOL 1409)

(3-3) 4 hours
A continuation of Biol 1401. Includes plant and animal growth, the several plant and animal tissues and systems, ecology, evolution, behavior and a mammal dissection. Lab fee required. Prerequisite: Biol 1401 or consent of the instructor.

Biol 1403 Human Anatomy & Physiology (BIOL 2404)

(3-3) 4 hours
A one-semester course dealing with functional anatomy and basic principles of different systems of the body and their physiological activities. Lab fee required. Prerequisite: None.

Biol 1404 Anatomy & Physiology I (BIOL 2401)

(3-3) 4 hours
First of a two-semester course presented in an integrated manner. Demonstrates relationship between form and function. Includes study of the cell, basic chemistry, tissues and some of the body systems. Lab fee required. Prerequisite: None.

Biol 1405 Anatomy & Physiology II (BIOL 2402)

(3-3) 4 hours
A continuation of Biol 1404 that assumes foundations laid therein. Includes completion of body systems and a major mammal dissection. Lab fee required. Prerequisite: Biol 1404 or consent of the instructor.

- Biol 2301 General Ecology** (BIOL 2306) 3 hours
 (3-2) 3 hours
 Presents concepts of plant and animal communities and population dynamics. Includes community classification, environmental sampling methods and effects of chemicals on the biome. Requires field trips, group discussions and written theme. Lab fee required. Prerequisite: One semester of either biology or geology or consent of the instructor.
- Biol 2303 Marine Ecology** (BIOL 2370) 3 hours
 [(24-36) for 2 weeks] 3 hours
 A field course in marine ecology at Cholla Bay, Puerto Penasco, Sonora, Mexico. A 10-day course offered between spring semester and first summer session, as well as during Midwinter Session. Emphasizes field observation and identification of shore and reef animals. Shore fish, planktonic forms and marine algae also studied. Field collection, identification and preservation techniques presented along with systemic, life history and ecological information. Special trip fee required. Prerequisite: Consent of the instructor.
- Biol 2401 Comparative Anatomy** (BIOL 2428) 4 hours
 (3-4) 4 hours
 Undertakes a comparative study of the anatomy of type chordates. Includes lectures on progressive development of organs and organ systems. Requires laboratory dissection of representative animals from the Vertebrata. Lab fee required. Prerequisite: Biol 1401 and 1402.
- Biol 2403 Microbiology** (BIOL 2420) 4 hours
 (3-3) 4 hours
 Deals with structure, cultivation, classification and ecology of microorganisms. Emphasizes life activities of bacteria and their effects on man and his environment. Lab fee required. Prerequisite: One semester of biology or consent of the instructor.

Building Trades

Faculty: Tom Wilburn, chairman.

The building trades program at Odessa College trains students for entry-level jobs in the building and construction industry. Specific areas of training include on-site experience in the areas of carpentry, concrete forming, plumbing, electrical wiring and energy conservation. Further instruction offers expertise in the reading and interpretation of plans, specifications and codes.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
*General Education Elective	3
Math -- College Level	3
**PE (Any two one-hour activity courses)	2
Major Requirements	48
BT 1601 Principles of Residential Construction I	6
BT 1602 Carpentry I	6
BT 1603 Principles of Residential Construction II	6
BT 1604 Carpentry II	6
BT 2601 Principles of Residential Construction III	6
BT 2603 Cabinet Making	6
BT 2604 Special Problems	6
BT 2605 Residential Interior Finishes	6
Related Requirement	3
Elective	3
Total Semester Hours	68

*Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

**PE 1100 should be the first course taken in physical education.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 48 semester hours in BT courses.

BT 1601 Principles of Residential Construction I

(2-8) 6 hours
 Introduces student to basic tools and skills included in construction of residential home building. Familiarizes student with terminology to identify different construction objects and numbers not only during actual construction but also in the classroom and on blueprints. Lab fee required. Prerequisite: None.

BT 1602 Carpentry I

(2-8) 6 hours
 A skills learning class. Requires learning basic use of hand and power tools, job and tool safety and other job training of the initial stages of residential construction from reading of blueprints through framing of walls and ceiling joists. Lab fee required. Prerequisite: None. Corequisite: BT 1601.

BT 1603 Principles of Residential Construction II

(2-8) 6 hours
 A continuation of BT 1601. Emphasizes roof framing, sheathing and roofing. Continues blueprint study with review of basic symbols through a study of light commercial building. Lab fee required. Prerequisite: BT 1601. Corequisite: BT 1604.

BT 1604 Carpentry II

(2-8) 6 hours
 A continuation of BT 1602. Introduces using the rafter square, as well as cutting a common rafter, hip or valley rafter and jack rafter. Stresses installation of roof sheathing, tar paper and composition roofing. Lab fee required. Prerequisite: BT 1602 or consent of the department chairman.

BT 2601 Principles of Residential Construction III

(2-8) 6 hours
 Designed for the second-year student. Emphasizes advanced blueprint study in specifications and heavy construction. Requires brief review of first-year study in blueprint reading. Second-year students required to work with first-year students as instructor's helper. Lab fee required. Prerequisite: BT 1601, BT 1602, BT 1603, BT 1604 or consent of the department chairman.

BT 2603 Cabinet Making

(2-8) 6 hours
 Involves principles of cabinet construction. Presents plan making, layout, wood selection, joints, machine practices and techniques, door and drawer construction, sanding, finishing and laminate laying. Lab fee required. Prerequisite: None.

BT 2604 Special Problems

(2-8) 6 hours
 Includes study of cost estimating for construction trades, of building codes, bidding procedures and specialty construction methods. Includes employment-securing skills, customer relationships and job management. Lab fee required. Prerequisites: BT 1601, BT 1602, BT 1603, BT 1604, BT 2601, BT 2605 or consent of the department chairman.

BT 2605 Residential Interior Finishes

(2-8) 6 hours
 Includes interior finishes such as sheetrocking, taping, bedding, texturing and painting. Emphasizes methods and procedures involved in installation of vinyl, wood and ceramic tile, flooring, techniques for hanging doors and cabinets and application of interior molding and wood trim. Lab fee required. Prerequisite: BT 1603 and BT 1604 or consent of the department chairman.

Plumbing Fundamentals - R/AC 1402.

Business Administration

Faculty: Dan Neagle, chairman; Dr. Sue Blair, James Camp, Larry Duval, Jack Felts, Sharon Lipham.

Business administration is a broad field of study and contains many possible majors. Courses offered include those required by senior colleges at the freshman and sophomore levels to obtain the degree of bachelor of science of business administration or a bachelor of business administration (B.B.A.) in a specific undergraduate study, such as accounting. A business major should be aware of the opportunities, requirements and obligations in various majors of specialization so that a proper choice for study can be made. Students should reserve the decision of choosing an area of emphasis depending on their own abilities and interests. Suggested fields of study include accounting, advertising, banking, finance, business, teaching, various phases of management, insurance, retailing, marketing and statistical analysis.

The department also offers courses that may be directly applicable to those who already are employed but wish to upgrade their job skills or to meet certification requirements for their particular vocation.

**Course of Study for Associate in Arts Degree
(Business Administration)**

	Semester Hrs
General Education Requirements	40
Eco 2301 Principles of Economics or Eco 2302 Economic Problems	3
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
*PE (Any two one-hour activity courses)	2
Science (Two sequential semesters of a lab science in Biology, Chemistry, Geology or Physics)	8
Spch 1310 Introduction to Speech Communication; Spch 1320 Public Speaking; or Spch 2340 Business and Professional Speech	3
Major Requirements	29
BA 1301 Introduction to Business	3
BA 1304 Introduction to College Accounting	3
BA 2301 Principles of Financial Accounting	3
BA 2302 Principles of Managerial Accounting	3
BA 2311 Business Law I	3
CIS 1401 Introduction to Computer Information Systems or More Advanced	4
Math 1317 Mathematical Analysis for Business I	3
Math 1318 Mathematical Analysis for Business II	3
Math 2401 Business Statistics	4
Total Semester Hours	69

*PE 1100 should be the first course taken in physical education.

Students who desire to begin their study of college accounting beyond the introductory level (BA 1304) will take a departmental examination for placement purposes only. The examination will assess adequacy of foundations and background. For students who pass the examination, a substitution for BA 1304 may be agreed upon by the student and the department advisor.

BA 2311 may not be accepted by all four-year or upper-level institutions because of the level at which those institutions offer the course. The student and the department advisor may then agree on a substitution.

Business Administration Core Curriculum

Leading to degrees in Accounting, Finance, Personnel etc.

The following courses commonly are considered to be core courses for students intending to pursue a degree in business administration at an accredited, upper-level college or university.

	Semester Hrs
General Education Requirements	46-52
Eco 2301 Principles of Economics	3
Eco 2302 Economic Problems	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
* PE (Any two one-hour activity courses)	2
Psy 1301 Introduction to Psychology	3
Science (Dependent on university transferred to. If two courses are required, they must be taken sequentially.)	4-8

Soc 1301 Principles of Sociology	3
Spch 1310 Introduction to Speech Communication or 2340 Business and Professional Speech	3
**Approved Electives	4-6
Major Requirements	20
CIS 1401 Introduction to Computers or More Advanced	4
***BA 2301 Principles of Financial Accounting	3
BA 2302 Principles of Managerial Accounting	3
Math 1317 Mathematical Analysis for Business I	3
Math 1318 Mathematical Analysis for Business II	3
Math 2401 Business Statistics	4
Total Semester Hours	66-72

*PE 1100 should be the first course taken in physical education.

** Electives/Substitutions: Electives should meet degree requirements of the student's selected senior college or upper-level institution. BA 2312, Business Law II; CIS 1401, Introduction to Computer Information Systems; CIS 1403, COBOL Programming I; CIS 2404, Programming in RPG II and RPG III; or other CIS course as appropriate for student's four-year plan are recommended.

***Prior to taking BA 2301, BA 1304, Introduction to College Accounting, or acceptable high school background will be required. Passing a departmental exam for placement purposes will suffice for accounting background.

Students should check with the college or university to which they plan to transfer about course transferability and degree requirements. Faculty members in the department are available to assist students with their academic planning and with selecting appropriate course substitutions.

Accounting

The two-year accounting program prepares students for employment at mid-level accounting positions such as full-charge bookkeeper, accounts receivable or accounts payable clerk, payroll clerk, accounting technician and other similar accounting positions.

Course of Study for Certificate of Completion (Accounting)

	Semester Hrs
General Education Requirements	43
*CIS 2215 Electronic Word Processors	2
CIS 2220 Electronic Spreadsheets	2
Eco 2301 Principles of Economics	3
Eco 2302 Economic Problems	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Math 1316 College Algebra - Business or Math 1341 College Algebra	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
**PE (Any two one-hour activity courses)	2
Psy 1301 Introduction to Psychology	3
Science	4
Spch 1310 Introduction to Speech Communication or Spch 2340 Business and Professional Speech	3
Major Requirements	22
BA 1301 Introduction to Business	3
BA 1304 Introduction to Accounting	3
BA 2301 Principles of Financial Accounting	3
BA 2302 Principles of Managerial Accounting	3
BA 2311 Business Law I or BA 2312 Business Law II	3
Math 1317 Mathematical Analysis for Business I	3
Math 2401 Business Statistics	4
Total Semester Hours	65

*CIS 2215 may be waived for a student who has successfully completed Engl 1311 (Word Processing).

**PE 1100 should be the first course taken in physical education.

General Business

- BA 1301 Introduction to Business (BUSI 1301)** 3 hours
(3-0)
Presents a general survey of various fields of opportunity in business and industry. Emphasizes aptitudes and skills required for success. Includes methods and practices of businessmen and contribution of business to society. Prerequisite: none.

Accounting

- BA 1304 Introduction to College Accounting (ACCT 1370)** 3 hours
(3-0)
For business and non-business majors. Introduces basic theory of double-entry accounting for the sole proprietorship. Emphasizes complete accounting cycle, including accrual and deferral adjustments. Also includes financial statement presentation, accounting for cash, merchandising, payroll, receivables and payables. (May not be accepted for degree credit by all senior institutions.) Prerequisite: TASP equivalent for math competency.

- BA 2301 Principles of Financial Accounting (ACCT 2301)** 3 hours
(3-1)
Emphasizes compiling financial information and reporting to external users according to generally accepted accounting principles. Includes inventories, depreciation and fixed assets, partnerships, corporation stocks and bonds, statement of cash flows and financial statement analysis. Prerequisite: BA 1304 or satisfactory score on departmental exam.

- BA 2302 Principles of Managerial Accounting (ACCT 2302)** 3 hours
(3-1)
Emphasizes use of accounting information for management decision making. Stresses internal use of financial statements and other special reports in planning and controlling business enterprises. Includes such topics as job order, process and standard cost accounting, master budget concepts, CVP analysis, ratios and capital budgeting. Prerequisite: Math 1335, BA 2301 or BA 1304 (or satisfactory score on departmental exam).

Business Law

- BA 2311 Business Law I (BUSI 2301)** 3 hours
(3-0)
Provides understanding of legal framework of business and basic principles of law impacting on business and society. Gives special attention to legal environment of business and government; the nature and source of legal systems: law of contracts, personal property, bailments, real property, wills, estates and trusts; and to selected civil law topics. Prerequisite: Engl 1311 or equivalent.

- BA 2312 Business Law II (BUSI 2302)** 3 hours
(3-0)
A continuation of BA 2311. Emphasizes legal principles of sales, commercial paper, agency, secured transactions, bankruptcy, business organization. Prerequisite: Engl 1311 or equivalent.

Mathematics for Business Administration

- Math 1315 Elementary Mathematics of Finance (MATH 1321)** 3 hours
(3-0)
Develops skills in real number and algebraic operations with particular application to business and accounting problems. Includes percent, interest, annuities, insurance, payroll, taxes, depreciation, financial statements, profit distribution, graphs and basic statistics. This course may not be accepted for credit by all senior colleges. Prerequisite: Math 1313 or equivalent placement score.

- Math 1316 College Algebra—Business (MATH 1371)** 3 hours
(3-0)
Provides introduction to sets, functions and the algebraic number system. Includes inequalities, variation, logarithms, probability, determinants and quadratics. Presents problem solving by using business and decision-making techniques. Prerequisite: Math 1335 or equivalent placement score.

- Math 1317 Mathematical Analysis for Business I (MATH 1324)** 3 hours
(3-0)
Develops quantitative methods of analysis for business problems. Includes study of set theory, symbolic logic, mathematical relationships, vectors and matrices, break-even interpretations, linear programming, probability and expected value as aids in formulating business decisions. Prerequisite: Math 1316, 1341, or demonstrated proficiency in college algebra.

Math 1318 Mathematical Analysis for Business II (MATH 1325)

(3-0) 3 hours
Includes elementary calculus of differentiation, integration and application. Emphasizes application to business and economic problems. Prerequisite: Math 1317.

Math 2401 Business Statistics (MATH 1442)

(3-3) 4 hours
Provides introduction to techniques of collection, presentation analysis and interpretation of numerical data. Stresses application of correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models and programming. Prerequisite: Math 1317.

Chemistry

Faculty: Dr. E. Don Taylor, chairman; Dr. Jeanne Russell, Wendell Barber II.

The objectives of the chemistry department are to prepare pre-professional chemists, chemical engineers and chemical education majors and to give an effective background in chemistry for work in biology, physics, home economics, agriculture, premedicine and elementary education. A co-objective is to prepare students for careers in chemical technology, where emphasis is placed on applied chemistry for modern laboratory instrumentation.

The chemistry curriculum is intended to be general enough to fulfill these objectives for the major or the non-major's requirements for the first two years of college chemistry. Students are responsible for checking the catalog of the senior college to which they plan to transfer to determine which of these courses are compatible with the senior college degree program.

The chemistry department offers honors classes at the freshman level. These classes, which are smaller than normal, will review the basic chemistry fundamentals and discuss and do projects on current chemical concerns, environmental issues, energy issues, etc. Students must qualify for these classes. Contact the department chairman or the director of honors for more information.

Course of Study for Associate in Science Degree in Chemistry

	Semester Hrs
General Education Requirements	47
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1345 Analytic Geometry	3
Math 2331 Calculus I	3
*PE (Any two one-hour activity courses)	2
**Phys 1403 Engineering Physics I	4
**Phys 2401 Engineering Physics II	4
CIS 2406 FORTRAN 77 -- Scientific	4
Elective	3
Major Requirements	18
Chem 1301/1101 General Inorganic Chemistry I/Fundamentals of Chemistry Laboratory I	4
Chem 1302/ 1102 General Inorganic Chemistry II/Fundamentals of Chemistry Laboratory II	4
Chem 2201 Organic Nomenclature	2
Chem 2301/2101 Organic Chemistry I/Organic Chemistry Lab I	4
Chem 2302/2102 Organic Chemistry II/Organic Chemistry Lab II	4
***Electives	3 or 4
Total Semester Hours	68-69

*PE 1100 should be the first course taken in physical education.

**Phys 1401 and 1402 satisfy the Odessa College requirement for an associate degree for premedical students, but only Phys 1403 and Phys 2401 will transfer to satisfy a science requirement.

***Approved Electives: Chem 1201, 2303; Fr 1411 and 1412; Germ 1411 and 1412; Math 2333.

- Chem 1101 Fundamentals of Chemistry Laboratory I (CHEM 1111)**
 (0-3) 1 hour
 A laboratory course which illustrates and reinforces principles and concepts of Chem 1301 by use of quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Lab fee required. Corequisite or prerequisite: Chem 1301.
- Chem 1102 Fundamentals of Chemistry Laboratory II (CHEM 1112)**
 (0-3) 1 hour
 A laboratory course which illustrates and reinforces principles and concepts of Chem 1302 by use of qualitative and quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Lab fee required. Corequisite or prerequisite: Chem 1302.
- Chem 1105 Introductory Chemistry Laboratory (CHEM 1105)**
 (0-3) 1 hour
 A laboratory course which illustrates and reinforces principles and concepts of Chem 1300 by use of quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Lab fee required. Corequisite or prerequisite: Chem 1300.
- Chem 1201 Chemical Calculations (CHEM 1207)**
 (2-0) 2 hours
 A course that emphasizes the problem solving techniques that are used in Chem 1302. Can be used to fulfill the 10 hour freshman chemistry course or chemical engineering calculations course taught at some senior colleges. Prerequisite: Chem 1301.
- Chem 1305 Introductory Chemistry (CHEM 1305)**
 (3-0) 3 hours
 A one-semester lecture course in elementary chemistry. Primarily for majors or people desiring a one-semester introductory chemistry course. Includes terminology, nomenclature, stoichiometry, states of matter, solutions, equilibria, etc. Prerequisite: An understanding of basic mathematics, including simple algebra, is suggested. (Credit probably not transferable until Chem 1100 successfully completed.)
- Chem 1301 General Inorganic Chemistry I (CHEM 1311)**
 (3-0) 3 hours
 A lecture course designed as a first college-transfer course for students with some background in physical science. Covers such topics as atomic structure, bonding, formulas, equations, gas laws, solutions, etc. Prerequisite: none. (Credit probably not transferable until Chem 1101 is successfully completed. Proficiency in high school algebra is essential.)
- Chem 1302 General Inorganic Chemistry II (CHEM 1312)**
 (3-0) 3 hours
 A lecture course which is a continuation of Chem 1301. Includes chemical kinetics, acids and bases, equilibrium, electrochemistry, thermodynamics, coordination chemistry, nuclear chemistry, organic, etc. Prerequisite: A minimum grade of "C" in Chem 1301. (Credit probably not transferable until Chem 1102 is successfully completed. Proficiency in college algebra is essential.)
- Chem 2101 Organic Chemistry Laboratory I (CHEM 2123)**
 (0-4) 1 hour
 A laboratory course that illustrates and reinforces principles and concepts of Chem 2301. Uses preparative experiments of organic compounds. Lab fee required. Corequisite or Prerequisite: Chem 2301.
- Chem 2102 Organic Chemistry Laboratory II (CHEM 2101)**
 (0-4) 1 hour
 A laboratory course that illustrates and reinforces principles and concepts of Chem 2302. Uses preparative experiments of organic compounds. Covers NMR and IR as applicable to organic molecules identification. Lab fee required. Corequisite or Prerequisite: Chem 2302.
- Chem 2103 Analytical Chemistry Laboratory I (CHEM 2101)**
 (0-4) 1 hour
 A laboratory course that illustrates and reinforces principles and concepts of Chem 2303. Uses quantitative experiments. Lab fee required. Corequisite or Prerequisite: Chem 2303.
- Chem 2201 Organic Nomenclature (CHEM 2227)**
 (2-0) 2 hours
 A lecture course that presents a systematic study of rules of nomenclature for organic molecules. Emphasizes International Union of Pure and Applied Chemistry rules. Covers common names. Prerequisite: Chem 1302. Corequisite: Chem 2301 or consent of the instructor.

Chem 2301 Organic Chemistry I (CHEM 2323) 3 hours
(3-0)
A lecture course that presents a mechanistic approach to an integrated study of aliphatic, alicyclic and aromatic hydrocarbons. Includes an introduction to instrumental methods applicable to organic chemistry. Prerequisite: A minimum grade of "C" in Chem 1302. Corequisite: Chem 2201 or consent of the instructor. (Credit probably not transferable until Chem 2101 is successfully completed.)

Chem 2302 Organic Chemistry II (CHEM 2325) 3 hours
(3-0)
A lecture course that is a continuation of Chem 2301. A mechanistic approach to an integrated study of organic compounds with functional groups. Includes an introduction to biochemistry. Prerequisite: A minimum grade of "C" in Chem 2301. (Credit probably not transferable until Chem 2102 is successfully completed.)

Chem 2303 Analytical Chemistry (CHEM 2301) 3 hours
(3-0)
A lecture course that is a study of fundamental principles of elementary quantitative analysis, both theoretical and practical. Includes equilibrium, gravimetric analysis, volumetric analysis and introduction to instruments (AA, GC, UV, spectroscopy, pH meters, IR and NMR). Prerequisite or Corequisite: Chem 1302. (Credit probably not transferable until Chem 2103 is successfully completed.)

Child Development

Faculty: MaryIn Hair, chairman; Mary Joyce Harding.

The field of child development is a rapidly growing area with a wide range of employment possibilities. An increasing number of job opportunities are available in the community for those who work with children. Public and private schools, federal agencies, day care centers, industry and community agencies need professionally-trained people who understand children and who can give them love, guidance and leadership.

The associate degree program in child development will provide an opportunity for an in-depth study of the whole child. In the certificate program, the specialization is in child development. In both programs, at least 50 percent of course content will include an actual lab experience with children. Students enrolled in child development lab classes must meet Texas Department of Human Resources staff requirements for day-care centers.

Student liability insurance is required for all child development lab classes.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17-18
Engl 1311 Composition and Rhetoric	3
Math -- College Level	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
Spch 2340 Business and Professional Speech or Spch 2360 Voice and Diction	3
HEd 1301 First Aid	3
*PE (Any two one-hour activity courses) or PE 1303 Movement and Recreation	2-3
Major Requirements	41
CD 1302 Introduction to Child Development	3
CD 1304 The Abused and Neglected Child	3
CD 1305 Creative Art, Music and Movement for Children	3
CD 1307 Discipline and Classroom Management	3
CD 1308 Child Growth and Development of Infants and Toddlers	3
CD 1311 Child Health Care and Nutrition	3
CD 2301 Personal and Family Management	3
CD 2304 The Special Child	3
CD 2305 Children's Language and Literature Development	3
CD 2306 Science and Math Activities for Children	3
CD 2403 Planning and Teaching Methods in Early Childhood	4
CD 2410 Application of Learning Theories	4
Psy 2302 Child Psychology	3
Elective	3

**Approved Elective	3
Total Semester Hours	64-65

*PE 1100 should be the first course taken in physical education.
 **Approved Electives: BA 2311, Business Law I; Psy 1301, Introduction to Psychology; Soc 1301, Principles of Sociology; or any CD course not already required.

Certificate of Technology in Child Development

	Semester Hrs
CD 1302 Introduction to Child Development	3
CD 1304 The Abused and Neglected Child	3
CD 1305 Creative Art, Music and Movement for Children	3
CD 1307 Discipline and Classroom Management	3
CD 1308 Child Growth and Development of Infants and Toddlers	3
CD 1311 Child Health Care and Nutrition	3
CD 2301 Personal and Family Management	3
CD 2305 Children's Language and Literature Development	3
HEd 1301 First Aid	3
Psy 2302 Child Psychology	3
Total Semester Hours	30

CD 1302 Introduction to Child Development 3 hours
 (2-3)
 Introduces profession of teaching the young child. Emphasizes adult-child relationship, observation skills, guidance techniques, communication skills and learning environments. Explores career opportunities in child development and related fields. Lab fee required. Prerequisite: None.

CD 1304 The Abused and Neglected Child 3 hours
 (3-0)
 Designed to educate individuals in all aspects of child maltreatment. Utilizes outside resource persons, as well as films, lectures, etc. Reviews current federal, state and local child abuse laws, programs, policies and resources. Prerequisite: None.

CD 1305 Creative Art, Music and Movement for Children 3 hours
 (2-3)
 Emphasizes creative arts, music and movement in development of young children. Plans and presents individual projects in a classroom with children. Lab fee required. Prerequisite: None.

CD 1307 Discipline and Classroom Management 3 hours
 (2-3)
 Provides opportunity to evaluate and understand individual's expectations regarding discipline and classroom management. Emphasizes techniques of communication with children as well as co-workers. Offers opportunity to learn theories of behavior-shaping. Presents major theorists and theories of individual and group management. Lab fee required. Prerequisite: None.

CD 1308 Child Growth and Development of Infants and Toddlers 3 hours
 (3-2)
 Emphasizes development processes and environmental factors that can affect physical growth, shape personality and achievement from conception to three years of age. Presents skills for group or individual care of infants or toddlers. Requires laboratory observation, participation and performance in relation to planned projects geared toward infants and toddlers. Lab fee required. Prerequisite: None.

CD 1310 Child Growth and Development from School Age Through Adolescence 3 hours
 (3-0)
 Focuses on social, emotional, mental and physical development processes. Designed particularly for anyone working with individuals or with groups from school age through adolescence. Prerequisite: None.

CD 1311 Child Health Care and Nutrition 3 hours
 (2-3)
 Concentrates on general principles of personal and community health. Emphasizes health supervision of the young child to protect against communicable diseases and accidents. Stresses effect of nutrition on growth and development. Includes assessment and development of activities for young children in regard to health, safety, nutrition and food management. Lab fee required. Prerequisite: None.

- CD 2110 Child Development Seminar**
 (1-0) 1 hour
 Provides leadership and guidance for special, identified needs of staff members of day care of preschool programs. Allows student and instructor to formulate objectives on an individual basis and to agree on strategies to meet the objectives. May be repeated for credit if course content changes. May be substituted for required course if content is appropriate and if department chairman approves. Prerequisite: None.
- CD 2301 Personal and Family Management**
 (3-0) 3 hours
 Presents development and relationships between individual family members. Includes changing role of men and women in society. Discusses stages of family life cycle. Introduces management techniques applicable to the individual and the family, including time management, money management and related topics. Prerequisite: None.
- CD 2304 The Special Child**
 (2-3) 3 hours
 Presents techniques to identify and serve children with special needs. Includes studies of physical, emotional, language and/or mental disabilities. Also presents needs of gifted and talented children. Emphasizes constructing environment to enable children with special needs to function to their maximum abilities within the group structure. Stresses ways of working with parents of special children to bring out maximum home-center coordination. Lab fee required. Prerequisite: None.
- CD 2305 Children's Language and Literature Development**
 (2-3) 3 hours
 Introduces techniques for development of early childhood language experiences in listening, speaking and reading and writing readiness. Includes criteria for selecting and using children's literature in preschool environment. Introduces methods of story telling with and without audiovisual aids (such as puppets, flannel graphs and story rolls). Includes introduction to bilingual language development. Lab fee required. Prerequisite: None.
- CD 2306 Science and Math Activities for Children**
 (2-3) 3 hours
 Applies scientific approach to a child's world. Includes lectures and laboratory activities designed to acquaint child with nature, ecology and the world around him. Includes such math concepts as shapes, counting sets, etc. Lab fee required. Prerequisite: None.
- CD 2307 Special Problems**
 (2-3) 3 hours
 Serves special, identified needs of staff members of day-care or preschool programs. Allows student and instructor to formulate objectives on an individual basis and to agree on strategies to meet the objectives. May be repeated for credit when course content changes. May be substituted for required course if content is appropriate and if department chairman approves. Lab fee required. Prerequisite: Consent of the department chairman.
- CD 2308 Special Problems**
 (3-0) 3 hours
 Serves special, identified needs of staff members of day-care or preschool programs. Allows student and instructor to formulate objectives on an individual basis and to agree on strategies to meet the objectives. Offers opportunity for special assignments which require only instructor lecture time. May be repeated for credit when course content changes. May be substituted for required courses if content is appropriate and if department chairman approves. Prerequisite: Consent of the department chairman.
- CD 2309 Special Problems**
 (1-4) 3 hours
 Serves special, identified needs of staff members of day-care or preschool programs. Allows student and instructor to formulate objectives on an individual basis and to agree on strategies to meet the objectives. May include renewal of CDA credential, solving a management problem and/or other special assignment which requires mostly guided lab time. May be repeated for credit when course content changes. May be substituted for required course if content is appropriate and if department chairman approves. Lab fee required. Prerequisite: Consent of the department chairman.

CD 2403 Planning and Teaching Methods in Early Childhood 4 hours
 (2-4)
 Emphasizes planning and teaching curriculum for children three to five years of age. Includes assessing children's developmental level and planning yearly to daily curricula. Also includes involving parents, creating physical environments and managing classrooms. Lab fee required. Prerequisite: CD 1302 and minimum of two of the following courses: CD 1305, CD 1311, CD 2305, CD 2306 or consent of the department chairman.

CD 2410 Application of Learning Theories 4 hours
 (1-8)
 Requires evidence of competency as a child care worker and/or director before a passing grade can be awarded. Lab fee required. Prerequisite: 21 hours of child development including CD 1302, CD 1308, CD 2403 and Psy 2302 as well as consent of the department chairman. Requires a grade of "C" or better.

Clinical Laboratory Sciences

Faculty: Joel Smith, chairman; Annette McMinn, Eloisa Corbell, Dr. Kris Challapalli, medical advisor.

Medical laboratory technology is a special two-year program of combined academic and clinical training which prepares students with entry skills in medical laboratory techniques, completes prerequisites for certification by examination in the category of medical laboratory technician and leads to an associate of applied science degree. The Odessa College MLT program is CAHEA accredited. Laboratory practicums are under the full-time supervision of a qualified education coordinator at affiliated clinical laboratories, and the entire program is supervised by a pathologist certified by the American Society of Clinical Pathologists and the College of American Pathologists.

Because practicum space is limited, students will be admitted on a selected basis. To be admitted to the program, students must be a high school graduate or equivalent, must achieve a satisfactory score on selected college entrance examinations and must show evidence of good physical and mental health. Applicants must submit their applications and fulfill admission requirements no later than two weeks prior to the start of the second summer term.

Students must maintain an average grade of "C" or better for all courses taken and attain no grade lower than "C" in any medical laboratory technology course to continue the program.

Students seeking additional information should contact the chairman, clinical laboratory sciences department. Applications for the medical laboratory technology associate degree program may be obtained from the counseling center.

Student liability insurance is required for all laboratories and clinical practicums.

Course of Study for Associate in Applied Science Degree

Summer Session II			
		Course	Sem Hrs
		MLT 1304	3
		Math 1341	3
First Year			
First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Chem 1301	3	Biol 1402	4
Chem 1101	1	Spch 1310	3
Engl 1311	3	MLT 1212	2
MLT 1211	2	MLT 1602	6
MLT 1601	6	*PE	1
*PE	1		
Summer Session I			
		Course	Sem Hrs
		MLT 1223	2

Second Year

Third Semester		Fourth Semester	
Course	Sem Hrs	Course	Sem Hrs
MLT 2211	2	MLT 2212	2
**MLT 2221	2	**MLT 2222	2
MLT 2601	6	MLT 2602	6
Govt	3	Hist	3

Summer Session I

Course	Sem Hrs
MLT 2223	2

Summer Session II

Course	Sem Hrs
Elective	3

*PE 1100 should be the first course taken in physical education.

**MLT 2424 may be substituted for MLT 2221 and MLT 2222.

MLT 1211 Urinalysis, Hematology and Hemostasis Lab

(0-8) 2 hours
 Illustrates and reinforces content of MLT 1304 and MLT 1601. Emphasizes theory, principle, procedure and performance of selected techniques employed in urinalysis, hematology and coagulation laboratories for diagnosing and/or monitoring disease processes. Stresses laboratory safety. Lab fee required. Prerequisite: None. Corequisite: MLT 1601.

MLT 1212 Immunology and Immunochemistry Lab

(0-8) 2 hours
 Illustrates and reinforces content of MLT 1602. Emphasizes theory, principle, procedure and performance of selected techniques employed in immunodiagnosis. Includes procedures for donor screening, antibody identification and crossmatching of blood for transfusion. Stresses laboratory safety. Lab fee required. Prerequisite: None. Corequisite: MLT 1602.

MLT 1223 Clinical Practicum

(0-16) 2 hours
 Consists of 16 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a medical technologist and a pathologist. Prerequisites: MLT 1304, MLT 1601, MLT 1602, MLT 1211 and MLT 1221.

MLT 1304 Urinalysis and Body Fluids

(3-0) 3 hours
 Introduces fundamentals of medical laboratory technology. Introduces professional ethics essential to the clinical laboratory. Emphasizes theory and practical application of urinalysis procedures and their interpretation and the examination of body fluids in the diagnosis and monitoring of disease processes. Prerequisite: Admission to the medical laboratory technology program and approval of the department chairman.

MLT 1601 Hematology and Hemostasis

(6-0) 6 hours
 Consists of study of the formed elements of blood and the cellular, vascular and plasma components of hemostasis. Emphasizes theory and practical application of hematology and hemostasis/coagulation procedures and their interpretation. Prerequisite: MLT 1304 or concurrent enrollment in MLT 1304 and approval of the department chairman. Corequisite: MLT 1211.

MLT 1602 Immunology and Immunochemistry

(6-0) 6 hours
 Consists of study of immunology and immunochemistry. Emphasizes study of antigen-antibody reactions and their use in serological testing and blood banking procedures. Prerequisites: MLT 1601 and consent of the department chairman. Corequisites: MLT 1212 and MLT 1222.

MLT 2211 Clinical Microbiology Lab

(0-8) 2 hours
 Illustrates and reinforces content of MLT 2601. Emphasizes theory, principle, procedure and performance of selected techniques employed in clinical microbiology for the isolation and identification of microorganisms pathogenic to man. Stresses laboratory safety. Lab fee required. Prerequisite: None. Corequisite: MLT 2601.

MLT 2212 Clinical Chemistry Lab

(0-8) 2 hours
 Illustrates and reinforces content of MLT 2602. Emphasizes theory, principle, procedure and performance of selected techniques employed in clinical chemistry for diagnosing and/or monitoring disease processes of a metabolic nature. Stresses laboratory safety. Lab fee required. Prerequisite: None. Corequisite: MLT 2602.

MLT 2221 Clinical Practicum

(0-20) 2 hours
 Consists of 20 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a medical technologist and a pathologist. Prerequisite: MLT 1223. Corequisite: MLT 2601.

MLT 2222 Clinical Practicum

(0-20) 2 hours
 Consists of 20 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a medical technologist and a pathologist. Prerequisite: MLT 2221. Corequisite: MLT 2602.

MLT 2223 Clinical Practicum

(0-16) 2 hours
 Consists of 16 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a medical technologist and a pathologist. Prerequisites: MLT 2222 or consent of the department chairman.

MLT 2424 Clinical Practicum

(0-36) 4 hours
 Consists of 36 hours per week in assigned departments of affiliated clinical laboratories performing procedures under the supervision of a medical technologist and a pathologist. Course may be substituted for MLT 2221 and MLT 2222. Prerequisites: MLT 1123, MLT 1211, MLT 1212, MLT 1304, MLT 1601, MLT 1602, MLT 2223, MLT 2211, MLT 2212, MLT 2601 and MLT 2602.

MLT 2601 Clinical Microbiology

(6-0) 6 hours
 Consists of study of microorganisms of medical importance to man. Includes study of bacteriology, mycology and parasitology. Emphasizes specimen requirements, isolation and culture techniques, staining characteristics and biochemical tests used in identifying pathogenic microorganisms. Stresses safety measures to prevent spread of infection. Prerequisite: MLT 1602 or consent of the department chairman. Corequisites: MLT 2211 and MLT 2221.

MLT 2602 Clinical Chemistry

(6-0) 6 hours
 Consists of the study of clinical chemistry. Briefly reviews general chemistry, chemical calculations and reagent preparation. Emphasizes theory and practical application of clinical chemistry procedures and their interpretation in relation to disease conditions. Includes manual and automated chemistry procedures. Prerequisites: MLT 2601 and consent of the department chairman. Corequisites: MLT 2212 and MLT 2222.

Communications

Faculty: Darlyne Ervin, chairman; Tom Barnett, radio/television; Tom Hughes, radio/television; Dr. James Johnson, speech; Debra Kirkland, speech; Wallace Jackson (ret.), radio/television; John McCarroll, journalism.

Odessa College offers through the communications department several degrees and options for students interested in communication studies. Programs for mass communication, radio/television and speech communication are available.

Mass Communication

The mass communication program at Odessa College prepares students to transfer to a senior college where they will work toward a bachelor's degree in any of several areas of mass communication. These fields may include advertising, commercial art, journalism, photography, public relations, radio, television and film.

Course of Study for Associate in Arts Degree

	Semester Hrs
General Education Requirements	54
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Spch 1320 Public Speaking	3
Engl (Sophomore Level)	6
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Math -- College Level	3
Science (Must have laboratory requirements)	8
Language 1411/1412	8
Language 2301/2302	6
*PE	2
Major Requirements	6
Jour 1313 Introduction to Mass Communications	3
R/TV 1310 Survey of Radio and Television	3
or R/TV 1320 Fundamentals of Radio and Television	3
Elective	3
Total Semester Hours	63

*PE 1100 should be the first course taken in physical education.

Jour 1313 Introduction to Mass Communication (COM 1307)
 (3-0) 3 hours
 Surveys basic facets affecting human interaction through mass communication. Examines evolution of today's concepts in mass communication. Prerequisite: None.

Radio/Television

Radio/television students at Odessa College enroll in broadcasting courses and laboratories mainly for three purposes: to prepare for transfer to universities, to prepare themselves vocationally for a career in radio and television and to broaden their exposure to the mass media.

Requirements for the associate in arts degree listed here are basically the same as requirements taken during the first two years at senior colleges and universities. However, students are responsible for becoming aware of the particular requirements of the school to which they plan to transfer.

To offer students an opportunity to gain valuable experience while still attending college, Odessa College operates a public radio station, KOCV-FM, and a public television station, KOCV-TV. Broadcasting students also produce programs that are carried by the local cable television company on Channel 10.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	32
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
Math -- College Level	3
*PE	2
Spch 1310 Introduction to Speech or Spch 1320 Public Speaking	3
Spch 2320 Introduction to Oral Interpretation	3
Jour 1313 Introduction to Mass Communication	3
Major Requirements	26
R/TV 1310 Survey of Radio and Television	3
R/TV 1320 Fundamentals of Radio and Television	3
R/TV 2310 Announcing for Radio and Television	3
R/TV 2320 Writing for Radio and Television	3
R/TV 2330 Radio and Television Production	3
R/TV 2360 Voice and Diction for Radio and Television	3

Radio 1111, 1112, 2111, 2112 Radio Laboratory	4
TV 1131, 1132, 2131, 2132 Television Laboratory	4
Elective	3
Total Semester Hours	61

*PE 1100 should be the first course taken in physical education.

**Course of Study for Associate in Arts Degree
(University Parallel)**

	Semester Hrs
General Education Requirements	48
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Math -- College Level	3
Science - Two semesters-must have lab requirements	8
Spch 1310 Introduction to Speech, Spch 1320 Public Speaking or Spch 2340 Business and Professional Speech	3
Phil 2301 Introduction to Philosophy I	3
Social Science (May be chosen from introductory courses in psychology, sociology, anthropology or economics)	3
*PE (Any two one-hour activity courses)	4
Major Requirements	12
R/TV 1310 Survey of Radio and Television	3
R/TV 2310 Announcing for Radio and Television	3
R/TV 2320 Writing for Radio and Television	3
R/TV 2330 Radio and Television Production	3
Electives	6
Total Semester Hours	66

*PE 1100 should be the first course taken in physical education.

- R/TV 1310 Survey of Radio and Television** 3 hours
(3-0)
Surveys American system of broadcasting. Includes personnel, equipment, terms and station and network organization. Offers practical experience in station operational procedures. Prerequisite: None.
- R/TV 1320 Fundamentals of Radio and Television** 3 hours
(3-0)
A continuation of R/TV 1310. Emphasizes inside station operational procedures. Prerequisite: None.
- R/TV 1375 Channeling Performance Stress** 3 hours
(3-0)
Directed toward students in performance classes. Addresses psychological and physiological stress responses with regard to their effect on performing ability. Presents training in both system and muscular relaxation techniques. Prerequisite: None.
- R/TV 2310 Announcing for Radio and Television** 3 hours
(3-0)
Designed to prepare the student for a career in voice talent for radio and television. Begins with discussions of proper pronunciation and articulation. Includes applications such as interviewing, reading news and commercial copy and announcing music and sports. Prerequisite: None.
- R/TV 2320 Writing for Radio and Television** 3 hours
(3-0)
Concerns effective communication of messages through radio and television. Presents techniques for writing commercial, public service and promotional announcements. Includes newscasts, dramatic scripts and documentaries. Prerequisite: None.

R/TV 2330 Radio and Television Production
 (3-0) 3 hours
 Emphasizes radio production problems posed by the documentary, panel, special event, music programs and announcements. Emphasizes television production techniques and creative aspects of the producer's problems. Prerequisite: None.

R/TV 2340 Advertising for Radio and Television
 (3-0) 3 hours
 Introduces advertising terminology, methods and strategies applicable to radio and television. Presents units on conducting audience research, reading rating books, purchasing radio and television time, formulating advertising campaigns and producing commercials. Includes advertising ethics and law. Prerequisite: None.

R/TV 2360 Voice and Diction for Radio and Television
 (3-0) 3 hours
 Presents basic principles of diction, voice development and interpretation. Designed to meet individual vocal needs and professional objectives through intensive application via classroom exercises and special projects. Requires mastery of International Phonetic Alphabet. Prerequisite: None.

Radio 1111, 1112, 2111, 2112 Radio Laboratory
 (0-5) 1 hour each
 Provides framework for student participation at KOCV-FM, the college radio station. Requires working a minimum of five hours per week at the station and attending a weekly staff meeting designed to keep students abreast of happenings at the station and in the industry. Lab fee required. Prerequisite or corequisite: Another R/TV course.

TV 1131, 1132, 2131, 2132 Television Laboratory
 (0-5) 1 hour each
 Designed for students who participate intensively in basic television production. Includes production of educational, informational and instructional television programs on cable television. Lab fee required. Prerequisite or corequisite: Another R/TV course.

Speech

The communication department recognizes that effective communication is an essential skill in college, industry and daily life. Students must be able to logically organize their ideas, adapt those ideas to their specific audience or situation and then express those ideas or feelings in a clear, confident manner. These skills, once learned, will aid students throughout their private and professional lives.

All speech courses have unique, diverse functions; therefore, each presents individual goals. However, the shared goal of these classes is to help students develop a more articulate, sensitive and confident self image in the area of oral communication.

Introduction to Speech Communication and Public Speaking are course offerings considered to be "core" classes because they help fulfill the communication requirements at most colleges and universities. Business and Professional Speech is a departmental course specifically offered to assist students who select business-related careers.

Speech courses need not be taken in any particular sequence. More than one speech course may be taken during a given semester.

Course of Study for Associate in Arts Degree

	Semester Hrs
General Education Requirements	42
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl 2301/2302 (Sophomore Level)	6
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Science (Two sequential semesters of a laboratory science)	8
Language 1411 and 1412 (Two semesters of any language)	8
*PE (Any two one-hour activity courses)	2
Major Requirements	19
Spch 1310 Introduction to Speech or Spch 1320 Public Speaking	3
**Spch 1131, 1132, 2131 and 2132: Forensic Laboratory	4
Spch 2320 Introduction to Oral Interpretation	3

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Spch 2330 Argumentation and Debate	3
Spch 2360 Voice and Diction	3
R/TV 1310 Survey of Radio and Television	3

Elective	3
Total Semester Hours	64

*PE 1100 should be the first course taken in physical education.
 **This laboratory prepares students for intercollegiate participation in various speech contests. Requires tournament participation for credit to be earned. Prerequisite: None.

Spch 1131, 1132, 2131, 2132 Forensics Laboratory (Spch 1144,1145, 2144, 2145)
 (0-2) 1 hour each
 Prepares students for intercollegiate participation in various speech contests. Requires tournament participation for credit to be earned. Prerequisite: None.

Spch 1300 Basic Speech Communication Skills
 (3-0) 3 hours
 A preparatory course in speech communication. Emphasizes interpersonal and small group communication. Offers opportunity to build critical thinking and communication skills. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: None.

✓ **Spch 1310 Introduction to Speech Communication** (SPCH 1311)
 (3-0) 3 hours
 A basic speech course to introduce the oral communication process through study of interpersonal communication. Presents and applies principles of effective speech communication in one-to-one and small group relationships in a variety of learning situations. Stresses everyday communication. May require individualized talks. Prerequisite: None.

Spch 1320 Public Speaking (SPCH 1315)
 (3-0) 3 hours
 Designed to teach students to prepare and deliver effective oral presentations before an audience. Emphasizes creation of ideas, audience analysis, organizational ideas and delivery techniques. Requires extemporaneous delivery of a number of speeches, including informative and persuasive presentations. Prerequisite: None.

Spch 1375 Channeling Performance Stress (SPCH 1375)
 (3-0) 3 hours
 Directed toward students in performance classes. Addresses psychological and physiological stress responses with regard to their effect on performing ability. Presents training in both system and muscular relaxation techniques. Prerequisite: None.

Spch 2320 Introduction to Oral Interpretation (SPCH 2341)
 (3-0) 3 hours
 Includes both theory and technique of oral interpretation of literature. Includes preparation and presentation of prose, poetry and dramatic literature. Prerequisite: None.

Spch 2330 Argumentation and Debate (SPCH 2335)
 (3-0) 3 hours
 Includes analysis and application of principles and techniques of argumentation and debate. Also includes research methods, use of evidence, argument construction, strategies, refutation and logical thought processes. Prerequisite: None.

Spch 2340 Business and Professional Speech (SPCH 1321)
 (3-0) 3 hours
 Provides opportunity to improve both formal and informal verbal communication skills by studying the structure of communication networks within organizations, interviewing techniques, oral presentations, workings of small groups, negotiating skills and effective listening techniques. Designed for students presently working in a business field or planning a degree in business or a related field. Prerequisite: None.

Spch 2360 Voice and Diction (SPCH 1342)
 (3-0) 3 hours
 Presents principles of diction, voice development and interpretation. Designed to meet individual vocal needs and professional objectives through intensive application in classroom exercises and special projects. Requires mastery of International Phonetic Alphabet. Prerequisite: None.

Computer Information Systems

Faculty: Mitch Slusher, chairman; Dr. Ron Kern, Stewart Bailey, Rochelle Mears, Willard Mears, Duane Moody.

The computer information systems curriculum provides students with practical, job-related computer experience. Courses offered provide background terminology and concepts needed to understand and communicate; provide experience with programming languages, operating systems and software products; develop good programming and system design techniques; and encourage students to develop the ability to continue to grow and mature as knowledgeable computer users in a rapidly changing field.

The department of computer information systems and computer science also offers an honors lab to be added to CIS 2401 or CS 2455. This honors lab will present hardware and software topics in addition to the topics covered in CIS 2401 or CS 2455. Contact the department chairman or the director of honors for additional information.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Math -- College Level	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
Spch 1310 Introduction to Speech Communication	3
PE (Any two one-hour activity courses)	2
Major Requirements	43
CIS 1200 Programming Logic	2
CIS 1401 Introduction to Computer Information Systems	4
CIS 1402 Computer Operating Systems	4
CIS 1403 COBOL Programming I	4
CIS 1405 Programming in BASIC and CIS 2400 Advanced Programming in BASIC; or CIS 1404 Programming in Pascal and CIS 2415 Advanced Pascal/Data Structures	8
CIS 2112 Seminar in Computer Related Topics	1
CIS 2215 Word Processing	2
CIS 2220 Spreadsheets	2
CIS 2404 Programming in RGP II and RGP III	4
CIS 2405 Systems Analysis Methods	4
CIS 2410 Database Management Systems	4
Elective	3-4
*Approved elective	4
Total Semester Hours	63-64

*PE 1100 should be the first course taken in physical education.

**Approved electives: CIS 2401, CIS 2403, CIS 2406 or CIS 2408 or CS 2420.

CIS 1200 Programming Logic

(2-0) 2 hours
Introduces concepts of problem solving used in computer programming. Emphasizes techniques of developing algorithms and procedures using tools of program design. Required for CIS majors. Prerequisite: None.

CIS 1401 Introduction to Computer Information Systems

(3-3) 4 hours
Presents terminology, concepts and techniques needed to begin study of Computer Information Systems. Stresses history, number systems, hardware fundamentals, software design and use, problem definition, introduction to structured programming and comparison of languages, flowchart and program design. Lab work includes introduction to word processing, electronic spreadsheets, data base systems and programming in COBOL and BASIC. Lab fee required. Prerequisite: None

CIS 1402 Computer Operating Systems

(3-3) 4 hours
An in-depth study of computer operating systems. Includes computer architecture and system software, including assemblers, compilers, interpreters and loaders, and operating systems concepts. Microcomputer and mainframe operating systems at Odessa College used in lab time. Lab fee required. Prerequisite: CIS 1200 and CIS 1401.

- CIS 1403 COBOL Programming I**
 (3-3) 4 hours
 Introduces computer programming in a business environment. Emphasizes fundamentals of structured program design, development, testing, implementation and documentation using COBOL. (DPMA CIS-2). Lab fee required. Prerequisite: CIS 1401. CIS 1200. Math 1335 or more advanced.
- CIS 1404 Programming in Pascal**
 (3-3) 4 hours
 Introduces beginning techniques of Pascal programming using a microcomputer system. Includes Pascal syntax, introduction to disk operating system and structured program design techniques. Requires writing and executing Pascal programs on a microcomputer disk. Lab fee required. Prerequisite: CIS 1200. CIS 1401 and Math 1335 or more advanced.
- CIS 1405 Programming in BASIC Language**
 (3-3) 4 hours
 Introduces beginning techniques of BASIC programming. Includes BASIC syntax, flowcharting and program design. Introduces disk operating systems. Requires writing and executing BASIC programs on microcomputer systems. Offered fall and spring. Lab fee required. Prerequisite: Math 1335 or more advanced.
- CIS 2112 Seminar in Computer-Related Topics**
 (1-0) 1 hour
 Presents literature of current topics in data processing and computer science. Requires research and presentation of at least two oral reports on such topics as professionalism, ethics, computer law, data security, networking, telecommunications and distributed data processing. Prerequisite: CIS 1401.
- CIS 2215 Word Processing**
 (2-1) 2 hours
 Presents concepts of editors and word processors on microcomputer systems. Introduces terminology and operation of several software packages with emphasis placed on utilization of Word Perfect. Lab fee required. Prerequisite: None.
- CIS 2220 Spreadsheets**
 (2-1) 2 hours
 Introduces concepts of spreadsheet applications on microcomputer systems utilizing Lotus 123. Places emphasis on the design and development of functional spreadsheets. Includes the use of statistical and financial functions, data management functions, situation analysis and macros. Prerequisite: None.
- CIS 2400 Advanced Programming in BASIC**
 (3-3) 4 hours
 A continuation of CIS 1405. Introduces advanced techniques of BASIC programming on a microcomputer system. Includes random and sequential files, program chaining, graphics, screen handling, memory access methods and microcomputer Disk Operation Systems (DOS). Requires writing and executing BASIC programs on a microcomputer system in lab. Lab fee required. Prerequisite: CIS 1200 and CIS 1405 or consent of the department chairman.
- CIS 2401 Assembler Level Hardware/Software Concepts**
 (3-3) 4 hours
 Surveys technical topics related to computer systems. Emphasizes relationships between hardware architecture, system software and applications software. Includes architecture of processors and storage systems. Requires assembly level programming on microcomputer systems in lab. (DPMA CIS-8). Lab fee required. Prerequisite: CIS 1402 and at least one of the following: CIS 2408, CIS 1404 or CS 1451.
- CIS 2403 COBOL Programming II**
 (3-3) 4 hours
 A continuation of CIS 1403. Emphasizes structured methodology of program design, development, testing, implementation and documentation using COBOL. Includes sequential and indexed-sequential and relative file access and processing techniques, COBOL subroutines, system design and other advanced techniques. (DPMA CIS-3). Lab fee required. Prerequisite: CIS 1403 or consent of the department chairman.
- CIS 2404 Programming in RPG II and RPG III**
 (3-3) 4 hours
 Designed to further the student's study of computers and computer applications in the business environment. Solves practical business data processing problems by using the RPG II programming language. Lab fee required. Prerequisite: CIS 1401 or consent of the department chairman.

CIS 2405 Systems Analysis Methods (3-3)	4 hours
Presents overview of system development life cycle. Emphasizes current systems documentation through use of both classical and structured techniques. (DPMA CIS-4). Lab fee required. Prerequisite: CIS 2410 and either CIS 2403 or CIS 2400 or CIS 2415.	
CIS 2406 FORTRAN 77-Scientific (3-3)	4 hours
An introductory programming course for science and engineering majors. Places emphasis on the design of solutions to numerically oriented problems including Taylor Series, differentiation, matrix calculations, simultaneous equations and least squares fitting.	
CIS 2408 Programming in "C" (3-3)	4 hours
Introduces concepts of designing, editing, compiling and linking "C" programs. Includes valid "C" language object routines into library of system routines. Uses different variable types in routines to describe Lvalues and Rvalues and Pointers leading further to structures, arrays of structures and pointers to structures. Lab fee required. Prerequisite: CIS 1404 or CS 1451 or consent of the department chairman.	
CIS 2410 Database Management Systems (3-3)	4 hours
Designed to allow all information to be considered and processed as a whole rather than as independent files. Introduces database concepts in microcomputer and network environments (DPMA CIS-5). Lab fee required. Prerequisite: CIS 1200, CIS 1401 and either CIS 1403, CIS 1404 or CIS 1405.	
CIS 2415 Advanced Pascal/Data Structures (3-3)	4 hours
Introduces selection, design and implementation of data structures to organize information. Also introduces file access methods and advanced programming techniques. Lab fee required. Prerequisite: CIS 1404 or CS 1451 or consent of the department chairman.	
CIS 2188 Internship Program (1-10)	1 hour
CIS 2288 Internship Program (1-20)	2 hours
Allows elective credit for working in an approved computer site. Requires supervised employment and periodic observation by an Odessa College CIS department faculty member. Grants one-hour credit for each 10 hours worked per week throughout the semester. Prerequisite: Consent of the department chairman based on student's suitability for a specific employer's needs.	
CIS 2199 Special Problems (0-1.5)	1 hour
CIS 2299 Special Problems (0-3)	2 hours
CIS 2399 Special Problems (0-4.5)	3 hours
CIS 2499 Special Problems (0-6)	4 hours
Allows students to work on an approved special project of their choosing to receive a maximum of four semester hours CIS elective credit. Requires consent of the department chairman for project and semester hours credit. Prerequisite: Consent of the department chairman.	

Computer Science

Faculty: Mitch Slusher, chairman; Dr. Ron Kern.

The computer science curriculum provides students with course work comparable to the first two years for a bachelor's degree in computer science. The ACM curricula recommendations for computer science (1983) serves as the basis for this area of study.

Course work introduces students to the concept of a program and techniques of good program design, to internal data representations and common data structures, to elementary mathematics associated with computer systems and to a working knowledge of Pascal and assembler programming languages.

The following curriculum in computer science has been designed as a guide for those students wishing to prepare for a degree in computer science. The course of study outlined below is a suggestion and may be modified to conform to the requirements of the institution granting the four-year degree in computer science.

The department of computer information systems and computer science also offers an honors lab to be added to CIS 2401 or CS 2455. This honors lab will present hardware and software topics in addition to the topics covered in CIS 2401 or CS 2455. Contact the department chairman or the director of honors for additional information.

Course of Study for Associate in Science Degree

	Semester Hrs
General Education Requirements	44
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl Sophomore Level Literature	3
Spch 1310 Introduction to Speech Communication	3
*Math 1341 College Algebra	3
*Math 1343 Trigonometry	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Lab Science Sequence in Chemistry or Physics	8
Lab Science Elective	4
**PE (Any two one-hour activity courses)	2
Major Requirements	20
CS 1450 Introduction to Computer Science	4
CS 1451 Programming Concepts I	4
CS 2420 Programming Structures in C	4
CS 2451 Programming Concepts II	4
CS 2455 Organization and Assembly Language	4
Elective	3
Total Semester hours	67

* Math 1345, Math 2331 or Math 2335 may be substituted. Because upper level institutions require advanced math courses, taking additional math courses in your degree plan is recommended.

** PE 1100 should be the first course taken in physical education.

Note: Computer science majors should consult the degree requirements of the university that they plan to attend before selecting approved electives.

CS 1300 Introduction to Computer Systems (COSC 1301)
 (3-0) 3 hours
 Surveys terminology, hardware, software, history and fundamental concepts of computer equipment. Includes exposure to popular software on IBM-compatible PC and field trips to various computer sites. Not for CIS or CS majors, business or accounting majors, or teacher computer literacy certification. Lab fee required. Prerequisite: May require consent of director of allied health.

CS 1450 Introduction to Computer Science (COSC 1415)
 (3-3) 4 hours
 A first course for computer science majors. A survey of computer applications with emphasis on personal computer operations. Broad coverage of topics includes hardware, firmware and software. Software topics emphasize application of software, logic and structured programming techniques. Laboratory exercises focus on the use of DOS, word processing, spreadsheets and data base application software, as well as introducing programming structures and techniques using the Pascal language. Lab fee required. Prerequisite: None.

CS 1451 Programming Concepts I (COSC 1418)
 (3-3) 4 hours
 Programming techniques using the Pascal language. Emphasis will be on problem analysis as well as on structured program design and production. Topics include text file processing, arrays and records. Lab fee required. Prerequisite: CS 1450 or CIS 1200 and CIS 1401 or department approval.

CS 2420 Programming Structures in "C" (COSC 2420)

(3-3) 4 hours
 Intermediate to advanced programming techniques and topics using the C programming language. A comparative approach relying on the student's prior knowledge of Pascal and structured programming techniques. A study of programming structures and algorithms in "C" including functions, arrays, records, files, classes, constructors, destructors and inheritance. Development of applications based on Object Oriented Programming techniques. Design and development of libraries and use of system calls. Prerequisite: CS 2451 or CIS 2415.

CS 2451 Programming Concepts II (COSC 2415)

(3-3) 4 hours
 A continuation of CS 1451. Advanced programming techniques and topics are presented. These topics include non-text files, dynamic data structures, recursion, search and sort algorithms, stacks and queues. Lab fee required. Prerequisite: CS 1451 or CIS 1404 or department approval.

CS 2455 Computer Organization and Assembly Language (COSC 2425)

(3-3) 4 hours
 Includes computer organization and machine cycle analysis, digital representation of data and instructions, assembly language programming, assemblers, loaders, macros, subroutines, program linkage and file I/O. Lab fee required. Prerequisite: CS 1451 or CIS 1404 or department approval.

Cosmetology

Faculty: Faye Morgan, chairman; Sylvia Blain; Lou Ann Hitt; Johnnie Luttrell; Linda Sullivan.

Cosmetology courses at Odessa College seek to provide students with the skill and knowledge required to pass the Texas Cosmetology Commission examination for licensing in Texas and for successful entry into the cosmetology profession. All aspects of the beauty profession are presented, and training also is available for the cosmetologist seeking an instructor's license.

Requirements for admission to the cosmetology program, in addition to the Odessa College admission requirements, are having a personal interview with the department chairman, getting a physical examination including a tuberculin test by a licensed physician and sending a \$25 fee and two 1 1/2" by 1 1/2" pictures to the Texas Cosmetology Commission for a student permit. Students also are required to purchase a cosmetology kit. For admission, applicants should apply to Odessa College and to the chairman of the cosmetology department.

The program is designed around an open-entry and -exit concept. Students may enroll in the program at any time during the year when a vacancy exists. Because of limited enrollment, students are urged to apply as early as possible before the date of proposed admission.

An advanced standing procedure is available for those individuals who hold a valid Texas cosmetology license which did not result from completion of a program at Odessa College. People in this category who wish to pursue an associate degree may satisfy cosmetology requirements outlined in the associate degree course of study in the following manner: (1) by providing proof of licensure to the college registrar and/or to the director of the cosmetology program; (2) by successfully completing Cos 2601 and Cos 2603 for a total of 12 semester hours credit; (3) by successfully completing a comprehensive examination for 24 of the 36 required hours of cosmetology listed in the course of study, the examination to be administered and evaluated by the department of cosmetology; and (4) by satisfying all other requirements in the course of study for an associate in applied science degree in cosmetology. **Any deviation from these stipulations must be petitioned for in writing and approval must be received in advance from the chairman of the department of cosmetology and the dean of instructional services.**

Student liability insurance is required for students enrolled in cosmetology.

Course of Study for Cosmetology Operator Option

	Semester Hrs
General Education Requirements	15
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
Psy 1301 Introduction to Psychology	3

Major Requirements (1500 Clock Hours)	36
(Classes meet eight hours per day, Monday through Thursday)	
Cos 2601 Orientation	6
Cos 2602 Introduction to Cosmetology	6
Cos 2603 Cosmetology I	6
Cos 2604 Cosmetology II	6
Cos 2605 Cosmetology III	6
Cos 2606 Cosmetology IV	6
Related Required Courses	8
Mgt 2344 Fashion Promotion	3
Spch 1310 Introduction to Speech Communication	3
* PE (Any two one-hour activity courses.)	2
Electives	4
Electives must be approved by department chairman	
Total semester hours	63

*PE 1100 should be the first course taken in physical education.

Note: Students successfully completing the 1500 clock hour major requirements are eligible to take the Texas Cosmetology Commission examination for licensure as a cosmetology operator.

Students not desiring the associate of applied science degree may receive a certificate of technology by successfully completing Cos 2601; Cos 2602; Cos 2603; Cos 2604; Cos 2605; and Cos 2606.

Course of Study for Cosmetology Instructor Option

	Semester Hrs
General Education Requirements	18
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Govt 2301 U.S. and Texas Government	3
Math 1335 Intermediate Algebra or More Advanced	3
Psy 1301 Introduction to Psychology	3
Psy 2301 Personal Applications of Psychology	3
Major Requirements (750 Clock Hours)	32
Cos 2811 Orientation and Lesson Plan Development	8
Cos 2812 Practical Clinical Management	8
Cos 2813 Classroom Teaching of Informational Theory	8
Cos 2814 Preparation for State Cosmetology Commission	8
Related Required Courses	8
Mgt 2344 Fashion Promotion	3
Spch 1310 Introduction to Speech Communication	3
*PE (Any two one-hour activity courses.)	2
Electives	5
Total Semester Hours	63

*PE 1100 should be the first course taken in physical education.

Note: Students successfully completing the 750 clock hours major requirements are eligible to take the Texas Cosmetology Commission examination for licensure as a cosmetology instructor.

Students not desiring the associate of applied science degree may receive a certificate of technology by successfully completing Cos 2811, Cos 2812, Cos 2813 and Cos 2814.

Cos 2601 Orientation

(5-27.5) 6 hours
 Introduces field of cosmetology. Emphasizes basic principles and practices involving hair dressing, personality development, visual poise, good grooming, sanitation and safety habits. Prerequisite: None.

Cos 2602 Introduction to Cosmetology

(5-27.5) 6 hours
 Develops fundamental knowledge and understanding of technical and related sciences and mathematics which find practical application in cosmetology. Requires learning safe work habits and orderly, systematic procedures for performing tasks related to the field. Prerequisite or corequisite: Cos 2601.

Cos 2603 Cosmetology I 6 hours
 (5-27.5) Provides preparatory instruction in development of manipulative skills, knowledge and desirable attitudes to equip students for gainful employment. Stresses rules, regulations and preparation for the Texas Cosmetology Commission licensure test. Prerequisite: Cos 2602.

Cos 2604 Cosmetology II 6 hours
 (5-27.5) Provides manipulative skills for rendering personal beauty services. Includes all skills pertaining to hairdressing, nail care and skin care. Emphasizes selection, care and proper use of commercial beauty products. Prerequisite: Cos 2603.

Cos 2605 Cosmetology III 6 hours
 (5-27.5) Emphasizes basic chemical characteristics of various cosmetics used in beauty salons. Stresses basic principles of chemistry essential to cosmetology. Introduces chemicals used to color, straighten and curl hair. Prerequisite: Cos 2604.

Cos 2606 Cosmetology IV 6 hours
 (5-27.5) Introduces principles used in planning a salon. Includes location, space allotment and installation cost. Also includes financial aspects of salon operation: operating expenses, profit and loss statements, types of insurance coverage needed and legal requirements regarding wages, working hours and working conditions. Prerequisite: Cos 2605.

Cos 2811 Orientation and Lesson Plan Development 8 hours
 (8-24.5) Develops teaching skill methods and techniques. Emphasizes basic unit planning and daily lesson plan development. Prerequisite: cosmetology operator's license.

Cos 2812 Practical Clinical Management 8 hours
 (8-24.5) Develops practical clinic management techniques. Includes supervision of student skills in classroom situations. Prerequisite or corequisite: Cos 2811.

Cos 2813 Classroom Teaching of Informational Theory 8 hours
 (8-24.5) Develops methods and techniques of teaching informational theory relative to cosmetology. Prerequisite: Cos 2812.

Cos 2814 Preparation for State Cosmetology Commission 8 hours
 (8-24.5) Designed to prepare students to pass Texas Cosmetology Commission examination for cosmetology instructor's license. Prerequisite: Cos 2813.

Specialization Programs

**Manicurist Program
 (250 clock hours)**

A person holding a manicurist license may practice manicuring and pedicuring for compensation only in a licensed beauty salon or manicuring salon.

Cos 1401 Manicuring Specialization 4 hours
 Emphasizes proper way to file nails, apply polish and give hand and arm massages. Presents all aspects of manicures and pedicures. Prepares student to test for state licensure as manicurist upon successful completion of course. Prerequisite: None.

**Facial Specialist Program
 (600 clock hours)**

A facial specialist license authorizes the holder to practice facials, to apply facial cosmetics, to perform manipulations, eye tabbing, arching, lash and brow tinting and to practice temporary removal of facial hair in a licensed beauty or facial salon.

Cos 1603 Facial Specialization I 6 hours
 Provides student with knowledge and skills needed to pass exam for state licensure as a facial specialist. Emphasizes application of facials, facial cosmetics and manipulations. Covers eye tabbing, arches, lash and brow tints and temporary removal of facial hair. Prerequisite: None.

Cos 1604 Facial Specialization II 6 hours
 A continuation of Cos 1603. Provides student with knowledge and skills needed to pass exam for state licensure as a facial specialist. Prerequisite: Cos 1603.

**Shampoo-Conditioning Specialist Program
 (150 Clock Hours)**

A shampoo specialist license authorizes the holder to practice the art of shampooing, to perform scalp manipulation and to give scalp treatment. It also allows for the application of conditioners, rinses and shampoo hair goods in a licensed establishment.

Cos 1302 Shampoo and Conditioning Specialist 3 hours
 Presents all aspects of shampooing and conditioning. Emphasizes chemistry of shampoos and conditioners and chemistry of skin and scalp. Includes disorders of the skin, scalp and hair as well as treatment for these disorders. Qualifies student to test for state licensure as a shampoo-conditioning specialist upon successful completion of course. Prerequisite: None.

Culinary Arts

Faculty: Peter Lewis, chairman; Michel McKay.

Odessa College offers an associate in applied science degree program in culinary arts. This program trains individuals in the basic and advanced principles of food preparation and baking, with additional emphasis focusing on managerial and supervisory skills and practices. The curriculum intends to prepare individuals for entry level professional positions as cooks and bakers and would afford those individuals with sufficient thinking, reasoning and application skills to pursue and obtain advancement in their chosen profession.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	26
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Psy 1301 Introduction to Psychology	3
Soc 1301 Principles of Sociology	3
Govt 2301 U.S. and Texas Government	3
BA 1304 Introduction to College Accounting	3
Mgt 1301 Introduction to Management	3
Math--College Level	3
*PE	2
Major Requirements	27
CA 1201 Food Preparation and Production	2
CA 1202 Soups and Sauces	2
CA 1203 Pantry and Short-Order Cooking	2
CA 1206 Introduction to Baking	2
CA 1207 Patisserie	2
CA 1208 Classical Desserts	2
CA 2210 A La Carte Cooking	2
CA 2211 International Cuisine	2
CA 2212 American Regional Cuisine	2
CA 2215 Food Sculpture and Design	2
CA 2216 Charcuterie	2
CA 2217 Buffet Theory and Production	2
CA 1320 Sanitation Principles and Practices	3
Related Required Courses	12
CA 1222 Tableservice and Mixology	2
CA 1321 Stewarding	3
CA 1322 Nutrition	3
CA 2223 Food Service Management	2
CA 2224 Menu Design and Layout	2
Total Semester Hours	65

*PE 1100 should be the first course taken in physical education.

One Year Diploma Program

This program is designed for the individual who cannot commit to two years in a formalized degree program but wishes to obtain employable skills in the food service industry as quickly as possible. Individuals who complete this program and secure employment may continue their studies toward a degree on a part-time basis without having to repeat major or related courses in the degree sequence.

The curriculum is based on the recommendations of the American Culinary Federation, which suggests that a program that is less than two years in duration should emphasize basic and advanced food preparation skills as they pertain to the production and service of food items.

Course of Study for One Year Diploma

	Semester Hrs
General Education Requirements	10
Engl 1311 Composition and Rhetoric	3
Psy 1301 Introduction to Psychology	3
Math--College Level	3
*PE	1
Major Requirements	15
CA 1201 Food Preparation and Production	2
CA 1202 Soups and Sauces	2
CA 1203 Pantry and Short Order Cooking	2
CA 2210 A La Carte Cooking	2
CA 2211 International Cuisine	2
CA 2212 American Regional Cuisine	2
CA 1320 Sanitation Principles and Practices	3
Related Required Courses	8
CA 1222 Tableservice and Mixology	2
CA 1321 Stewarding	3
CA 1322 Nutrition	3
Total Semester Hours	33

*PE 1100 should be the first course taken in physical education.

Certificate Program

This program is designed for individuals employed within the food service industry who are not interested initially in the associate in applied science degree or the one year diploma programs but who wish to pursue certification in one or more courses within the culinary arts curriculum. The certification program provides the student with several flexible options:

Option One: Earning credits and/or continuing education units in one or all of the designated major and related major culinary arts courses.

Option Two: Pursuing on a part-time basis those courses that lead towards a credential, either a certificate, diploma or associate of applied science degree.

Option Three: Completing all of the designated courses required to receive a certificate of recognition for accomplishment that could in the future be applied towards a one year diploma or associate of applied science degree.

Course of Study for Certificate Program

Requirements	Semester Hrs
CA 1201 Food Preparation and Production	2
CA 1202 Soups and Sauces	2
CA 1203 Pantry and Short Order Cooking	2
CA 1206 Introduction to Baking	2
CA 1207 Patisserie	2
CA 1208 Classical Desserts	2
CA 2210 A La Carte Cooking	2
CA 2211 International Cuisine	2
CA 2212 American Regional Cuisine	2
CA 1320 Sanitation Principles and Practices	3
Total Semester Hours	21

- CA 1201 Food Preparation and Production** 2 hours
 (3-9)
 An introduction to the basic principles and concepts of commercial food preparation with emphasis on menu structure, recipe development and conversions and the basic cooking techniques employed to insure desired nutritional value, food texture, eye appeal and flavor. Students will also acquire proficiency in the operation of basic hand tools, food service equipment and the overall maintenance and sanitation of kitchen stations.
- CA 1202 Soups and Sauces** 2 hours
 (3-9)
 An introduction to the basic varieties of stocks, soups and sauces with emphasis on the production, utilization and holding of these food products. The student will learn to employ the appropriate garnishment and condiments to create additional food products as specified by the menu and will exercise the correct sanitation processes in the preparation, holding and service of soups and sauces.
- CA 1203 Pantry and Short-Order Cooking** 2 hours
 (3-9)
 The student will learn to prepare and produce salads, salad dressings, breakfast and short order food items with emphasis on production techniques, holding principles and the "eye appeal" of these food items.
- CA 1206 Introduction to Baking** 2 hours
 (3-9)
 An introduction to the principles and practices of commercial baking with emphasis on the production of basic breads and rolls, cookies, pies and cakes.
- CA 1207 Patisserie** 2 hours
 (3-9)
 A continuation of Introduction to baking with emphasis on the production of complex pastries and desserts.
- CA 1208 Classical Desserts** 2 hours
 (3-9)
 This course will cover the classical desserts as developed by Careme and Escoffier with emphasis on gateauxs, meringues, tortes, mousses, cold souffles and Charlottes.
- CA 1222 Tableservice and Mixology** 2 hours
 (2-0)
 In this course the student will acquire knowledge and skills in the essentials of professional tableservice and the organization and construction of various mixed, stirred and shaken beverages.
- CA 1320 Sanitation Principles and Practices** 3 hours
 (3-0)
 This course is certified by the Texas Department of Health and meets certification requirements as stated in House Bill 2092 and required as of May 1987. Designed with restaurants in mind, this course will provide students, food service supervisors and managers with the following information: cause and prevention of food-borne diseases, methods for food protection, personal hygiene, food handling practices, operational problems, methods of self inspection, motivating employees and personnel training.
- CA 1321 Stewarding** 3 hours
 (3-0)
 Students will acquire knowledge and skills in the development of food specifications, purchasing of food items, stock organization and the interpretation of requisitioning and inventory controls.
- CA 1322 Nutrition** 3 hours
 (3-0)
 Focuses on essential nutrients, their roles and functions in the body and nutritional requirements of life.
- CA 2210 A La Carte Cooking** 2 hours
 (3-9)
 The student will learn to prepare menu items to order by broiling, sauteing and roasting food items with emphasis on the preparation, cooking, saucing and garnishment principles of those food items.

- CA 2211 International Cuisine**
 (3-9) 2 hours
 The student will acquire classical cooking skills associated with the preparation of menus from Germany, Mexico, France, China and Italy. Emphasis will also focus on the history and development of these cuisines.
- CA 2212 American Regional Cuisine**
 (3-9) 2 hours
 Through the preparation of soups, sauces, entrees, vegetables and salads, the student will explore the unique culinary heritage that exists in the United States. Four regions of the country will be examined: New England, the South, Texas and the West Coast.
- CA 2215 Food Sculpture and Design**
 (3-9) 2 hours
 A garde manger chef performs highly skilled, original and complex work procedures in the construction of canapes, hors d'oeuvres, aspics and chaud froil display pieces. The student will acquire basic garde manger skills and produce foods and display pieces that emphasize colors, shapes, textures and unique flavor combinations.
- CA 2216 Charcuterie**
 (3-9) 2 hours
 A continuation of Food Sculpture and Design with emphasis on the student being able to construct pates, gallantines, terrines, mousses, timbales and grosse display pieces.
- CA 2217 Buffet Theory**
 (3-9) 2 hours
 In this course the student learns to apply the principles of buffet theory to the construction of dramatic display pieces created from ice, butter, tallow and natural food products: buffet tables for the presentation of colorful and balanced food service: and the production of buffet food items.
- CA 2223 Food Service Management**
 (2-0) 2 hours
 Provides the student with an introduction to the specialized practices of operating a food service operation with emphasis on financial concepts and the controls used in employee selection, supervision and evaluations.
- CA 2224 Menu Design and Layout**
 (2-0) 2 hours
 The menu in all types of food service operations is the basis for an effective control system. The student will learn to understand the importance of a menu in relationship to the problems that confront the food service operation and will be able, through the menu's design and layout, to control many of those problems.

Developmental Studies

Faculty: Ned Pilcher, director; Dr. James Johnson, lab coordinator.

Odessa College offers a developmental studies program for those students who need further development in or who wish to review fundamentals of mathematics, reading, writing and speech. All courses described below in greater detail are elements of the developmental studies program.

These courses are designed to help students achieve fundamental skills that they may not have gained before entering Odessa College and to prepare students for college-level course work. The recommendation to enroll in one, some or all of the developmental courses is made on the basis of diagnostic testing, which can be administered prior to enrollment.

Courses listed below do not satisfy requirements for any degree at Odessa College. Students who intend to transfer to another community college, senior college or university should check with that institution to determine whether the hours earned in developmental studies will transfer for degree credit.

Courses and Services Available in Developmental Studies English Courses and the Writing Lab

Engl 1300, Basic English, and the four one-hour lab courses -- Engl 1101, 1102, 1103 and 1104 -- are designed to help students become more successful in using grammar and writing skills. The Basic English course covers a wide variety of English fundamentals and is specifically designed to prepare students for Engl 1311, Composition and Rhetoric. Students may enroll in self-paced or classroom instruction for institutional credit, but none of the English courses listed below satisfy requirements for any degree plan at Odessa College.

Engl 1300 Basic English

(3-0) 3 hours

A compensatory course designed to improve basic English skills. Emphasizes sentence structure, agreement, usage and paragraph development. Prepares student for Engl 1311. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: None.

The lab courses, Engl 1101 through 1104, provide practical help in selected areas of English. They focus specifically on principles of the simple sentence, focus and unity, organization and usage. Students are guided into these courses according to their performance on the TASP test and on placement tests administered in the testing center, located on the second floor of the Student Union Building.

Engl 1101 Sentence Structure

(0-16) 1 hour

A compensatory, self-paced lab course designed to improve basic thinking and writing skills. Emphasizes techniques for creating concise and effective sentence structures. Prepares students for the TASP examination and for Engl 1300 and Engl 1311. Credit probably is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Engl 1102 Focus and Unity

(0-16) 1 hour

A compensatory, self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition of purpose, audience and techniques of maintaining unity in a piece of writing. Prepares students for the TASP examination and for Engl 1300 and 1311. Credit probably is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Engl 1103 Organization and Development

(0-16) 1 hour

A compensatory, self-paced lab course designed to improve basic thinking and writing skills. Emphasizes paragraph organization, cohesion and sequencing of ideas. Prepares students for the TASP examination and for Engl 1300 and Engl 1311. Credit probably is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Engl 1104 Usage

(0-16) 1 hour

A compensatory, self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognizing and incorporating standard usage in sentence composition and focusing on parts of speech and their characteristics. Prepares students for the TASP examination and for Engl 1300 and Engl 1311. Credit probably is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor

The tutoring lab, located in the Electronics Technology Building, Room 120, and the writing lab, located in Wilkerson Hall, Room 206, offer supplemental, individualized assistance in grammar, spelling, composition and techniques of research to any student who needs improvement in writing ability or skill in literary analysis. Assistance is provided to both walk-in students and students referred by an instructor or by a counselor. Assistance is free of charge.

Math Courses and the Tutoring Lab

Math 1311, Basic Mathematics, addresses the four fundamental operations of mathematics and additional topics. The course is designed to prepare students for Math 1313, Introductory Algebra, and should be taken as a preparatory course only. Math 1313, Introductory Algebra, continues the review of the basic functions in mathematics and introduces elementary algebra concepts. Math 1335, Intermediate Algebra, completes the review of elementary algebra concepts and prepares the student for entry into College Algebra. Four one-hour lab courses -- Math 0171, 0172, 0173 and 0174 -- provide review of mathematics fundamentals, graphing and equations, algebraic operations and quadratics, and geometry and reasoning. None of these courses satisfies the requirements for any degree plan at Odessa College, and they will not be accepted in transfer to other colleges and universities. Students are guided into the courses on the basis of diagnostic pre-tests that are available in the testing center on the second floor of

the Student Union Building.

Math 1311 Basic Mathematics (MATH 0371)

(3-0) 3 hours
 Presents four fundamental operations of addition, subtraction, multiplication and division of whole numbers, common fractions, decimal fractions and signed numbers. Includes percentages, metric system and geometric measurements. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted at all senior colleges. Placement testing available. Prerequisite: None.

Math 1313 Introductory Algebra (MATH 0372)

(3-0) 3 hours
 Introduces elementary algebra with some arithmetic review. Includes signed numbers, polynomial multiplication and division, factoring, linear and quadratic functions and word problems. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted by all senior colleges. Placement testing available. Prerequisite: Math 1311 passed with a "C" or better or satisfactory placement score.

Math 1335 Intermediate Algebra (MATH 1312)

(3-0) 3 hours
 A study of real number operations, linear and quadratic inequalities, exponents and radicals, rational expressions, the straight line and linear equations. This course may not be accepted for credit by all senior colleges. Placement testing is available. Prerequisite: Math 1313 passed with a "C" or better or satisfactory placement score.

The tutoring lab, located in Room 120 of the Electronics Technology Building, offers tutoring to Odessa College students and has extensive supplemental materials that parallel Math 1311 Basic Mathematics. An audio-tutorial program demonstrates the relationships between mathematics and everyday situations involving mathematics in addition to presenting materials on the four basic mathematical operations. Materials and assistance also are available to students wishing to review mathematical concepts related to vocational course work.

The four one-hour lab courses follow. Students are guided into these courses according to their performance on the TASP test and on placement tests administered in the testing center, located on the second floor of the Student Union Building.

Math 0171 Fundamental Math

(0-1) 1 hour
 Provides review of fundamental mathematics. Presents use of number concepts and computation skills. Includes solving word problems using integers, fractions and decimals as well as percents, ratios and proportions. Includes how to interpret information from a graph, table or chart. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 0172 Algebra -- Graphing and Equations

(0-1) 1 hour
 Provides review of algebra -- graphing and equations. Presents graphs of numbers and number relationships. Introduces solving one- and two-variable equations including word problems. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 0173 Algebra -- Operations and Quadratics

(0-1) 1 hour
 Provides review of algebra -- operations and quadratics. Presents operations with algebraic expressions. Investigates problems involving quadratic equations. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 0174 Geometry and Reasoning

(0-1) 1 hour
 Provides a review of geometry and reasoning. Presents problems involving geometric figures and investigates how to apply reasoning skills. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Reading Courses and the Reading Lab

An effective citizen must read well, and reading courses help to develop efficient tools to use in today's society. These courses implement the philosophy that the ultimate in reading ability is never reached and that good study skills are predominantly good reading skills. Time spent in a program is an investment in self. All people, regardless of their reading ability or what kind of grades they make, can improve their

reading skills.

Courses listed below do not satisfy requirements for any degree at Odessa College. Students who intend to transfer to another community college, senior college or university should check with that institution to determine whether hours earned in reading will transfer for degree credit.

Read 1300 Basic Reading

(3-0) 3 hours
 Initiates instruction in developmental reading with emphasis on building vocabulary and comprehension skills. Includes individual diagnosis of reading strengths and weaknesses for placement in multileveled materials. Lab fee required. Prerequisite: none or placement by counselors.

Read 1301 College Reading

(3-0) 3 hours
 Aims to improve speed and comprehension on a variety of materials. Includes diagnosis of reading strengths and weaknesses, timed reading practices, short lectures, study skills and vocabulary study. Lab fee required. Prerequisite: Read 1300 passed with a "C" or better or satisfactory placement score.

Read 1302 Advanced College Reading

(3-0) 3 hours
 Continues independent work to maintain improved critical reasoning skills. Designed to meet specific needs in comprehension, vocabulary, rate and study skills. Lab fee required. Prerequisite: Read 1301 passed with a "C" or better or satisfactory placement score.

College Reading Techniques

The college reading techniques courses taught in the Electronics Technology Building, Room 123, provide an alternative reading program with structured, individualized, self-paced instruction.

Registration is open to everyone, and anyone may enroll for non-credit or for one, two or three semester hours of credit. Non-credit enrollment also is available for junior and senior high school students. Standardized tests are given to determine beginning reading performance levels and specific areas of need. Through student-teacher conferences, a self-paced plan of action is developed to set immediate and long-range goals. Pre-tests are scheduled by appointment with the instructor in the Electronics Technology Building, Room 123.

Students enrolling in any of the three lab courses should consult with the lab instructor as early in the semester as possible to arrange a meeting time. Materials covered and skills learned in the three one-hour reading lab courses -- Read 1101, 1102 and 1103 -- are equal to one three-hour college reading course.

Read 1101 Improving Reading Skills

(0-24) 1 hour
 Functions to improve a student's ability to understand his relationship with the academic demands of the college. Diagnostic testing determines the student's need for these skills: vocabulary, reading, listening and spelling. It is taught in an individualized setting. Lab fee required. Prerequisite: None.

Read 1102 Improving Reading Flexibility

(0-12) 1 hour
 Aims to make the student aware of importance of vocabulary and degree of comprehension expected when reading in a variety of materials at a variety of speeds. Lab fee required. Prerequisite or corequisite: Read 1101 or consent of instructor.

Read 1103 Improving Reading Rate and Comprehension

(0-12) 1 hour
 Provides an opportunity to become a trained successful reader, one able to handle large amounts of written materials by emphasizing purpose, concentration, recall, increased vocabulary and rapid reading. Lab fee required. Prerequisite or corequisite: Read 1101 or 1102 or consent of instructor.

Speech Communication

Speech 1300 is designed to help students develop skills in various areas of oral communication. This institutional-credit course should be taken for personal growth in communication skills and as a preparatory course for other college courses; it does not satisfy requirements for any degree plan at Odessa College. Spch 1300 explores communication with self, one-to-one, small groups and one-to-many by examining self-concept, non-verbal communication, listening skills, perception, use of language and the organization and presentation of speeches.

Spch 1300 Basic Speech Communication Skills

(3-0) 3 hours
 A preparatory course in speech communication. Emphasizes interpersonal and small group communication. Offers opportunity to build critical thinking and communication skills. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: none.

Diesel Mechanics

Faculty: Jurl O. Davis, chairman; Steve Mapes.

The diesel mechanics program is designed to train the student to service diesel-powered trucks, farm tractors, buses, construction equipment and oil field equipment. Specific areas of training include: (1) major engine overhaul; (2) transmission overhaul; (3) rear axle assembly and drive line overhaul; (4) steering gear and linkage overhaul; (5) fuel injection system overhaul; (6) hydraulic system overhaul; (7) overhaul or replacement of auxiliary equipment such as generators, starters, alternators, switches, regulators and other miscellaneous items; (8) troubleshooting procedures; and (9) shop management procedures.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
*General Education Elective	3
Math -- College Level	3
**PE (Any two one-hour activity courses)	2
Major Requirements	45
DM 1501 Principles of Diesel Engines or DM 1505 Automotive Diesel	5
DM 1503 Electrical Systems and Control Circuits	5
DM 1504 Fuel and Emissions Systems	5
DM 1507 The Diesel Chassis	5
DM 2501 Transmissions, Power Trains and Accessories	5
DM 2503 Caterpillar Diesel Engines	5
DM 2504 Auto Diesel Electronics I	5
DM 2505 Auto Diesel Electronics II	5
DM 2506 Cummins Diesel	5
Related Requirements	6
Mgt 1304 Employee-Management Relationships	3
Elective	3
Total Semester Hours	68

*Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

**PE 1100 should be the first course taken in physical education.

Students not desiring the associate of applied science degree may receive a certificate of technology by completing a minimum of 45 semester hours in DM courses.

DM 1501 Principles of Diesel Engines

(4-4) 5 hours
 Introduces principles and repair of high compression gasoline and Detroit diesel engines, cooling systems and lubricating systems. Stresses use and care of hand tools, precision instruments and test equipment. Lab fee required. Prerequisite: None.

DM 1503 Electrical Systems and Control Circuits

(4-4) 5 hours
 Introduces principles of electricity and emphasizes the uses of electrical test equipment. Stresses repair and testing procedures for batteries, electric starters, generators, alternators, warning devices, lighting systems, switches, etc. Lab fee required. Prerequisite: None.

DM 1504 Fuel Emissions Systems

(4-4) 5 hours
 Emphasizes fuels and emissions related to tune-up procedures. Various fuel system components and emission control systems studied. Exhaust emission test equipment used to ascertain condition of

emission control systems before and after tune-ups. Lab fee required. Prerequisite: None.

DM 1505 Automotive Diesel

(4-4) 5 hours
 Includes theory and practice in principles for repair and maintenance of the automotive diesel engine. Contrasts automotive and commercial diesels. Lab fee required. Prerequisite: None.

DM 1507 The Diesel Chassis

(4-4) 5 hours
 Provides theory and practice in the repair and maintenance of brakes, steering, front end alignment and suspension systems. Lab fee required. Prerequisite: None.

DM 2501 Transmissions, Power Trains and Accessories

(4-4) 5 hours
 Provides theory and practice in repair and maintenance of differentials and related assemblies. Lab fee required. Prerequisite: None.

DM 2503 Caterpillar Diesel Engines

(4-4) 5 hours
 Provides extensive shop practice in major engine overhaul. Includes fuel systems analysis, troubleshooting procedures, and injection testing and timing. Lab fee required. Prerequisite: None.

DM 2504 Automotive/Diesel Electronics I

(4-4) 5 hours
 Introduces Ohm's law, power law, principles of direct current circuits, principles of alternating current and voltage, induction, capacitance, reactance, impedance and filters. Requires a scientific calculator. Lab fee required. Prerequisite: Math 1335 or more advanced or consent of the department chairman.

DM 2505 Automotive/Diesel Electronics II

(4-4) 5 hours
 Introduces fundamentals of solid state devices such as FET's bipolar and unijunction transistors, zener diodes, LEDs, solid state regulators, electronic spark control and timing, linear amplifiers, buffers, SCRs, RAMs, PROMs, EPROMs, microprocessors and the automotive digital computer. Requires a scientific calculator. Lab fee required. Prerequisite: None.

DM 2506 Cummins Diesel Engines

(4-4) 5 hours
 Provides extensive shop practice in major engine overhaul. Includes fuel system analyzing, injection testing and timing. Emphasizes proper troubleshooting procedures and techniques. Lab fee required. Prerequisite: none.

Drafting

Faculty: Dr. Kenneth Hurst, chairman.

Draftsmen make working plans and detailed drawings for engineering construction or manufacturing purposes. They usually work from sketches, specifications or field notes furnished by an engineer, architect or designer. The drafting program is designed to provide basic preparation for entry-level employment.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Math 1341 College Algebra or More Advanced	3
Math 1343 Plane Trigonometry or More Advanced	3
*PE (Any two one-hour activity courses)	2
Major Requirements	38-39
DT 1401 Technical Drafting I or Engr 1301 Engineering Drawing	4 or 3
DT 2401 Architectural Drafting	4
DT 2402 Machine Drafting	4

DT 2403 Technical Illustration	4
DT 2404 Piping Drafting	4
DT 2406 Structural Drafting	4
DT 2408 Computer Aided Drafting	4
DT 2418 Advanced Computer Aided Drafting	4
**Approved Electives	7
Related Requirements	9
Art 1311 Drawing I	3
Mgt 1304 Employee-Management Relationships	3
Elective	3
Total Semester Hours	64-65

*PE 1100 should be the first course taken in physical education.

** Recommended electives for drafting technology majors: DT 2411, Advanced Architectural Drafting; DT 2412, Advanced Machine Drafting; DT 2413, Advanced Technical Illustration; Engr 1303, Descriptive Geometry; Engr 2303, Mechanics I; Engr 2304, Mechanics II; any advanced math; Mgt 1301, Introduction to Management; MT 1501, Basic Machine Shop Fundamentals; Phys 1401, College Physics I; and WT 1501, Basic Shielded-Metal Arc Welding.

Students not desiring the associate of applied science degree may receive a certificate of technology by completing a minimum of 31 semester hours in drafting courses.

DT 1401 Technical Drafting I

(2-4) 4 hours
 Presents fundamentals of drawing and sketching for the technical student. Includes lettering, geometric construction, sketching and shape description, multiview projection, sections, dimensioning techniques, auxiliary views, and interpretation of industrial sketches and prints. Emphasizes development of skills as well as theory. Prerequisite: None.

DT 2401 Architectural Drafting

(2-4) 4 hours
 An introductory course in the field of architectural drafting. Lab fee required. Prerequisite: DT 1401 or Engr 1301.

DT 2402 Machine Drafting

(2-4) 4 hours
 Presents engineering sketches, conventional practices, detail and assembly drawings, machine fastenings and pipe drawings. Lab fee required. Prerequisite: DT 1401 or Engr 1301.

DT 2403 Technical Illustration

(2-4) 4 hours
 Presents pictorial drawings used in industrial catalogs, training aids, engineering designs, assembly sheets and promotional literature. Orthographics, axonometrics and perspectives used extensively. Lab fee required. Prerequisite: DT 1401 or Engr 1301.

DT 2404 Piping Drafting

(2-4) 4 hours
 Study of pipes and pipe fittings, symbols and specifications of process systems. Emphasizes drawings of flow diagrams, pumps, compressors and various other mechanical equipment. Lab fee required. Prerequisite: DT 1401 or Engr 1301.

DT 2406 Structural Drafting

(2-4) 4 hours
 Design and development of details and specifications for industrial structures. Emphasizes structural steel, pipe and reinforced concrete. Lab fee required. Prerequisite: DT 1401 or Engr 1301.

DT 2408 Computer Aided Drafting

(2-4) 4 hours
 An introductory course; covers basic commands and functions utilized to produce drawings using computer terminal, menu tablet, printer and/or plotter. Emphasizes learning and applying system functions to basic problems. Lab fee required. Prerequisite: DT 1401 or Engr 1301 (Mathematics through Plane Trigonometry strongly recommended).

DT 2411 Advanced Architectural Drafting

(2-4) 4 hours

A continuation of DT 2401. Emphasizes commercial and industrial construction. Lab fee required. Prerequisite: DT 2401.

DT 2412 Advanced Machine Drafting 4 hours
 (2-4)
 A continuation of DT 2402. Includes a thorough study of position dimensioning and tolerancing. Lab fee required. Prerequisite: DT 2402.

DT 2413 Advanced Technical Illustration 4 hours
 (2-4)
 A continuation of DT 2403. Includes inking, shading and airbrush rendering. Lab fee required. Prerequisite: DT 2403.

DT 2418 Advanced Computer Aided Drafting 4 hours
 (2-4)
 Utilizes skills learned in DT 2408. Computer Aided Drafting. Applies skills learned to advanced CAD drafting assignments by utilizing more complex capabilities of the equipment to produce customized menus, libraries, reports and graphic presentations. Use of advanced editing techniques, report generation, drawing interchange files, and configuration changes discussed and practiced. Lab fee required. Prerequisite: DT 2408.

Educational Aide

Faculty: MaryIn Hair, chairman; Mary Joyce Harding.

With increased need for individualized instruction of children beginning with preschool, school districts are hiring more educational aides. Other aides may be hired in the clerical and media area. The educational aide program provides training in basic educational skills, understanding of how children develop and learn and an understanding of how the school system operates in addition to reading, writing, bilingual and media skills. Emphasis will be placed on practical experience, human development, development of skills and the interpersonal relations needed for working with students and staff.

For students employed as educational aides, all lab activities and requirements can be met at their places of employment.

Student liability insurance is required for all educational aide and child development lab classes.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	20-21
Engl 1311 Composition and Rhetoric	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
Math -- College Level	3
Spch 2340 Business or Professional Speech or Spch 2360 Voice and Diction	3
HEd 1301 First Aid	3
Soc 2302 American Minorities	3
*PE 1303 Movement and Recreation or any two one-hour activity courses	2-3
Major Requirements	42
EA 1300 School Procedure	3
EA 2300 Media	3
EA 2301 Teaching Skills	3
EA 2302 Special Child	3
EA 2303 Bilingual Teaching Skills	3
EA 2600 Application of Learning Theories	6
CD 1304 The Abused and Neglected Child	3
CD 1305 Creative Art, Music and Movement for Children or CD 2305 Children's Language and Literature Development	3
CD 2306 Science and Math Activities for Children	3
CD 1307 Discipline and Classroom Management	3
CD 1310 Child Growth and Development from School Age through Adolescence or Psy 2302 Child Psychology	3
CD 2301 Personal and Family Management	3
CD 2304 The Special Child	3
Electives	3

Total Semester Hours65-66

*PE 1100 should be the first course taken in physical education.

EA 1300 School Procedure 3 hours
 (3-0) 3 hours
 An orientation course covering school organization, procedures, general practices, individual instruction and staff utilization. Explores and emphasizes teacher and assistant teacher's roles. Prerequisite: None.

EA 2300 Media 3 hours
 (2-3) 3 hours
 Introduces instructional media, including practical uses of the microcomputer used in public schools. Includes preparation and application of visual materials such as transparency processing, lettering and duplicating. Requires students to demonstrate competency in operating all audiovisual classroom equipment and microcomputers. Prerequisite: None.

EA 2301 Teaching Skills 3 hours
 (2-3) 3 hours
 Includes techniques of assisting the teacher in teaching-interest areas such as math, reading, reading readiness, phonics, science, writing and spelling. Components include individualized instruction and classroom management. Prerequisite: None.

EA 2302 Special Child 3 hours
 (2-3) 3 hours
 A continuation of CD 2304. Requires students to identify disability areas in which to concentrate studies. Studies conducted at lab site, primarily by individualized instruction. Prerequisite: CD 2304 or consent of the department chairman.

EA 2303 Bilingual Teaching Skills 3 hours
 (2-3) 3 hours
 Includes strategies for instructing language arts skills (listening, speaking, reading and writing) in languages other than English and English as a second language. Includes cultural learning styles as well as descriptive characteristics of English and other languages. Prerequisite: EA 2301 or consent of the department chairman.

EA 2600 Application of Learning Theories 6 hours
 (1-17) 6 hours
 Requires working with children under supervision of experienced teacher. Also requires evidence of teacher-aide competency before passing grade of "C" or better can be awarded. Prerequisite: 24 hours of EA and CD, including EA 1300 and EA 2301, and/or consent of the department chairman.

Electrical and Electronics

Faculty: Danny Bailey, chairman; Larry Brown

The electrical and electronics technology curriculum is designed to prepare individuals for technical careers in the industrial electrical and electronics fields. People already employed in these fields can increase or update their technical knowledge and skills. They may follow the plans leading to an associate in applied science degree or to a certificate in technology. However, students may simply enroll for courses to increase their knowledge in certain electrical or electronic areas (note prerequisites). While the overall program is broad based, some specialization is possible in motors and controls, two-way radios, computers or electronic instruments.

Course of Study for Associate in Applied Science Degree

General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
*PE (Any two one-hour activity courses)	2
Math -- College Level	3
**General Education Elective	3
Major Requirements	34
ET 1401 D.C. Circuits	4
ET 1402 Digital Circuits	4
ET 1403 A.C. Circuits	4
ET 1404 Electronics I	4

ET 1408 Microprocessors	4
ET 2400 Electronics II	4
***ET Electives	10
Related Requirements	12-13
Mgt 1304 Employee-Management Relationships	3
****Approved Elective	3
DT 1401 Technical Drafting I or Engr 1301 Engineering Drawing	4 or 3
Elective	3
Total Semester Hours	63-64

*PE 1100 should be the first course taken in physical education.
 **To satisfy the three semester hour general education elective requirement, students should select: any math course more advanced than the required three semester hour course and not already counted as an approved elective; or any science, language, fine arts or social science course not already required.
 ***To satisfy the 10 semester hour ET elective requirement, second-year students should choose ET electives based on their need. ET electives are any ET course not specifically required in the degree plan.
 ****To satisfy the three semester hour approved elective requirement, students should select from the approved elective list those courses which will provide training most closely related to their occupational objective. Approved electives are: AT 2501; BA 2311 and 2312; any CIS course; DM 1503; DT 2408 and 2418; any ET course not already required or counted as an ET elective; any math more advanced than the required three semester hours and not already counted as a general education elective; Mgt 1301, 1303, 1361, 1362, 2303 and 2304; MT 1501; Pet 1370 and 1380; OE 1401 and 1402; R/AC 1400 and 2302; Span 1311; any R/TV; and WT 1501.

Credit in beginning ET courses may be awarded by passing an advanced standing examination. Students with prior training or experience who wish to apply for advanced standing should contact the department chairman.

Students not desiring the associate of applied science degree may receive a certificate of technology by completing a minimum of 34 semester hours of electronics courses, the necessary three semester hours of prerequisite math courses and CIS 1401.

ET 1401 D.C. Circuits
 (3-3) 4 hours
 A study of principles and applications of direct current electricity. Includes Ohm's law, series-parallel circuits, batteries, meters, magnetism, conductors, insulators, Kirchoff's laws, Thevenin, Norton, super position theorems and resistor color codes. Requires a scientific calculator and basic math competency. Lab fee required. Prerequisite: One year of high school algebra or Math 1335 taken concurrently.

ET 1402 Digital Circuits
 (3-3) 4 hours
 Presents logic circuitry basic to computers, telemetry and automation. Includes gates; counters; adders; I/O, D/A, & A/D converters; storage devices; binary, octal, BCD, hexadecimal systems; and an introduction to Boolean algebra. Lab fee required. Prerequisite: One year of high school algebra or Math 1335 taken concurrently.

ET 1403 A.C. Circuits
 (3-3) 4 hours
 Presents principles of alternating current and voltage. Applies basic laws and formulas to electrical circuits and testing, induction, capacitance, reactance, impedance, complex numbers and filters. Requires a scientific calculator. Lab fee required. Prerequisites: ET 1401 or consent of the department chairman.

ET 1404 Electronics I
 (3-3) 4 hours
 Introduces fundamentals of solid state devices such as diodes, bipolar and field effect transistors, and their applications in power supplies, amplifiers, regulators and linear integrated circuits. Requires a scientific calculator. Lab fee required. Prerequisites: ET 1401 or consent of the department chairman.

ET 1408 Microprocessors
 (3-3) 4 hours
 Control and logic handling course wherein the microprocessor and associated integrated circuits replace formerly extensive hard-wired circuitry. Involves programming, machine and assembly languages, octal and hexadecimal systems. Includes control and timing pulses and such devices as

memory, UARTs, programmable and non-programmable serial and parallel ports, A/D, D/A converters. Emphasizes 8080 and 6800 microprocessor chips. Lab fee required. Prerequisites: ET 1401 and ET 1402 or consent of the department chairman.

ET 2201 Rules & Regulations

(2-0) 2 hours
 Presents current rules and regulations of the Federal Communications Commission on two-way radio, broadcast radio and television. Proficiency in basic math expected. Requires a scientific calculator. Prerequisites: ET 1403, 1404 and 1408; or consent of the department chairman. Recommend taking ET 2400 and ET 2401 concurrently.

ET 2203 Communications Systems

(2-0) 2 hours
 Introduces broad-based concepts of modern worldwide communications systems. Includes analog, digital and telemetry networks as they relate to landline, broadcast, microwave and satellite communications systems. Prerequisite: ET 1402, ET 1403 and ET 1404 or consent of the department chairman.

ET 2205 Electronic Instruments

(2-0) 2 hours
 Presents principles in the operation of various electrical and electronic instruments such as meters, oscilloscopes, power supplies, generators, counters, controls, etc. Prerequisites: ET 1403, ET 1404 and ET 1408. Recommend ET 2400 be completed or taken concurrently.

ET 2302 Electrical Power Technology

(3-0) 3 hours
 Introduces methods and equipment for generation, transmission and distribution of electrical power. Requires field trips to industrial locations. Prerequisites: None.

ET 2305 Electrical/Electronics Business Operations

(3-0) 3 hours
 Designed to give basic understanding of setting up and operating a small business. Topics include types of ownership, types of loans, accounting, marketing, taxation, cash flow, legal aspects and equipment and material control. Prerequisite: None.

ET 2400 Electronics II

(3-3) 4 hours
 A continuation of ET 1404. Includes topics of operational and differential amplifiers, oscillators, multi-vibrators, UJT, SCR, Diacs, Triacs, varactors and RF amplifiers. Lab fee required. Prerequisites: ET 1402, ET 1403 and ET 1404 or consent of the department chairman.

ET 2401 Two-way Radio

(3-3) 4 hours
 Presents principles of amplitude and frequency modulation, antennas and RF detection. Includes single sideband, automatic frequency and gain devices, as well as noise suppression, RF frequency, power measurements and adjustments. Lab fee required. Prerequisite: ET 1404 or consent of the department chairman. Recommend ET 2201 and ET 2400 taken concurrently.

ET 2404 Electrical Machinery and Controls

(3-3) 4 hours
 Investigates theory, principles, performance and construction of electric motors, generators, transformers, voltage regulators and various electro-mechanical circuits to control these devices. Emphasizes the making and reading of complex control diagrams. Lab fee required. Scientific calculator required.

ET 2408 Microcomputers

(3-3) 4 hours
 An advanced course on microcomputers. Includes topics on operating systems, bus structures, disk drives, monitors, modems, printers and programming. Includes classroom and laboratory instruction on principles of operation and troubleshooting. Emphasizes IBM-type equipment. Lab fee required. Prerequisites: ET 1404 and ET 1408 or consent of the department chairman.

ET 2410 National Electrical Code

(3-3) 4 hours
 An applied course covering the National Electrical Code for industrial, commercial and residential wiring. Lab fee required.

ET 2411 Programmable Logic Controllers

(3-3) 4 hours
 Introduces the use of programmable controllers and their related industrial and commercial uses. Presents methods of entering and simplifying complex control circuits into programmable controllers. Students will learn

programming techniques by using the latest models of programmable controllers. Lab fee required. Prerequisite: ET 2404 or consent of the department chairman.

Emergency Medical Technology

Faculty: Phyllis Howard, chairman; Lee Don Martin, Dr. Weldon Butler, medical director.

Odessa College offers a cooperative program with a local hospital and an ambulance service designed to provide understanding, proficiency and skill in emergency medical care and transportation of the sick and injured.

The curriculum is primarily designed for ambulance personnel, safety engineers, rescue squad workers, policemen, firemen, employees of public or private health agencies, and civil defense workers. Completion of the courses will qualify the individual to write the examination for registry with the Texas Department of Health, Emergency Medical Services Division.

Objectives are to include all techniques of emergency medical care presently considered within the responsibilities of the Emergency Medical Technician, as well as the operational aspects of the job in which he is expected to perform. Specific contents of the courses are based on guidelines from the Texas Department of Health, Division of Emergency Medical Services, and the U.S. Department of Transportation. The training includes both theoretical and practical applications of emergency medical care.

Enrollment in EMT 2801 and EMT 2802 is limited, and students are urged to contact the department chairman early to ensure acceptance to the program. Applicants or those seeking additional information should contact the emergency medical technology director.

Enrollment in EMT 1201, 2801 and 2802 requires student liability insurance.

Course of Study for Associate in Applied Science Degree

First Year			
First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 1100	1	Biol 1405	4
Biol 1404	4	EMT 1201	2
Engl 1311	3	EMT 1501	5
Govt 2301 or 2302	3	Engl 1312	3
Math -- College Level	3	PE	1
*PE	1		
Second Year			
Third Semester		Fourth Semester	
Course	Sem Hrs	Course	Sem Hrs
CS 1300	4	EMT 2302	3
EMT 2801	8	EMT 2802	8
Nu 1201	2	Psy 1301	3
Elective	3-4	Spch 1310	3

*PE 1100 should be the first course taken in physical education.

Students not desiring the A.A.S. degree may prepare themselves to write the examination for Registry for Class "A" basic emergency medical technician by successfully completing EMT 1201 and EMT 1501, and for registry for EMT-paramedic by successfully completing EMT 2801 and EMT 2802.

Students not desiring the A.A.S degree may receive a certificate of technology by completing EMT 1201, 1501, 2801 and 2802.

EMT 1201 Clinical Practicum

(0-5) 2 hours
 Designed to complement EMT 1501 and required of students wishing to write the exam for emergency medical technician. Includes training in emergency and recovery rooms of the hospital. Requires complete training on the ambulance. Prerequisite: Must be 18 years of age. Corequisite: EMT 1501.

EMT 1501 Emergency Care of the Sick and Injured

(4-4) 5 hours
 Designed to define role and responsibilities of the emergency medical technician. Includes medical-legal aspects, functional anatomy, medical terminology, vital sign recognition, cardiac and pulmonary

problems, wounds and fractures, medical and environmental emergencies, extrication, rescue and ambulance operation. Prepares students to write examination for state registry as emergency care attendant. To write for emergency medical technician, students must complete EMT 1201 as corequisite. Lab fee required. Prerequisite: Must be 18 years of age.

EMT 2200 Emergency Medical Review

(2-0) 2 hours
 Provided for periodic review and updating of EMT skills and knowledge. Recommended by National Highway Safety Bureau and National Academy of Sciences/National Research Council for maintaining uniformly high level of skill. Prerequisite: EMT Registry.

EMT 2302 Introduction to Human Disease

(3-0) 3 hours
 Introduces fundamentals of human disease and reviews principal diseases of major organ systems. Emphasizes nature, prevention, control, diagnosis and treatment of common diseases. Provides a comprehensive examination of human pathology to meet educational needs of allied health students. Prerequisite: None.

EMT 2400 Advanced Paramedic Review

(4-0) 4 hours
 Designed to provide review and updating of paramedic skills and knowledge. Complies with U.S. Department of Transportation and Texas Department of Health guidelines for paramedic recertification. Prerequisite: Paramedic Registry.

EMT 2801 Advanced Emergency Care of the Sick or Injured

(4-12) 8 hours
 Provides instruction on care of acutely ill. Emphasizes respiratory and cardiovascular care. Includes diagnostic techniques, pharmacology and shock and fluid therapy. Requires clinical experience in emergency, operating and intensive care unit, in addition to the laboratory. Also requires ambulance runs as needed for certification. Lab fee required. Prerequisite: Registered Class "A" EMT and consent of the department chairman.

EMT 2802 Advanced Emergency Care of the Sick or Injured

(4-12) 8 hours
 A continuation of EMT 2801 which emphasizes central nervous system, soft tissue and musculoskeletal injuries. Includes medical emergencies, obstetrics, pediatrics, rescue techniques, communications and management of emotionally disturbed. Includes clinical experience in emergency room, labor suite, morgue and electrodiagnostic unit. Requires ambulance runs as required for certification. Allows writing examination for registry for EMT-paramedic upon successful completion of course. Lab fee required. Prerequisite: EMT 2801 and consent of the department chairman.

Engineering

Faculty: George Brewer, chairman; Delmos Hickmott, Robert Keating.

The curriculum in engineering has been designed for those students who wish to prepare for professional engineering degrees. Students should be aware of specific requirements of the college or university to which they may ultimately transfer. The program below is a suggested one and may be modified to conform to requirements of the students' chosen transfer institution.

Course of Study for Pre-Engineering

	Semester Hrs
General Education Requirements	34
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communications	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Math 1345 Analytic Geometry	3
Math 2331 Calculus I	3
Phys 1403 Engineering Physics I	4
Phys 2401 Engineering Physics II	4
*PE (Any two one-hour activity courses)	2

Major Requirements	21
Engr 1300 Engineering Analysis	3
Engr 1301 Engineering Drawing	3
Engr 2303 Mechanics I	3
Engr 2304 Mechanics II	3
Math 2333 Calculus II	3
Math 2335 Calculus III	3
Math 2351 Differential Equations	3
Related Requirements	12
CIS 2406 Fortran 77 - Scientific	4
Chem 1101 Fundamentals of Chemistry Lab I	1
Chem 1301 General Inorganic Chemistry I	3
Chem 1102 Fundamentals of Chemistry Lab II	1
Chem 1302 General Inorganic Chemistry II	3
Total Semester Hours	67

*PE 1100 should be the first course taken in physical education.

Chemical engineering majors should take Chemistry 2301, 2101, 2102 and 2302.

It is recommended that all engineering majors take Math 2334 (Linear Algebra) if time permits.

Students pursuing engineering as a career who desire an associate degree are advised to follow the curriculum for an associate in science degree.

Engr 1300 Engineering Analysis (ENGR 1370) 3 hours
 (3-0)
 Introduces the profession of engineering. Presents overview of various disciplines within the engineering field. Includes methods of analyzing and solving engineering problems. Includes an introduction to FORTRAN. Lab fee required. Prerequisite: None; however, algebra, trigonometry and physics backgrounds are recommended.

Engr 1301 Engineering Drawing (ENGR 1304) 3 hours
 (2-4)
 Presents care and use of drawing instruments, free-hand lettering, geometric construction, general drafting principles, multiview projection, revolutions and sections. Includes isometric and cabinet projection, threads, bolts, rivets, helices, dimensioning, principles of working drawings, oblique drawing and fundamentals of computer graphics. Prerequisite: None.

Engr 1303 Descriptive Geometry (ENGR 1305) 3 hours
 (2-4)
 Introduces principles of descriptive geometry, auxiliary views, developments, intersections, double-curved and warped surfaces, point, line and plane problems, and their applications to problems of engineering and architecture. Prerequisite: Engr 1301 or DT 1401.

Engr 2303 Mechanics I (ENGR 2301) 3 hours
 (3-0)
 A basic mechanics course utilizing vectors and tensors. Introduces statics, including concepts of free-body diagrams, friction forces and virtual-work as well as motion of particles, including momenta, energy and work concepts. Prerequisite or corequisite: Math 2333.

Engr 2304 Mechanics II (ENGR 2302) 3 hours
 (3-0)
 Dynamics of particles, including harmonic motion, motion of a particle in a central force field, momentum and work methods, theory of rigid body motion, work and energy methods, and relative motion in rigid bodies. Prerequisite: Engr 2303.

Fire Technology

Faculty: Jack Culberson, chairman.

The fire technology program assists in the development of meaningful educational experiences for pre-service and in-service fire fighters. The program emphasizes the principles of fire protection, fire prevention and fire suppression.

Courses stress practical application in understanding building designs, classification of fires, exposure protection, toxic fumes, arson investigation, hazardous materials, fire fighting techniques and standards.

The course surveys fire administration with special interest in recruiting, organization, budget, legal aspects, employee effectiveness, evaluation and related problems. The program is planned to develop specific abilities and knowledge for entry-level employment and to provide the necessary educational background for advancing into a highly responsible position in the profession.

All courses are structured to coincide with the requirements set forth by the State Commission on Fire Protection Personnel Standards and Education and the State Firemen's and Fire Marshals' Association.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	15
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
Spch 1310 Introduction to Speech Communication or	
Spch 1320 Public Speaking	3
Major Requirements	33
Fire 1301 Fundamentals of Fire Protection	3
Fire 1302 Industrial Fire Protection I	3
Fire 1305 Fire Prevention	3
Fire 1306 Chemistry for Fire Fighters	3
Fire 2301 Fire and Arson Investigation	3
Fire 2302 Building Codes and Construction	3
Fire 2303 Fire Administration	3
Fire 2306 Hazardous Materials I	3
Fire 2307 Fire Safety Education	3
Fire 2315 Fire Fighting Tactics and Strategy	3
Fire 2316 Fire Ground Command	3
*Approved Elective	3
Fire 1303 Industrial Fire Protection II	3
Fire 1304 Fire Protection Systems	3
Fire 2310 Fire Hydraulics and Equipment	3
Fire 2314 Hazardous Materials II	3
Related Requirements	10
EMT 1201 Clinical Practicum	2
EMT 1501 Emergency Care of the Sick and Injured	5
CS 1300 Introduction to Computer Systems	3
Elective	3
Total Semester Hours	64

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 21 semester hours of major fire courses plus EMT 1201, 1501, 2801 and 2802.

Fire 1301 Fundamentals of Fire Protection

(3-0) 3 hours
 Presents history and philosophy of fire protection and reviews statistics of loss of life and property by fire. Introduces agencies involved in fire protection, equipment used in fire suppression and techniques of extinguishment. Includes recruitment and training for fire department personnel, position classification and pay plans, and employee organizations. Discusses current related problems and reviews expanding future of fire protection problems. Prerequisite: None.

Fire 1302 Industrial Fire Protection I

(3-0) 3 hours
 Emphasizes specific concerns and safeguards related to business and industrial organizations. Introduces study of industrial fire brigade organization and development, plant lay-out, fire prevention programs, extinguishing factors and techniques, hazardous situations and prevention methods. Stresses gaining cooperation between the public and private fire department organization. Includes study of elementary fire hazards in manufacturing plants. Prerequisite: None.

***Fire 1303 Industrial Fire Protection II**

(3-0) 3 hours
 Includes development of fire and safety organizations in industry. Explains relation between private and public fire protection organizations. Discusses current trends, deficiencies and possible solutions for

industrial fire problems, role of insurance and other special organizations. Presents in-depth study of specific industrial processes, equipment, facilities and work practices to understand the potential hazards and techniques to detect and control such hazards. Requires field trips to selected plants for demonstrations of new techniques, equipment and other innovations. Prerequisite: Fire 1302.

***Fire 1304 Fire Protection Systems**

(3-0) 3 hours

Offers a study of required standards for water supply; special hazards; automatic signaling, detection and protection systems as well as automatic sprinklers and extinguishing systems. Emphasizes automatic signaling and detection systems. Includes role of rating organizations and underwriting agencies. Prerequisite: None.

Fire 1305 Fire Prevention

(3-0) 3 hours

Stresses recognition of fire hazards. Presents objectives and views of inspections, fundamental principles, methods, techniques and procedures of fire prevention administration. Includes study of fire prevention organizations, their public image and cooperation with the public. Considers legal aspects and insurance problems. Emphasizes development and implementation of a systematic and deliberate inspection program and the relationship between building inspection agencies and fire prevention organizations. Surveys local, state and national codes pertaining to fire prevention and related technology. Offers engineering as a solution to fire hazards. Prerequisite: None.

Fire 1306 Chemistry for Fire Fighters

(3-0) 3 hours

Introduces the study of the effects of fire on combustible and noncombustible materials. Presents mechanical and hydraulic systems important to fire personnel. Introduces and explores the role of chemistry in the fire service. Prerequisite: None.

Fire 2301 Fire and Arson Investigation

(3-0) 3 hours

Introduces kinds of arsonists and detection of arson. Presents investigation techniques, case histories, gathering and preserving of evidence and preparing for a court case. Includes discussion of selected laws, decisions and opinions. Stresses interrogation procedures, cooperation and coordination between fire fighters and arson investigators and other related topics. Prerequisite: None.

Fire 2302 Building Codes and Construction

(3-0) 3 hours

Considers and explores fundamentals of building construction and design. Emphasizes fire resistance of building materials and assemblies, exposures and related data focused on fire protection concerns. Reviews related statutory and suggested guidelines, both local and national. Reviews Model Building Codes and Life Safety Code. Prerequisite: None.

Fire 2303 Fire Administration

(3-0) 3 hours

Presents organization and management of fire department personnel and administration. Includes budgeting, maintaining records and reports, managing fire department officers, distributing equipment and other related topics. Also includes relation of various government agencies to fire protection areas. Views fire service leadership from the administrative position. Prerequisite: None.

Fire 2306 Hazardous Materials I

(3-0) 3 hours

Introduces chemical characteristics and behavior of various hazardous materials, flammable liquids, combustible solids and gases, that burn or react violently when stored or transported. Emphasizes emergency situations and most favorable methods of handling, fighting and controlling such burning substances. Prerequisite: None.

Fire 2307 Fire Safety Education

(3-0) 3 hours

Surveys physical, chemical and electrical hazards and their relationship to loss of property and/or life. Presents codes, laws, problems and cases. Presents detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Stresses safety techniques while on the fire ground and at the fire station and while driving emergency vehicles. Prerequisite: None.

***Fire 2310 Fire Hydraulics and Equipment**

(3-0) 3 hours

Applies laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasizes applying principles of hydraulics to fire fighting problems. Evaluates water supply, flow requirements of standpipes, sprinklers and appliances and methods of determining available quantities of water for fire protection purposes. Prerequisite: Fire 1301.

***Fire 2314 Hazardous Materials II**
 (3-0) 3 hours
 Content covers hazardous material storage, handling, laws, standards and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, radioactive materials, rocket propellants and other exotic fuels. Stresses formation of toxic fumes and health hazards. Emphasizes ignition and combustion characteristics of gases, liquids and solids related to free-burning fire and explosion phenomena. Introduces radiological instruments, human exposure to radiation, decontamination procedures, common uses of radioactive materials and operational procedures. Prerequisite: Fire 2306.

Fire 2315 Fire Fighting Tactics and Strategy
 (3-0) 3 hours
 Covers essential elements in analyzing nature of the fire and determining its requirements. Stresses efficient and effective utilization of manpower, equipment and apparatus. Emphasizes pre-planning, study of conflagration problems, fire ground organization problem solving related to fire ground decision-making and attack strategy and tactics. Includes use of mutual aid and large scale command problems. Prerequisite: Fire 1301.

Fire 2316 Fire Ground Command
 (3-0) 3 hours
 This course is designed to build on the Fire 2315 Fire Fighting Tactics and Strategy course. Upon successful completion, the student will demonstrate in practice, the techniques for properly managing the fire scene while retaining the initial goal of extinguishing the fire. These techniques include assuming command, evaluating the situation, communicating, identifying strategies and developing plans, changes in command and total implementation. This course emphasizes all aspects of the incident command system. Prerequisite: Fire 2315.

*Approved electives

Basic Fire Fighter Academy - OCFA

The basic course for fire fighters is designed for people interested in pursuing fire technology and fire fighting as a career. The training curriculum mandated by the Texas Commission on Fire Protection Personnel Standards and Education has been equated to six courses -- 21 semester hours -- in the fire technology curriculum. College credit for six academic courses will be awarded for successful completion of the academy and will be recorded in the registrar's office at Odessa College.

Consultation with the director is required before registration. Upon satisfactory completion of the entire academy, the following credits will be awarded:

Course Number	Course Name	Sem. Hrs	Credit
OCFA 2401	Fundamentals of Fire Protection	4	
OCFA 1305	Fire Prevention	3	
OCFA 2306	Hazardous Materials I	3	
OCFA 2307	Fire Safety Education	3	
OCFA 2402	Fire Hydraulics and Equipment	4	
OCFA 2403	Fire Fighting Tactics and Strategy	4	

Students successfully completing the 21 semester hours in OCFA courses with a minimum average of "C" (2.0) in all work will be issued a certificate of technology.

OCFA 2401 Fundamentals of Fire Protection
 (3-3) 4 hours
 Presents history and philosophy of fire protection and reviews statistics of loss of life and property by fire. Introduces agencies involved in fire protection, equipment used in fire suppression and techniques of extinguishment. Includes recruitment and training for fire department personnel, position classification and pay plans and employee organizations. Discusses current related problems and reviews expanding future of fire protection problems. Prerequisite: None.

OCFA 1305 Fire Prevention
 (3-0) 3 hours
 Stresses recognition of fire hazards. Presents objectives and views of inspections, fundamental principles, methods, techniques and procedures of fire prevention administration. Includes study of fire prevention organizations, their public image and cooperation with the public. Considers

legal aspects and insurance problems. Emphasizes development and implementation of a systematic and deliberate inspection program and the relationship between building inspection agencies and fire prevention organizations. Surveys local, state and national codes pertaining to fire prevention and related technology. Offers engineering as a solution to fire hazards.
Prerequisite: None.

OCFA 2306 Hazardous Materials I 3 hours
(3-0)
Introduces chemical characteristics and behavior of various hazardous materials, flammable liquids, combustible solids and gases that burn or react violently when stored or transported. Emphasizes emergency situations and most favorable methods of handling, fighting and controlling such burning substances. Prerequisite: None.

OCFA 2307 Fire Safety Education 3 hours
(3-0)
Surveys physical, chemical and electrical hazards and their relationship to loss of property and/or life. Presents codes, laws, problems and cases. Presents detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Stresses safety techniques while on the fire ground and at the fire station and while driving emergency vehicles. Prerequisite: None.

OCFA 2402 Fire Hydraulics and Equipment 4 hours
(3-2)
Applies laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasizes applying principles of hydraulics to fire fighting problems. Evaluates water supply, flow requirements of standpipes, sprinklers and appliances and methods of determining available quantities of water for fire protection purposes. Prerequisite: None.

OCFA 2403 Fire Fighting Tactics and Strategy 4 hours
(3-2)
Covers essential elements in analyzing nature of fire and determining its requirements. Stresses efficient and effective utilization of manpower, equipment and apparatus. Emphasizes pre-planning, study of conflagration problems, fire ground organization, problem solving related to the fire ground, decision making and attack strategy and tactics. Includes use of mutual aid and large scale command problems. Prerequisite: None.

Geology, Anthropology, Geography & Earth Science

Faculty: G. Brent McAfee, chairman; Ed Orton (ret.).

Geology

Geology is a study of the earth, its history, materials, changing life, and the processes that have resulted in its present form. For students who do not wish more than a year of geology, the principal value will be primarily in an increased interest in and understanding of their environment. However, for those majoring in geology, petroleum or civil engineering, ecological studies or some closely-related subject, the first year of geology courses provides necessary background for further study. Geol 1401 and 1402 will serve as a required physical and/or natural science for non-science majors at most universities.

Course of Study for Associate in Science Degree

	Semester Hrs
General Education Requirement	61
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Spch 1310 Introduction to Speech	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra or More Advanced	3
Math 1343 Plane Trigonometry or More Advanced	3

Math 1345 Analytic Geometry or More Advanced	3
Math 2331 Calculus I or More Advanced	3
*PE (Any two one-hour activity courses)	2
Chem 1301/1101 General Inorganic Chemistry I/Fundamentals of Chemistry Laboratory I	4
Chem 1302/1102 General Inorganic Chemistry II/Fundamentals of Chemistry Laboratory II	4
Biol 1401 General Biology I	4
Phys 1401 College Physics I or Phys 2401 Engineering Physics II	4
Phys 1402 College Physics II or Phys 2402 Engineering Physics III	4
Elective	3
Major Requirements	11
Geol 1401 Physical Geology	4
Geol 1402 Historical Geology	4
Geol 2302 Geomorphology	3
Total Semester Hours	72

*PE 1100 should be the first course taken in physical education.

Geol 1401 Physical Geology (GEOL 1403)
 (3-3) 4 hours
 Presents physical aspects of the Earth's crust, rocks and minerals, structures, landforms and their origins. Lab fee required. Prerequisite: None.

Geol 1402 Historical Geology (GEOL 1404) ✓
 (3-3) 4 hours
 Presents chronological sequence of events in the history of the Earth and its life forms. Lab fee required. Prerequisite: None.

Geol 2301 Geomorphology (GEOL 2371)
 (3-0) 3 hours
 Offers geologic interpretation of the origin, development, and classification of land forms. Prerequisite: Geol 1401 or consent of the department chairman.

Anthropology

Anthropology is a comprehensive study of man and his works. The discipline includes human origin and development, variation in physical types, and aspects of human culture such as family patterns and customs, economics, religions, languages, and handicrafts and technology. Anth 2301 and 2302 will fulfill social science requirements at many universities.

Anth 2301 Physical Anthropology (ANTH 2301)
 (3-0) 3 hours
 Introduces study of physical characteristics of man. Compares modern man, fossil man, and higher primates. Presents physical characteristics of modern man. Prerequisite: None.

Anth 2302 Cultural Anthropology (ANTH 2351)
 (3-0) 3 hours
 Presents study of human culture in historical perspective by examining development of culture as well as by comparing present cultures. Prerequisite: None.

Geography

Courses in geography are designed to acquaint students with the world and its peoples. Major aspects of both physical and cultural geography are studied in an integrated manner in order to provide a greater understanding of world conditions. Geog 2301 and 2302 will fulfill social science requirements at many colleges.

Geog 2301 Principles of Geography I (GEOG 1301)
 (3-0) 3 hours
 Presents physical and cultural geography of countries of North and South America. Prerequisite: None.

Geog 2302 Principles of Geography II (GEOG 1302)
 (3-0) 3 hours
 Presents physical and cultural geography of Europe, Asia, Africa, Australia, and the more important island groups. Prerequisite: None.

Earth Science

Earth science is an integrated science course intended for non-technical majors. The material covered includes earth processes such as mountain building, erosion and sedimentation, the nature and composition of the Earth with its atmosphere, and the relationship of the Earth to the solar system and galaxy. Principles of physics and chemistry are included where appropriate.

EaSc 1401 Nature of the Earth and Universe I (GEOL 1401)

(3-3) 4 hours

Presents a study of the planet Earth, its history, and the processes and agents that shape its surface and interior. Presents Earth's relationships to the solar system and the universe. Includes many principles of other sciences in terms of easily-visualized natural processes. Lab fee required. Prerequisite: None.

EaSc 1402 Nature of the Earth and Universe II (GEOL 1402)

(3-3) 4 hours

A continuation of EaSc 1401. Emphasizes the oceans, atmosphere, and weather. Lab fee required. Prerequisite: None.

Human Development

Faculty: Dr. Sherry Burke, director of student development; Fred Gaither, Joanne Guinn, Rodney Hernandez, Judy Merritt, Terri Pease, LaRae Phillips, Betsy Ray, Rena Ventura.

Human development offers educational and personal growth experiences to promote individual effectiveness. The program emphasizes students' success and well-being at Odessa College, in the job market and in their daily lives.

Instruction includes traditional approaches, such as lecture and class discussion, as well as innovative methods, such as structured group experiences and individualized applications of psychoeducational principles.

Students are encouraged to enroll in human development courses to assist in their personal growth. There is no specific course of study for an associate degree in human development. However, students may elect to include human development courses among those required to complete the minimum 63 hours for the associate in arts or associate in science degree.

HD 1101 Orientation (ORIE 1100)

(1-0) 1 hour

Helps students gain skills and knowledge necessary to function effectively in college environment. Familiarizes students with the catalog, handbook and campus. Includes information on the policies, rules and regulations of Odessa College, the state-mandated TASP testing requirement, standards of conduct, standards of progress and study skills. Required of all students who are enrolled in college for the first time. Prerequisite: None.

HD 1301 College Skills Training

(3-0) 3 hours

Addresses individual needs in study skills and learning preferences. Facilitates surviving in college by individualized study and direct skillbuilding activities in taking notes, studying for examinations, managing time, planning course schedules, listening effectively and communicating assertively, and determines academic strengths and learning needs. Individualized instruction for identified needs. Prerequisite: None.

HD 1302 Educational and Career Planning

(3-0) 3 hours

Explores academic and career alternatives. Battery of career assessment tests administered to determine interests, aptitudes and other individualized factors. Conducts guided career exploration, including specification of college educational plans. Focuses on concept of career as life-long learning. Individual needs receive special emphasis. Includes self-appraisal; occupational information; socio-economic, psychological and behavioral influences; problem solving and decision making; job acquisition and maintenance; resume writing and job interviewing; and career advancement. Prerequisite: None.

HD 2102 Special Topics/Directed Studies

(1-0) 1 hour

Provides opportunities for intensive study of specialized areas according to population, problem or technique. "Stress Management," "Women in Transition," "Behavior Modification," "Transactional Analysis," etc., warrant

special attention. Directed studies sections initiated by student and approved by faculty with expertise in proposed topic. May be repeated for credit when topics vary. Prerequisite: None.

HD 2202 Special Topics/Directed Studies
 (2-0) 2 hours
 Provides greater opportunities for intensive study of human development areas specialized according to population, problem or technique. Prerequisite: None.

HD 2301 Interpersonal Relationships
 (3-0) 3 hours
 Develops understanding of human interactions and group dynamics. Builds skills in assertion, communication and intimacy. Uses small-group training activities and classroom instruction to develop effective helping, leadership and social behaviors. Designed to address significant interpersonal relations, including dating, marriage and parenting. Includes unit on job-seeking skills. Some background in human development, psychology, child development and sociology desirable. Prerequisite: None.

HD 2302 Special Topics/Directed Studies
 (3-0) 3 hours
 Provides greater opportunities for intensive study of human development areas specialized according to population, problem or technique. Offered as a special topic section. Prerequisite: None.

Human Services

Faculty: James Jordan, chairman.

Odessa College offers a program in human services (alcohol and drug abuse) for those students who wish to be licensed by the Texas Commission on Alcohol and Drug Abuse in order to take employment relating to victims of alcohol and drug abuse. The core curriculum in human services, which meets the requirements of the Texas Commission on Alcohol and Drug Abuse, can lead to an associate in applied science degree.

The human services program also is approved by the Texas Association of Alcohol and Drug Abuse Counselors.

Course of Study for Associate in Applied Science Degree (Alcohol and Drug Abuse)

	Semester Hrs
General Education Requirements	44
CD 1304 The Abused and Neglected Child	3
CD 1310 Child Growth and Development from School Age Through Adolescence	3
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
HD 2301 Interpersonal Relationships	3
Math -- College Level	3
*PE (Any two one-hour activity courses)	2
Psy 1301 Introduction to Psychology	3
Psy 2301 Personal Applications of Psychology	3
Soc 1301 Principles of Sociology	3
Soc 1302 Sociology of the Family	3
Soc 2301 Social Problems	3
Spch 1310 Introduction to Speech Communication	3
Major Requirements	21
HuS 1301 Introduction to Chemical Dependency	3
HuS 1302 Issues in Chemical Dependency	3
HuS 1306 Basic Counseling Skills I	3
HuS 1308 Basic Counseling Skills II	3
HuS 2101 Basic Counseling Skills III Practicum	1
HuS 2110 Special Studies in Substance Abuse Practicum	1
HuS 2310 Special Studies in Substance Abuse	3
HuS 2401 Counseling Skills III	4
Total Semester Hours	65

*PE 1100 should be the first course taken in physical education.

Students who wish only to qualify to take the TCADA licensure examination may do so by successfully completing 21 semester hours of human services courses.

Students who wish to transfer to an upper-level institution should check requirements of that institution.

HuS 1301 Introduction to Chemical Dependency 3 hours
 (3-0)
 Gives overview of chemical dependency, including historical and cultural attitudes, concepts of addiction, potential results of addiction and identification of and confidentiality in recognition of chemical dependency. Prerequisite: None.

HuS 1302 Issues in Chemical Dependency 3 hours
 (3-0)
 Presents study of behavior patterns, lifestyles and social relationships associated with chemical dependency. Develops awareness of possible solutions to chemical dependency as suggested by AA, Alanon, etc., and an awareness of differences between sponsoring and counseling agencies. Prerequisite: None.

HuS 1306 Basic Counseling Skills I 3 hours
 (3-0)
 Introduces basic model of counseling therapy. Includes concepts of active listening, empathy, challenging and goal setting. Prerequisite: None.

HuS 1308 Basic Counseling Skills II 3 hours
 (3-0)
 Introduces various counseling theories and provides basis for developing individual counseling styles. Students will conduct individual and group counseling sessions in the classroom setting to gain experience using the methods presented in class. Prerequisite: None.

HuS 2101 Basic Counseling Skills III Practicum 1 hour
 (0-3)
 A corequisite of HuS 2401. Requires engaging in supervised activities in an appropriate agency setting. Emphasizes skills and self awareness. Prerequisite: None. Corequisite: HuS 2401.

HuS 2110 Special Studies in Substance Abuse Practicum 1 hour
 (0-3)
 A corequisite of HuS 2310. Requires engaging in supervised activities in an appropriate agency setting. Emphasizes skills and self awareness. Prerequisites: HuS 1306, HuS 1308 and HuS 2401. Corequisite: HuS 2310.

HuS 2310 Special Studies in Substance Abuse 3 hours
 (3-0)
 Includes special topics related to pharmacology of drugs, recent research in medicine relating to treatment and prevention strategies. Prerequisites: HuS 1306, HuS 1308 and HuS 2401. Corequisite: HuS 2110.

HuS 2401 Counseling Skills III 4 hours
 (4-0)
 Presents counseling ethics and AIDS education as major topics. Requires student participating in micro-counseling activities to sharpen their counseling skills. Prerequisite: None. Corequisite: HuS 2101.

Humanities

Faculty: Delmos Hickmott, chairman; Barry Phillips, Barry Phillips III.

Fine arts students have the opportunity to pursue an interdisciplinary fine arts program with an emphasis in one major area which culminates in an associate in arts degree.

This program is designed to prepare individuals for paraprofessional fine arts occupations, leadership and involvement in the development of community fine arts activities. It allows the student to explore all of the fine arts areas: music, visual art, photography and dance. The interdisciplinary nature of the program reinforces basic fine arts skills and concepts and gives breadth to the student's fine arts involvement.

**Course of Study for Associate in Arts Degree*
(Art Option)**

*The suggested course of study is designed for the associate in arts degree in the humanities with a concentration in art. Similar plans can be designed for music, photography, etc.

	Semester Hrs
General Education Requirements	40
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Language, Math or Science	6 or 8
*PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication or Spch 2340 Business and Professional Speech	3
Major Requirements	24
Art 1311 Drawing I	3
Art 1321 Design I	3
Art 1371 Art History Survey I	3
Art 2321 Painting I; Art 2381 Pottery I; or Art 2391 Sculpture I	3
Art 1372 Art History Survey II	3
Hum 1310 Introduction to The Fine Arts (Self-Paced)	3
Mu 1328 Music Appreciation	3
Phot 2370 History of Photography	3
Total Semester Hours	64

*PE 1100 should be the first course taken in physical education.

Hum 1310 Introduction to the Fine Arts (Self-Paced) (HUMA 1315)
(3-0) 3 hours
Surveys the fine arts areas of visual art, photography, music, theater and dance. Designed to interrelate aesthetic concepts common to each art form. Involves student in excitement and action of activities and personalities. Prerequisite: None.

Law Enforcement/Criminal Justice

Faculty: Sidney Lyle, chairman; George Baucum, Bill Cooksey.

The field of law enforcement/criminal justice presents a challenging field of study for people interested in public service. The ever increasing problem of crime, as well as continued population growth provides many opportunities to those who have prepared themselves through education and training. This program offers students the opportunity to attend an approved Texas Peace Officer Academy and meet the requirements of licensure to be a Texas law enforcement officer. It also provides an avenue to obtain an associate in applied science degree in law enforcement/criminal justice. The associate degree program consists of both law enforcement and academic courses. It serves as the first two years of study for the baccalaureate degree in criminal justice or law enforcement in many senior colleges and universities.

Those students who are enrolled in the academic program and who wish to be licensed must first complete the designated seven transfer courses. The student may then enroll in the academy and complete that portion of the academy that the Texas Commission on Law Enforcement Officer Standards and Education has designated as the Texas Peace Officer Sequence courses. These courses will be offered as open entry credit courses and are a part of the basic academy requirements. For further information, contact the department chairman.

Course of Study for Associate in Applied Science Degree

	Semester Hours
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3

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Engl 1312 Composition and Literature	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
*PE (Any two one-hour activity courses)	2
Major Requirements	33
LE 1301 Introduction to Criminal Justice	3
LE 1302 Crime In America	3
LE 1303 Patrol Administration	3
LE 1306 Traffic Law	3
LE 1307 Fundamentals of Criminal Law	3
LE 2303 Traffic Management and Supervision	3
LE 2304 Criminal Investigation	3
LE 2305 Police Systems and Practices	3
LE 2306 Juvenile Procedures	3
LE 2312 Legal Aspects of Law Enforcement	3
LE 2313 The Courts and Criminal Procedure	3
**Approved Electives	13
Related Requirements	3
Elective	3
Total Semester Hours	66

*PE 1100 should be the first course taken in physical education. PE 1118 and PE 1119 are recommended for those individuals pursuing a career as a peace officer. Those students attending the law enforcement academy may substitute the Texas Peace Officer Sequence courses, LEA 2414, LEA 2415 and LEA 2416 for LE 1306, LE 1307 and LE 2411. Other credits awarded for the degree through the academy are LE (LEA) 2304, LE (LEA) 2312 and LE (LEA) 2313.

**Approved Electives: Mgt 1304, Psy 1301, Soc 1301, Span 1311, Span 1411, PE 1149, LE 1308, LE 1309, LE 2307, LE 2310, LE 2411, LE 2364, LE 2562, LE 2568, LEA 2414, LEA 2415, LEA 2416, OE 1401, Hist 2301, Hist 2302, CIS 1401, CD 1304, Fire 2301 and Fire 2306.

Students must complete 66 hours as approved by the department chairman to meet degree requirements. Any variance from prerequisites or any substitution of courses must have prior, written approval.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 33 semester hours in major law enforcement courses.

Texas accrediting agencies have designated seven law enforcement courses as transfer courses creditable and transferable toward any law enforcement/criminal justice degree offered in Texas. Those courses are as follows: LE 1301, LE 1302, LE 1307, LE 2304, LE 2305, LE 2312 and LE 2313. Students should receive written confirmation from the college or university to which they intend to transfer regarding the scope and extent of acceptance of these courses. In addition, all persons who apply for a peace officer's position with any law enforcement agency in Texas must first have completed all mandated training and education prior to being employed. The two methods of achieving Texas peace officer licensure are as follows:

1. Successful completion of that portion of the academy designated as LEA 2414, LEA 2415 and LEA 2416 (TCLEOSE sequence courses) plus the seven transfer courses, or
2. Successful completion of the Law Enforcement Academy.

LE 1301 Introduction to Criminal Justice (CRIJ 1301)

(3-0) 3 hours
Presents history and philosophy of criminal justice and its ethical considerations. Defines crime, its nature and its impact. Gives overview of the criminal justice system, law enforcement, the court system, prosecution and defense, the trial process and corrections. Prerequisite: None.

LE 1302 Crime in America (CRIJ 1307)

(3-0) 3 hours
Presents in historical perspective the problems of crime in America. Includes social and public policy factors affecting crime, the impact and trends of crime, social characteristics of specific crimes and crime prevention. Prerequisite: None.

- LE 1303 Patrol Administration (CRIJ 1317)**
 (3-0) 3 hours
 Presents overview of administration of the police patrol. Delineates interrelationship between first-line supervisor and the man in the car. Stresses responsibilities and significance of the operation. Prerequisite: None.
- LE 1306 Traffic Law (CRIJ 1322)**
 (3-0) 3 hours
 Presents basic principles of traffic control, traffic law enforcement and traffic court procedures in context of Texas traffic laws. Emphasizes traffic law background, problems in interpretation and application of traffic laws and accepted procedures for enforcement. Prerequisite: None.
- LE 1307 Fundamentals of Criminal Law (CRIJ 1310)**
 (3-0) 3 hours
 Establishes nature of criminal law. Includes its philosophical and historical development. Presents major concepts, definitions, classifications, elements and penalties of crime, as well as criminal responsibility. Uses Texas statutes as illustrations. Prerequisite: LE 1301.
- LE 1308 County Corrections (Jail Operation & Management) (CRIJ 2320)**
 (3-0) 3 hour
 Presents the basic county corrections course as required for certification by the Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE). Successful completion admits qualified students to licensure examination for county corrections officer. Prerequisite: None.
- LE 1309 Law Enforcement Telecommunications (CRIJ 1379)**
 (3-0) 3 hours
 Addresses legal issues and functional areas for certification of telecommunications operators. Includes history, federal, state and local regulations and laws concerning public safety communications. Prerequisite: None.
- LE 2303 Traffic Management and Supervision (CRIJ 2331)**
 (3-0) 3 hours
 Examines police responsibilities in traffic planning. Identifies police policies and procedures in education, engineering and enforcement. Analyzes special traffic problems, motor vehicle laws and accident investigation techniques. Prerequisite: LE 1306.
- LE 2304 Criminal Investigation (CRIJ 2314)**
 (3-0) 3 hours
 Introduces investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic sciences and case and trial preparation. Prerequisite: LE 1301.
- LE 2305 Police Systems and Practices (CRIJ 2328)**
 (3-0) 3 hours
 Presents the police profession and the organization of law enforcement systems. Includes role of the police, police discretion, ethics, police/community relations and current and future issues. Prerequisite: LE 1301 and 1303.
- LE 2306 Juvenile Procedures (CRIJ 2322)**
 (3-0) 3 hours
 Provides a study of history and philosophy of court procedures related to the handling of juveniles as opposed to adults. Emphasizes the Juvenile Court Act as applied under the laws of the State of Texas. Prerequisite: None.
- LE 2307 Probation and Parole (CRIJ 1321)**
 (3-0) 3 hours
 Introduces the many-faceted subject of criminal corrections. Emphasizes history as well as evolution of the field. Prerequisite: None.
- LE 2310 Physical Evidence and Investigation Techniques (CRIJ 2370)**
 (2-1) 3 hours
 Presents scientific methods of search, identification, evaluation, preservation and testing of physical evidence. Emphasizes fingerprinting, police photography and crime scene technology. Lab fee required. Prerequisite or corequisite: LE 2304 or consent of the department chairman.
- LE 2312 Legal Aspects of Law Enforcement (CRIJ 2323)**
 (3-0) 3 hours
 Presents police authority, responsibilities and constitutional constraints. Includes laws concerning arrest, search and seizure and liability. Prerequisite: LE 1301.

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- LE 2313 The Courts and Criminal Procedure (CRIJ 1306)** 3 hours
 (3-0) 3 hours
 Presents the judiciary in the criminal justice system. Includes structure of the American court system, prosecution, right to counsel, pretrial release, grand juries, adjudication process, types and rules of evidence and sentencing. Prerequisite: LE 1301.
- LE 2364 Fundamentals of Interviewing (CRIJ 2374)** 3 hours
 (3-0) 3 hours
 Presents possible behavioral reactions and interactions in a face-to-face interview with an incarcerated person. Develops recognition of likely responses to interviewer. Requires lab time to be spent in an approved criminal justice or social agency setting designed to provide students with opportunity to apply academic training in practical situations. Prerequisite: Sophomore level, third semester in law enforcement/criminal justice or a related field and consent of the department chairman. Corequisite: LE 2562.
- LE 2411 Firearms Proficiency (CRIJ 2471)** 4 hours
 (2-3) 4 hours
 Requires weapon familiarization. Includes safety precautions, proper care of weapons, proper shooting positions, liability and actual firing on the range. Lab fee required. Lab fee does not include firearms and/or ammunition. Prerequisite: Be a declared LE major, be enrolled in other LE courses or consent of the department chairman.
- LE 2562 Introduction to Pre-Trial Release Services (CRIJ 2572)** 5 hours
 (3-5) 5 hours
 Presents fundamentals of pre-trial release. Includes types of bonding available to persons charged with certain alleged crimes and procedures to be followed regarding personal recognizance release. Prerequisite: Sophomore level, third semester in law enforcement/criminal justice or a related field and consent of the department chairman. Corequisite: LE 2364.
- LE 2568 Human Behavior Patterns (CRIJ 2578)** 5 hours
 (3-5) 5 hours
 Presents dynamics of human behavior as it affects criminal activity. Includes biological factors, the mentally disordered offender, human aggression and violence, juvenile delinquency and the motives behind some types of behaviors and crimes. Requires lab time to be spent in a criminal justice agency. Lab is designed to provide students with an opportunity to apply academic training in practical situations. Prerequisite: LE 2562, LE 2364 or consent of the department chairman.

**Odessa College Basic Law Enforcement Academy
 OCLEA**

The basic course for peace officers is designed for persons interested in obtaining a peace officer's license and pursuing law enforcement as a career. The training curriculum segments mandated by the Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE) have been equated to six courses (21 semester hours) in the law enforcement curriculum. College credit for the six academic courses will be awarded for successful completion of the academy and will be recorded in the registrar's office at Odessa College.

Prior to admission to the academy program, applicants must successfully complete the following:

1. A reading comprehension-writing skills test, and
2. A sworn personal history statement.

Students completing the seven transfer courses are not required to take the reading comprehension/writing skills test.

Individuals who want to take the peace officer sequence (LEA 2414, LEA 2415 and LEA 2416) must first show proof of having successfully completed the seven transfer courses as identified in the associate in applied science degree for law enforcement/criminal justice.

Upon satisfactory completion of the entire academy, the following credits will be awarded:

Course Number	Course Name	Sem. Hrs.	Credit
LEA 2304	Criminal Investigation	3	3
LEA 2312	Legal Aspects of Law Enforcement	3	3
LEA 2313	The Courts and Criminal Procedure	3	3
LEA 2414	Texas Peace Officer Law	4	4
LEA 2415	Texas Peace Officer Procedures	4	4

LEA 2416	Texas Peace Officer Skills	4
PE 1118	Defensive Tactics (Optional)	1
PE 1119	Advanced Defensive Tactics (Optional)	1

Students successfully completing the 21 semester hours in LEA courses with a minimum average of "C" (2.0) in all work will be issued a certificate of technology.

LEA 2304 Criminal Investigation
 (3-0) 3 hours
 Introduces investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic science and case and trial preparation. Prerequisite: None.

LEA 2312 Legal Aspects of Law Enforcement
 (3-0) 3 hours
 Presents police authority, responsibilities and constitutional constraints. Includes laws concerning arrest, search and seizure and liability. Prerequisite: None.

LEA 2313 The Courts and Criminal Procedure
 (3-0) 3 hours
 Presents the judiciary in the criminal justice system. Includes structure of the American court system, prosecution, right to counsel, pretrial release, grand juries, adjudication process, types and rules of evidence and sentencing. Prerequisite: None.

LEA 2414 Texas Peace Officer Law
 (3-3) 4 hours
 A study of laws that are directly related to police field work. Included are traffic, intoxicated driver, penal code, elements of crimes, the family code, alcoholic beverage code and civil liability. Lab fee required. Prerequisite: None.

LEA 2415 Texas Peace Officer Procedures
 (3-2) 4 hours
 A study of the techniques and procedures used by police officers on patrol. Includes controlled substance identification, handling abnormal persons, traffic collision investigation, note taking and report writing, vehicle operation, traffic direction, crowd control and jail operations. Lab fee required. Prerequisite: None.

LEA 2416 Texas Peace Officer Skills
 (3-2) 4 hours
 Demonstration and practice of the skills expected of a police officer. Includes traffic stops, use of force, mechanics of arrest, firearms safety and emergency medical care. Lab fee required. Prerequisite: None.

Literature and Languages

Faculty: Imogene Pilcher, chairman; Dr. Judith Cornes, Dr. Elizabeth Gillette (ret.), Dr. Aija Hoover, Larry Hoover, Wayne Johnson, Mark Jordan, Ulrike Kalt, Dr. Daryl Lane, Ned Pilcher, Ivan Reyez, Donna Smith, Dr. Michael White, Lynn Whitson, Stanley Williams.

Language defines us as human; without language we would never have evolved from a mere animal-like existence. Not only is language the means by which we communicate with others and thus create societies and culture, it also is the sole means we have of shaping and controlling our thought. Indeed, without language, we would have no science, no religion, no technology, no civilization. Abilities to communicate and think with precision and flexibility are more than just useful skills; they are fundamental to our survival and to our progress as humankind.

Further, without the power to read intelligently, we would be spiritually diminished; the full richness of our cultural heritage would be inaccessible to us. In great literature, civilizations have recorded not only their exploits, but also psychological and cultural truths that unfold in archetype and myth. Literature is both the magnifying glass and the mirror through which we learn of others' cultural experiences and see our own more clearly.

Students in literature and languages study the structure, the resources, the nuances of languages, and they read many of the world's literary masterpieces. They pursue the skills necessary for clear, effective, forceful communication and intelligent, perceptive, analytical reading.

The Tutorial Lab

The writing lab is located in the Electronics Technology Building, Room 120. An additional writing word processing lab is located in Wilkerson Hall, Room 206. These labs offer supplemental, individual instruction in grammar, spelling, composition and techniques of research to any student who needs improvement in writing ability or skill in literary analysis. Assistance is provided to both walk-in students and students referred by any instructor. All assistance is free of charge, and students may enroll for any or all of the writing lab courses listed in the curriculum of the developmental studies/reading department.

Course of Study for Associate in Arts Degree (English Major)

	Semester Hrs
General Education Requirements	40
Electives	9
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Math 1341 College Algebra	3
Math 1343 Plane Trigonometry or Math 1361 Mathematical Statistics	3
*PE (Any two one-hour activity courses)	2
Science (Two sequential laboratory courses)	8
Spch 1310 Introduction to Speech Communication	3
Major Requirements	26
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl 2350 Survey of British Literature I	3
Engl 2360 Survey of British Literature II	3
Foreign Language (French, German or Spanish 1411 and 1412)	8
Foreign Language (Sophomore Level)	6
Total Semester Hours	66

*PE 1100 should be the first course taken in physical education.

Students who have some knowledge of a foreign language are advised to consider the advanced standing examination program for credit by examination.

English

Engl 1101 Sentence Structure

(0-1) 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes techniques for creating concise and effective sentence structures. Prepares student for the TASP examination and for Engl 1300 and Engl 1311. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Engl 1102 Focus and Unity

(0-1) 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition of purpose and audience and techniques of maintaining unity in a piece of writing. Prepares student for the TASP examination and for Engl 1300 and 1311. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Engl 1103 Organization and Development

(0-1) 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes paragraph organization, cohesion and sequencing of ideas. Prepares student for the TASP examination and for Engl 1300 and 1311. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Engl 1104 Usage

(0-1) 1 hour
A compensatory self-paced lab course designed to improve basic writing skills. Emphasizes recognition and incorporation of standard usage in sentence composition, focusing on parts of speech and their characteristics. Prepares student for the TASP examination and for Engl 1300 and Engl 1311. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

- Engl 1300 Basic English**
(3-0) 3 hours
A compensatory course designed to improve basic English skills. Emphasizes sentence structure, agreement, usage and paragraph development. Prepares student for Engl 1311. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. The student must attain a "C" or better before enrolling in Engl 1311. Prerequisite: None.
- Engl 1311 Composition and Rhetoric (ENGL 1301)**
(3-0) 3 hours
Consists of essentials of correctness and effectiveness in mechanics of writing. Emphasizes reading and writing expository prose. Requires expository essays and collateral readings. Lab fee required for Engl 1311 (Word Processing), which provides personal computers for composition of required essays. Prerequisite: Engl 1300 passed with a "C" or better or a satisfactory placement score.
- Engl 1312 Composition and Literature (ENGL 1302)**
(3-0) 3 hours
Presents the principal genres of literature—drama, poetry and fiction—and research techniques. Requires analytical expository papers on literature, research exercises, supplemental readings and examinations. Prerequisite: Engl 1311.
- Engl 1321 Report Writing (ENGL 2311)**
(3-0) 3 hours
Consists of reading and writing precis, proposals, abstracts, summaries, correspondence and other report forms commonly used in business and industry. Gives attention to style, paragraphing, organization, mechanics, spelling and usage as they apply to technical writing. Students should check with senior college regarding course transferability. Prerequisite: Engl 1311.
- Engl 2305 Advanced Composition (ENGL 1309)**
(3-0) 3 hours
An advanced course in English composition for students who want to polish their writing skills and to gain experience with a wide variety of expository methods. Requires writing clear, thoughtful prose with substantial content. Also requires at least one longer paper and some research. Does not fulfill sophomore English requirement. Students should check with senior college regarding course transferability. Prerequisite: Engl 1312 or consent of the instructor.
- Engl 2310 Survey of World Literature I (ENGL 2331)**
(3-0) 3 hours
Presents significant works of literature of the western world from the Classical period through the Renaissance. Requires research paper or several short critiques. Prerequisite: Engl 1312.
- Engl 2320 Survey of World Literature II (ENGL 2332)**
(3-0) 3 hours
Presents significant works of literature of the western world from the Neoclassical period through the present time. Requires research paper or several short critiques. Prerequisite: Engl 1312.
- Engl 2330 Technical Writing (ENGL 2314)**
(3-0) 3 hours
Prepares the student for technical report writing. Offers practical experience in organization of reports and proper use of technical terms. Prerequisite: Engl 1312.
- Engl 2340 Creative Writing (ENGL 2307)**
(3-0) 3 hours
Introduces the study and writing of fiction and poetry. Presents contemporary writers, market analysis and preparation and submission of manuscripts for publication. An elective course that will not substitute for any required English course in any associate degree program. May be repeated for credit. Will transfer, perhaps, in selected majors at senior institutions. Prerequisite: Engl 1312 or consent of the instructor.
- Engl 2350 Survey of British Literature I (ENGL 2322)**
(3-0) 3 hours
Presents significant works of British literature from the Old English period through the Neoclassical period. Requires research paper or several short critiques. Required of all English majors. Prerequisite: Engl 1312.
- Engl 2360 Survey of British Literature II (ENGL 2323)**
(3-0) 3 hours
Presents significant works of British literature from the Romantic period to the present day. Requires research paper or several short critiques. Required of all English majors. Prerequisite: Engl 1312.

Engl 2380 Survey of American Literature I (ENGL 2326) 3 hours
 (3-0)
 Presents significant works of American literature from the Colonial period through the Romantic period.
 Requires research paper or several short critiques. Prerequisite: Engl 1312.

Engl 2390 Survey of American Literature (ENGL 2327) 3 hours
 (3-0)
 Presents significant works of American literature from Realism to the present day. Requires research
 paper or several short critiques. Prerequisite: Engl 1312.

Options

Students who enroll in Engl 1311, Word Processing, and who lack keyboarding skills should also enroll
 in OE 1100, Basic Keyboarding Skills, a one-hour, four-week course that develops touch-method skills
 on the alpha-numeric keyboard.

Students have two alternatives to regular Engl 1312 courses listed above. The first is Engl 1312, Film,
 which substitutes movies for written literature. The second is Engl 1312, Science Fiction, which is based
 on science fiction and fantasy novels, stories and movies.

On the sophomore level, the department offers an alternate method for completing Engl 2380 and 2390.
 In addition to the regularly scheduled three-hour per week sections of each class, a special six-hour time
 block is set aside each semester so that students can complete both courses in a single semester. During
 the first half of the semester, students complete Engl 2380. At this point, they may or may not choose to
 continue with Engl 2390, which will be completed in the second half of the semester.

Students also have the option of enrolling in English honors classes. Offered at both the freshman and
 sophomore levels, these courses vary in focus from semester to semester. Students should consult the
 current class schedule for specific offerings.

Foreign Languages

Most four-year colleges and universities require one or two years of a foreign language for a bachelor's
 degree in arts and sciences. The foreign language program at Odessa College can satisfy the needs of
 most students whose prospective major requires a foreign language. Students should consult carefully
 the catalog of the senior college or university they plan to attend.

Many students who major in foreign languages become language teachers. Others use their foreign language
 capabilities in law, business, sales, foreign service, travel for professional reasons or for pleasure, politics, social
 work, elementary education and sociability. For still other students, their language skill becomes a springboard
 to more alert citizenship through increased understanding of and interest in the world at large.

In the classroom, concentration is on the immediate and practical. The courses consist of vocabulary
 and drills most needed for communication, with ample opportunity for students to practice speaking the
 language. With the aid of well-equipped labs and teachers well qualified to teach the spoken language,
 students are expected to be able to speak, read and write the language by the time they have completed
 their second year of study. From the first day, class is carried on primarily in the language being studied.

**Course of Study for Associate in Arts Degree
 (Foreign Language Major)**

	Semester Hrs
General Education Requirements	48
Elective	5
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Rhetoric	3
Engl (Sophomore Level)	3
Engl (Sophomore Level)	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra	3
Math 1343 Plane Trigonometry or Math 1361 Mathematical Statistics	3
*PE (Any two one-hour activity courses)	2
Science (Two sequential laboratory courses)	8
Spch 1310 Introduction to Speech Communication	3

Major Requirements	19-22
Foreign Language 1411	4
Foreign Language 1411 (2nd)	4
Foreign Language 1412	4
Foreign Language 1412 (2nd)	4
Foreign Language (Sophomore Level)	3-6
Total Semester Hours	67-70

*PE 1100 should be the first course taken in physical education.

Students who have some knowledge of a foreign language are advised to consider the advanced standing examination program for credit by examination.

French

Fr 1411 First Year French I (FR 1411) 4 hours
 (3-2)
 A basic course conducted in French for students with no previous experience in French. Emphasizes simple conversation; pronunciation, fluency and vocabulary. Also presents basic grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available as needed. Lab fee required. Prerequisite: None.

Fr 1412 First Year French II (FR 1412) 4 hours
 (3-2)
 A continuation of Fr 1411. Has same purposes and uses same techniques. Lab fee required. Prerequisite: Fr 1411 or its equivalent.

Fr 2311 Second Year French I (FR 2311) 3 hours
 (3-0)
 A continuation of Fr 1411 and Fr 1412. Conducted in French. Emphasizes conversation based on reading assignments. Includes grammar and composition. Individual help available. Prerequisite: Fr 1412 or its equivalent.

Fr 2312 Second Year French II (FR 2312) 3 hours
 (3-0)
 A continuation of Fr 2311. Has same purposes and uses same techniques. Prerequisite: Fr 2311 or its equivalent.

German

GERM 1411 First Year German I (GERM 1411) 4 hours
 (3-2)
 A basic course conducted in German for students without previous experience in the German language. Emphasizes simple conversation; pronunciation, fluency and vocabulary. Presents basic grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available. Lab fee required. Prerequisite: None.

Germ 1412 First Year German II (GERM 1412) 4 hours
 (3-2)
 A continuation of Germ 1411. Has same purposes and uses same techniques. Lab fee required. Prerequisite: Germ 1411 or its equivalent.

Germ 2311 Second Year German I (GERM 2311) 3 hours
 (3-0)
 A sequential continuation of Germ 1411 and 1412. Conducted in German. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many course elements self-paced. Individual help available. Prerequisite: Germ 1412 or its equivalent.

Germ 2312 Second Year German II (GERM 2312) 3 hours
 (3-0)
 A continuation of Germ 2311. Has same purposes and uses same techniques. Prerequisite: Germ 1412 or its equivalent.

Latin

Lat 1411 First Year Latin I (LATI 1411) 4 hours
 (3-2)
 An introductory study of Latin for those students with little or no previous knowledge of the language. Includes grammar, syntax and vocabulary with the aim of achieving a reading knowledge of the language. Requires selected readings from Roman authors. Lab fee required. Prerequisite: None.

Lat 1412 First Year Latin II (LATI 1412)
 (3-2) 4 hours
 A continuation of Lat 1411. Has same purposes and techniques, but goes further with vocabulary building and more advanced readings. Lab fee required. Prerequisite: Lat 1411 or its equivalent and consent of the instructor.

Spanish

Span 1311 Conversational Spanish I (SPAN 1300)
 (3-0) 3 hours
 Conducted in basic, everyday conversation in simple social contexts. Introduces sound sentence structure but emphasizes basic vocabulary, idiomatic expressions and daily speech. Prerequisite: None.

Span 1312 Conversational Spanish II (SPAN 1301)
 (3-0) 3 hours
 A continuation of Span 1311. Increases conversational ability and structural knowledge of Spanish. Prerequisite: Span 1311, its equivalent or consent of the instructor.

Span 1320 Intensive Spanish Practicum
 (48-32) 3 hours
 A two-week course of intensive verbal practice in Spanish. Consists of six hours of classes daily with side trips to cultural points of interest. Students will live with local families who speak little or no English. Cost includes roundtrip airfare, room and board, institutional tuition and books. Odessa College fees not included. No previous knowledge of Spanish required. Prerequisite: None.

Span 1321 Spanish for Native Speakers of Spanish I (SPAN 1371)
 (3-0) 3 hours
 Gives special attention to pronunciation, writing, reading and usage for students whose native language is Spanish. Emphasizes structure of the language, generating basic sentence patterns and reading and analyzing brief passages of prose. Prerequisite: None.

Span 1322 Spanish for Native Speakers of Spanish II (SPAN 1372)
 (3-0) 3 hours
 A continuation of Span 1321. Examines structure of the language and uses advanced material for reading and writing. Prerequisite: Span 1321 or consent of the instructor.

Span 1411 First Year Spanish I (SPAN 1411)
 (3-2) 4 hours
 A basic course conducted in Spanish for students without previous experience in Spanish. Emphasizes simple conversation: pronunciation, fluency and vocabulary. Presents basic grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available. Many course elements self-paced. Lab fee required. Prerequisite: None.

Span 1412 First Year Spanish II (SPAN 1412)
 (3-2) 4 hours
 A continuation of Span 1411. Lab fee required. Prerequisite: Span 1411 or its equivalent.

Span 2311 Second Year Spanish I (SPAN 2311)
 (3-0) 3 hours
 Conducted in Spanish, a continuation of Span 1411 and 1412. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many elements self-paced. Prerequisite: Span 1412 or its equivalent.

Span 2312 Second Year Spanish II (SPAN 2312)
 (3-0) 3 hours
 A continuation of Span 2311. Prerequisite: Span 2311 or its equivalent.

Span 2341 Spanish Literature I (SPAN 2321)
 (3-0) 3 hours
 A survey course in Spanish and Latin American literature and culture. Includes reading of short prose and poetry selections for students new to Spanish literature. Includes conversation, writing and grammar review. Prerequisite: Span 2312, its equivalent or consent of the instructor.

Span 2342 Spanish Literature II (SPAN 2322)
 (3-0) 3 hours
 A continuation of Span 2341. Conducted in Spanish. Further readings include Spanish and Latin American literature and culture, along with conversation, writing and grammar review. Prerequisite: Span 2312, its equivalent or consent of the instructor.

Machine Technology

Faculty: Duane Nobles, chairman.

The machine technology program is designed to provide students a broad background of basic knowledge in the field of mechanical design and production. Skills are developed in the operation of machine tools, in layout and in blueprint reading so as to provide students with sufficient knowledge for entry employment in the trade. Students completing the associate degree program will have a sufficient background in mathematics, drafting, management and communications necessary for advancement into managerial positions.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
*PE (Any two one-hour activity courses)	2
**General Education Elective	3
Major Requirements	40
MT 1501 Basic Machine Shop Fundamentals	5
MT 1503 Machines and Their Operations I	5
MT 1504 Machines and Their Operations II	5
MT 1505 General Welding	5
MT 2501 Advanced Machine Tool Operations I	5
MT 2502 Advanced Machine Tool Operations II	5
MT 2503 Metallurgy	5
MT 2504 Numerical Control (CNC)	5
Related Requirements	9-10
Mgt 1304 Employee-Management Relationships	3
DT 1401 Technical Drafting I or Engr 1301 Engineering Drawing	4 or 3
Elective	3
Total Semester Hours	66-67

*PE 1100 should be the first course taken in physical education.

**Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 40 semester hours in MT courses.

MT 1501 Basic Machine Shop Fundamentals

(2-6) 5 hours

Introduces machine shop practices, trade terminology, mathematics, shop safety, shop operations, semiprecision and precision measuring tools, hand tools and high speed tooling. Stresses mathematics for planning and estimating shop work along with shop safety. Requires grinding and sharpening single-point cutting tools for simple lathe projects. Lab fee required. Prerequisite: None.

MT 1503 Machines and Their Operations I

(2-6) 5 hours

Continues practice of blueprint reading, shop sketching, shop math, units of measure and precision measuring by continuous use of precision measuring instruments. Requires use of power hacksaw, bandsaws and pedestal grinders. Stresses advanced lathe operation and set up. Requires classroom and laboratory performance to demonstrate maximum machine tool performance. Lab fee required. Prerequisite or corequisite: MT 1502 or consent of the department chairman.

MT 1504 Machines and Their Operations II

(2-6) 5 hours

Requires continued setting up and operating all machine tools for producing simple to complex projects. Emphasizes milling machines. Requires practice in blueprint reading, precision measuring and shop sketching in order to become industrially oriented. Lab fee required. Prerequisite or corequisite: MT 1503 or consent of department chairman.

MT 1505 General Welding
 (2-6) 5 hours
 Introduces oxy-fuel and electric arc welding. Emphasizes torches and regulators, flame adjustment, soldering, silver soldering, brazing and arc welding on common metals and safe procedures for handling welding equipment. Lab fee required. Prerequisite: None.

MT 2501 Advanced Machine Tool Operations I
 (2-6) 5 hours
 A continuation of basic layout practice, bench metal work and advanced machine tool operations related to major machine tools such as lathes and milling machines. Emphasizes shapers and grinders. Requires more complex projects and demonstrations. Lab fee required. Prerequisite or corequisite: MT 1504 or consent of the department chairman.

MT 2502 Advanced Machine Tool Operations II
 (2-6) 5 hours
 Continues to stress quality of finished products. Emphasizes production turning with automatic machinery and various machinability factors. Lab fee required. Prerequisite or corequisite: MT 2501 or consent of the department chairman.

MT 2503 Metallurgy
 (2-6) 5 hours
 Includes instruction in properties and uses of ferrous and nonferrous metals and alloys. Also includes forging and heat-treating steels, specification numbers of steel and application of industrial tests to determine alloying elements. Stresses shop organization, management and safety. Lab fee required. Prerequisite or corequisite: MT 2502 or WT 2501 or consent of the department chairman.

MT 2504 Computerized Numerical Control
 (2-6) 5 hours
 Presents operations of numerical control machine. Emphasizes principles of programming, setup operations, troubleshooting and safety. Special problems assigned to meet special needs. Lab fee required. Prerequisite: MT 2502 or consent of the department chairman.

Maintenance Technology

Faculty: Norman Witcher, chairman; James Bates, Duane Nobles.

The maintenance technology program is designed to train maintenance workers for general maintenance duties. Opportunities for skilled maintenance workers exist in virtually every segment of society. Facility maintenance includes schools, public and private buildings, apartment complexes and condominiums.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
*PE (Any two one-hour activity courses)	2
Math -- College Level	3
**General Education Elective	3
Major Requirements	32
MNT 1400 Basic Control Theory	4
MNT 1401 Refrigeration Theory	4
MNT 1402 Plumbing Fundamentals	4
MNT 1505 General Welding	5
MNT 2302 Air Conditioning Design	3
MNT 2407 Electrical Machinery and Controls	4
MNT 2404 Structural Repair	4
MNT 2410 National Electrical Code	4
Related Requirements	9-10
Mgt 1304 Employee-Management Relationships	3
DT 1401 Technical Drafting I or Engr 1301 Engineering Drawing	4 or 3
Elective	3
***Technical Electives	7
Total Semester Hours	65-66

*PE 1100 should be the first course taken in physical education.

**General Education Elective: Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

***Recommended electives for maintenance technology majors are: AT 1502; BA 1301, BT 1601 and BT 1602; Engl 1321; ET 1403, ET 1404 and ET 2408; Fire 1305, Fire 2306 and Fire 2307; any math more advanced than Math 1335; Mgt 1362 and Mgt 2303; R/AC 1403 and R/AC 2305; MNT 1405, MNT 2108, MNT 2208, MNT 2308, MNT 1404 and MNT 2401.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 32 semester hours in MNT courses.

MNT 1400 Basic Control Theory
 (3-3) 4 hours
 Introduces basic electricity and progresses to electric motors, design and function of starters, contactors, relays, capacitors, overloads and control circuits applicable to refrigeration and air conditioning industry. Lab fee required. Prerequisite: None. Corequisite: MNT 1401.

MNT 1401 Refrigeration Theory
 (3-3) 4 hours
 Presents theory of a sound, basic understanding of heat transfer, behavior of gases, refrigeration cycle, component parts of compression refrigeration machine and its accessories. Lab fee required. Prerequisite: None.

MNT 1402 Plumbing Fundamentals
 (2-4) 4 hours
 Presents theory and application of basic plumbing. Involves practical instruction in both new construction and repair work. Includes preparation for students interested in obtaining a state plumbing license. Lab fee required. Prerequisite: None.

MNT 1404 Heating
 (3-3) 4 hours
 Includes gas controls, properties of gas and gas piping, gas combustion, burners, troubleshooting, venting of heating systems and electrical strip heat. Presents theories of control and principles of heat pump sizing, installing, servicing and troubleshooting. Lab fee required. Prerequisite: None.

MNT 1405 Fundamentals of Sheet Metal Pattern Drafting and Layout
 (3-3) 4 hours
 Presents principles of basic sheet metal. Includes use of sheet metal tools, basic sheet metal layout and construction of components. Lab fee required. Prerequisite: None.

MNT 1505 General Welding
 (2-6) 5 hours
 Introduces oxy-fuel and electric arc welding. Emphasizes torches and regulators, flame adjustment, soldering, silver soldering, brazing and arc welding on common metals and safe procedures for handling welding equipment. Designed for the non-welding major. Lab fee required. Prerequisite: None.

MNT 2302 Air Conditioning Design
 (3-1) 3 hours
 Presents sizing and selecting air conditioning equipment and designing air distribution systems. Emphasizes estimating loads for residential and commercial applications. Prerequisite: None.

MNT 2308 Special Problems
 (1-5) 3 hours

MNT 2208 Special Problems
 (1-3) 2 hours

MNT 2108 Special Problems
 (1-1) 1 hour
 Provides assigned problems to meet specific needs. Emphasizes modern techniques. All assignments made on individual basis. Lab fee required. Prerequisite: Consent of the department chairman.

MNT 2401 D.C. Circuits
 (3-3) 4 hours
 A study of the principles and applications of direct current electricity. Includes Ohm's law, series-parallel circuits, batteries, meters, magnetism, conductors, insulators, Kirchoff's laws, Thevenin, Norton, super position theorems and resistor color codes. Scientific calculator and basic math competency required. Lab fee required. Prerequisite: High school algebra.

MNT 2404 Structural Repair

(3-3) 4 hours
 Presents principles and applications of building repair. Emphasizes minor and major wall, floor, ceiling, window and roof work. Lab fee required. Prerequisite: None.

MNT 2407 Electrical Machinery and Controls

(3-3) 4 hours
 Investigates the theory, principles, performance and construction of electric motors, generators, transformers, voltage regulators and various electro-mechanical circuits to control these devices. Introduces programmable controllers, making and reading of complex control diagrams. Lab fee required. Scientific calculator required. Prerequisites: MNT 1400 or consent of the department chairman.

MNT 2410 National Electrical Code

(3-3) 4 hours
 An applied course covering the National Electrical Code for industrial, commercial and residential wiring. Lab fee required. Prerequisite: None.

Management

Faculty: Larry Berthelsen, chairman; Clinton W. Forbes (ret.), Connie Nichols, Paul Tittle (ret.)

Fashion Merchandising, General Management, Industrial Supervision, and Marketing Management

The primary objective of the management program is to prepare each student for full-time employment in supervision. The program in the classroom is combined with actual on-the-job experience in the student's chosen career field. The management program is not intended to serve as preparatory work toward a baccalaureate degree. Students planning to pursue a four-year degree should consult the upper-level institution or senior college of their choice regarding transferability of courses.

Management students may choose one of four program options available. Students who are specifically interested in careers in retailing or marketing should enroll in the marketing management option. Students who plan careers in the field of fashion merchandising or fashion retailing should enroll in the fashion merchandising option. Students who plan careers in some phase of industrial production, oil or gas production or machine fabrication should enroll in the industrial supervision option. The general management option is available for students who plan careers in some other business or industrial field and for students who have not chosen a specific career field. Each option offered in management leads to the associate of applied science degree.

Many businesses, both large and small, actively seek graduates of associate degree programs. The shortage of promotable people in supervisory and middle-management ranks provides the graduate the opportunity for a challenging career with rewarding promotional possibilities.

The management program also offers honors classes. For students who qualify, these classes, which are smaller than normal, provide a challenging and non-traditional learning experience. Contact the department chairman or the director of honors for more information.

Course of Study for Associate in Applied Science Degree (General Management Option)

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
Spch 1310 Introduction to Speech Communication	3
*PE (Any two one-hour activity courses)	2
Eco 2301 Principles of Economics or Eco 2302 Economic Problems	3
Related Requirements	7
CIS 1401 Introduction to Computer Information Systems or CIS 1405 Programming In BASIC Language	4
Elective	3

Major Requirements for All Management Majors	13
Mgt 1116, 1117, 2116, 2117 Management Internships	4
Mgt 1301 Introduction to Management	3
Mgt 1303 Communication Management	3
Mgt 2304 Personnel and Human Relations	3
And	
General Management Majors	15
Mgt 1321 Principles of Marketing	3
Mgt 2301 Management Skills Development	3
Mgt 2305 Internationalization of Business	3
Mgt 2332 Small Business Management	3
Mgt 2365 Introduction to Business Logistics	3
Or	
Marketing Management Majors	24
Mgt 1321 Principles of Marketing	3
Mgt 1323 Principles of Personal Selling	3
Mgt 1331 Principles of Retailing	3
Mgt 2301 Management Skills Development	3
Mgt 2322 Marketing Management	3
Mgt 2325 Effective Advertising	3
Mgt 2332 Small Business Management	3
Mgt 2365 Introduction to Business Logistics	3
Or	
Fashion Merchandising Majors	24
Mgt 1323 Principles of Personal Selling	3
Mgt 1331 Principles of Retailing	3
Mgt 1341 Introduction to Fashion Merchandising	3
Mgt 1343 Development of Fashion	3
Mgt 2325 Effective Advertising	3
Mgt 2341 Visual Merchandising and Display	3
Mgt 2344 Fashion Promotion	3
Mgt 2345 Fashion Design	3
Or	
Industrial Supervision Majors	21
Mgt 1321 Principles of Marketing	3
Mgt 1361 Principles of Production Supervision	3
Mgt 1362 Industrial Safety	3
Mgt 1371 Introduction to Purchasing Management	3
Mgt 2301 Management Skills Development	3
Mgt 2365 Introduction to Business Logistics	3
Mgt 2371 Purchasing Practices	3
**Elective Requirements	
General Management Majors	12
Marketing Management Majors	3
Fashion Merchandising Majors	3
Industrial Supervision Majors	6
Total Semester Hours	64

*PE 1100 should be the first course taken in physical education.

**Approved Electives: Any other Mgt course (except Mgt 1304), any other CIS course; BA 2311, BA 2312, BA 2401; Eco 1301; OE 1404; Psy 1301, Psy 2301; Soc 1301, Soc 2301 and Soc 2303. Others with consent of department chairman.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 31 semester hours in management courses.

Mgt 1116, 1117, 2116, 2117 Management Internships

(1-20) 1 hour each

Focuses on specific on-the-job problems, modern business practices, human relations and job-finding techniques. Includes a one-hour seminar and 20 internship hours each week. Prerequisite: None.

Mgt 1100 Management Problems

(1-0) 1 hour

- Mgt 1200 Management Problems**
(2-0) 2 hours
- Mgt 1300 Management Problems**
(3-0) 3 hours
Designed to serve the business and industrial community. Includes directed study and research in selected topic areas. Offered on request. Prerequisite: Consent of the department chairman.
- Mgt 1301 Introduction to Management**
(3-0) 3 hours
Presents essentials of management. Includes an introduction to the behavioral approach and application of management principles as related to the first-line supervisor. Prerequisite: None.
- Mgt 1303 Communication Management**
(3-0) 3 hours
Emphasizes effective methods of creating understanding with employees and with the community within management's environment. Stresses perfecting business communication techniques in various channels of communication. Presents verbal, non-verbal and written communication media. Prerequisite: None.
- Mgt 1304 Employee-Management Relationships**
(3-0) 3 hours
Designed to provide students with the essential skills and techniques of employment. Includes employee and employer rights and responsibilities, business ethics, the Hazard Communication Act, OSHA and general safety compliance. For non-management majors. Prerequisite: None.
- Mgt 1321 Principles of Marketing**
(3-0) 3 hours
Introduces marketing. Analyzes factors that influence functions of marketing and environmental marketing activities. Uses case studies to relate marketing principles to market management situations. Prerequisite: None.
- Mgt 1323 Principles of Personal Selling**
(3-0) 3 hours
Designed to expose students to techniques that will prove immediately valuable in present or future selling positions. Provides opportunities for practicing these techniques under realistic conditions. Prerequisite: None.
- Mgt 1331 Principles of Retailing**
(3-0) 3 hours
Relates modern retailing industry to structure and environment of retailing, requirements of retailing management, retail merchandising and sales promotion. Examines case studies which apply retailing principles to actual operating situations. Prerequisite: None.
- Mgt 1341 Introduction to Fashion Merchandising**
(3-0) 3 hours
Presents an overview of general field of fashion merchandising. Focuses on functions of fashion merchandising as related to retail industry. Emphasizes organization and operation of the fashion merchandising segment of a department store or specialty shop. Prerequisite: None.
- Mgt 1343 Development of Fashion**
(3-0) 3 hours
Traces the evolution of fashion from medieval times through the Renaissance, from 17th-century development of textiles and designs into the 19th-century world of French couture. Traces emergence of trends, which cycle through contemporary fashion, from originating designer to application to modern style. Compares structure of European fashion centers and their operation to contemporary American markets. Prerequisite: None.
- Mgt 1361 Principles of Production Supervision**
(3-0) 3 hours
Introduces fundamental concepts of production management. Emphasizes formulation of objectives and use of systems approach to production. Maintains integrated managerial perspective. Prerequisite: None.
- Mgt 1362 Industrial Safety**
(3-0) 3 hours
Introduces principles and practices of safety management. Presents overview of legal requirements of Occupational Safety and Health Act. Includes basic concepts and methods of administering an industrial safety program. Prerequisite: None.

- Mgt 1371 Introduction to Purchasing Management**
 (3-0) 3 hours
 Presents practices underlying sound procurement of materials, parts, supplies and equipment to conduct a business. Emphasizes meaning, scope, organization and principles of purchasing procedure, the place of value analysis in the process, standardization and legal aspects of the purchasing function. Prerequisite: None.
- Mgt 2301 Management Skills Development**
 (3-0) 3 hours
 Examines relationships between management principles and specific functions of management. Presents case studies and projects from various areas, including organizational structure and design, as well as elements in the process of decision-making. Prerequisite: None
- Mgt 2303 Introduction to Public Relations**
 (3-0) 3 hours
 Introduces techniques of public relations applied to supervisory and management positions. Emphasizes customer relations. Gives attention to programming a total public relations effort and selecting strategy, media and persuasive devices that accomplish given objectives. Prerequisite: None.
- Mgt 2304 Personnel and Human Relations**
 (3-0) 3 hours
 Applies field of human relations to modern business management. Emphasizes productive management of human resources available to a business or industrial firm. Introduces innovative techniques of behavioral science. Presents case studies to apply behavioral theories to actual situations. Prerequisite: Mgt 1301.
- Mgt 2305 Internationalization of Business**
 (3-0) 3 hours
 Introduces theory and practice in international business. Emphasizes maintaining and controlling the flow of goods, people, information and funds for commercial purpose within and among international sovereignties. Stresses strategic decision-making process. Prerequisite: Mgt 1321 and Mgt 2301 or consent of the department chairman.
- Mgt 2322 Marketing Management**
 (3-0) 3 hours
 A continuation of Mgt 1321. Emphasizes management of activities associated with marketing and distribution processes and institutions. Uses case studies and marketing simulation to explain principles of marketing management to actual situations. Prerequisite: Mgt 1321.
- Mgt 2325 Effective Advertising**
 (3-0) 3 hours
 Designed to offer an overview of the social, economic and marketing environment for advertising. Examines techniques used to execute effective advertising. Emphasizes progression from purposes of advertising to production of specific ads and commercials. Prerequisite: Mgt 1321 or Mgt 1331.
- Mgt 2332 Small Business Management**
 (3-0) 3 hours
 Emphasizes management of personnel, merchandising and other resources of the small business enterprise. Uses case studies to apply principles of business management to actual conditions. Prerequisite: Six hours in management courses and consent of the department chairman.
- Mgt 2341 Visual Merchandising and Display**
 (3-0) 3 hours
 Trains students in techniques of visual display. Presents analysis and evaluation of various types of displays to develop competency in understanding components of their effectiveness. Requires practice construction of hard-line and soft-line displays. Emphasizes designing and laying out show cards, selecting appropriate props for a given display and understanding the value of visual merchandising in a store, department or corporation. Prerequisite: None.
- Mgt 2343 Fashion Buying**
 (3-0) 3 hours
 Presents fundamentals of effective buying as related to fashion retailing. Gives attention to planning correct purchases, estimation of demand, selection of sources of supply and product merchandising. Prerequisite: Mgt 1341.
- Mgt 2344 Fashion Promotion**
 (3-0) 3 hours
 Emphasizes relationship existing between personal selling, visual merchandising, advertising and fashion shows to accomplish successful retail merchandising of fashion products. Prerequisite: None.

- Mgt 2345 Fashion Design** 3 hours
 (3-0) Gives in-depth analysis of fashions from perspective of the designer's concern for fabrics, colors, cost and organizing of seasonal lines designs. Presents elements of the illusion of fashion. Prerequisite: Mgt 1341 or Mgt 1343.
- Mgt 2365 Introduction to Business Logistics** 3 hours
 (3-0) Presents a systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing and materials handling. Emphasizes decision-making techniques as applied to each activity. Uses case studies. Prerequisite: None.
- Mgt 2371 Purchasing Practices** 3 hours
 (3-0) Designed to develop student's knowledge and skills of merchandise and material procurement procedures. Gives attention to improvement of planning, policies and procedures applicable to organizational purchasing practices. Identifies concepts and problems in purchasing and merchandising management. Prerequisite: Mgt 1371.

Mathematics

Faculty: George Brewer, chairman; Jim Camp, Dr. James Fields, Robert Keating, Stephanie Kern, Glynn Strait, Dr. Charles Sweatt.

The department of mathematics is guided by the following objectives: (1) pre-professional training for mathematicians and teachers of mathematics; (2) preparation of students for further study of science, engineering, industry and business; (3) adequate mathematical training for students in occupational-technical programs; (4) mathematical offerings suitable for the student seeking a well-balanced, liberal education and (5) provision for students seeking to remove deficiencies or desiring to refresh their knowledge from previous training. Students are responsible for checking the catalog of the senior college or university to which they plan to transfer to determine which of these courses are compatible with that institution's degree plan.

Course of Study for Associate in Science Degree

	Semester Hrs
General Education Requirements	41
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Spch 1310 Introduction to Speech Communication	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Lab Science	12
*PE (Any two one-hour activity courses)	2
Major Requirements	18
*Math 1345 Analytic Geometry (MATH 1348)	3
Math 2331 Calculus I (MATH 2313)	3
Math 2333 Calculus II	3
Math 2334 Linear Algebra	3
Math 2335 Calculus III	3
Math 2351 Differential Equations	3
Related Requirements	7
CIS 2406 Fortran 77-Scientific	4
Elective	3
Total Semester Hours	66

*PE 1100 should be the first course taken in physical education.

**Students not prepared for Math 1345, Analytic Geometry, should enroll in Math 1343, Plane Trigonometry, or a lower-level math course before enrolling in Math 1345. Preregistration testing is available for placement aid for students planning to take Math 1311, Math 1313, Math 1335, Math 1341 or Math 1316.

- Math 1315 (See Business Administration)
- Math 1316 (See Business Administration)
- Math 1317 (See Business Administration)
- Math 1318 (See Business Administration)
- Math 2401 (See Business Administration)

Math 0171 Fundamental Math

(0-1) 1 hour
 Provides a review of Fundamental Mathematics. Presents the use of number concepts and computation skills. Includes solving word problems using integers, fractions and decimals as well as percents, ratios and proportions. Includes how to interpret information from a graph, table or chart. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 0172 Algebra -- Graphing and Equations

(0-1) 1 hour
 Provides a review of algebra -- graphing and equations. Presents graphs of numbers and number relationships. Introduces how to solve one- and two-variable equations including word problems. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 0173 Algebra -- Operations and Quadratics

(0-1) 1 hour
 Provides a review of algebra -- operations and quadratics. Presents operations with algebraic expressions. Investigates problems involving quadratic equations. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 0174 Geometry and Reasoning

(0-1) 1 hour
 Provides a review of Geometry and Reasoning. Presents problems involving geometric figures and investigates how to apply reasoning skills. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

Math 1311 Basic Mathematics (MATH 0371)

(3-0) 3 hours
 Presents four fundamental operations of addition, subtraction, multiplication and division of whole numbers, common fractions, decimal fractions and signed numbers. Includes percentages, metric system and geometric measurements. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted by all senior colleges. Placement testing available. Prerequisite: None.

Math 1313 Introductory Algebra (MATH 0372)

(3-0) 3 hours
 Introduces elementary algebra with some arithmetic review. Includes signed numbers, polynomial multiplication and division, factoring, linear and quadratic functions and word problems. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted by all senior colleges. Placement testing available. Prerequisite: Math 1311 passed with a "C" or better or satisfactory placement score.

Math 1335 Intermediate Algebra (MATH 1312)

(3-0) 3 hours
 A study of real number operations, linear and quadratic inequalities, exponents and radicals, rational expressions, the straight line and linear equations. This course may not be accepted for credit by all senior colleges. Placement testing available. Prerequisite: Math 1313 passed with a "C" or better, satisfactory placement score or passing score on TASP.

Math 1341 College Algebra (MATH 1314)

(3-0) 3 hours
 Includes sets, complex numbers, quadratic and quadratic form equations, inequalities, functions, systems of equations and topics selected from logarithmic functions, matrices, determinants, binomial theorem, math induction and sequences and series. Placement testing available. Prerequisite: Math 1335 or satisfactory placement score.

Math 1343 Plane Trigonometry (MATH 1316)

(3-0) 3 hours
 Presents trigonometric functions, formulas, solutions of right triangles and applications, variations of functions with changes in angles, trigonometric equations, identities, solutions of oblique triangles and applications, logarithmic functions, inverse functions and complex numbers. Prerequisite or corequisite: Math 1341 or equivalent competency.

Math 1345 Analytic Geometry (MATH 1348)	
(3-0)	3 hours
Presents fundamental concepts, straight line, circle, conics, simplification of equations, algebraic curves, transcendental curves, polar coordinates, parametric equations and other concepts. Prerequisite: Math 1343 or equivalent.	
Math 1361 Mathematical Statistics (MATH 1342)	
(3-0)	3 hours
Introduces elements of statistics. Includes frequency distributions, measures of central tendency, elementary probability, binomial distribution, measures of variation, normal distributions, random sampling, tests of significance, "t" test and chi-square test. Recommended for students in education, social science and physical science as well as mathematics. Prerequisite: Math 1341 or equivalent.	
Math 1371 College Mathematics	
(3-0)	3 hours
Presents a study of geometry, algebra, logic, functions, measurement, trigonometry and logarithms. Prerequisite: Math 1335 passed with "C" or better.	
Math 2331 Calculus I (MATH 2313)	
(3-0)	3 hours
Presents study of rate of change of functions, limits, derivatives of algebraic and trigonometric functions, integration and applications. Prerequisite or corequisite: Math 1345.	
Math 2333 Calculus II (MATH 2314)	
(3-0)	3 hours
Extends topics of Math 2331 to include differentiation and integration of a wider class of functions, to include transcendental functions. Also includes application of these processes to solutions of a wider range of problems including moments and mass. Prerequisite: Math 2331	
Math 2334 Linear Algebra (MATH 2318)	
(3-0)	3 hours
Presents study of vector spaces, linear transformations, matrix algebra, eigenvalues, eigenvectors and applications. Prerequisite: Math 2333.	
Math 2335 Calculus III (MATH 2315)	
(3-0)	3 hours
Presents study of sets, functions, vector fields, partial derivatives, power series and integration theory. Includes a study of line, surface and multiple integrals. Prerequisite: Math 2333.	
Math 2351 Differential Equations (MATH 2320)	
(3-0)	3 hours
A study of equations of order one, linear differential equations, non-homogeneous equations, differential operators, the Laplace transform, inverse transforms, applications, equations of order one and higher degree and inverse differential operators. Prerequisite: Math 2333.	

Music

Faculty: Jack Hendrix, chairman; Dr. Maurice Alfred, Lonnie Clark, Dr. Kathryn Hoppe.

The music department of the college provides pre-professional training for the music major, as well as general studies for personal enjoyment and enrichment. It also functions in a public relations capacity for the college by means of its performing organizations. It serves the community in cultural and entertaining programs; it assists teachers in the area by means of special course offerings; and it also offers required music courses for majors in other fields. The Odessa College department of music is an accredited institutional member of the National Association of Schools of Music, a member of the Texas Association of Music Schools and Texas Music Educators Association.

The several music organizations—including the band, choir, orchestra and various ensemble groups—offer training and cultural enjoyment. Frequent performances by the artist faculty, in solo and with the symphony, add to the cultural opportunities afforded the community.

All music majors and minors are expected to attend concerts and recitals as part of their musical and cultural growth. These functions include student recitals, programs by the Midland-Odessa Symphony and Chorale, the Odessa College Fine Arts Series and other designated recitals.

**Course of Study for Certificate of Completion in Music
(Piano or Organ Performance Major Leading to a B.M.)**

	Semester Hrs
General Education Requirements	24
Electives	6
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
*PE (Any three one-hour activity courses)	3
Spch 1310 Introduction to Speech Communication	3
Major Requirements	35
Mu 1123 Piano Accompanying and Ensemble	1
Mu 1124 Piano Accompanying and Ensemble	1
Mu 1335 Introduction to Music Literature	3
Mu 1336 Introduction to Music Literature	3
Mu 1337 Freshman Piano or MU 1339 Freshman Organ	3
Mu 1338 Freshman Piano or MU 1340 Freshman Organ	3
Mu 1376 Freshman Music Theory	3
Mu 1377 Freshman Music Theory	3
Mu 2333 Advanced Study of Harmony	3
Mu 2334 Advanced Study of Harmony	3
Mu 2337 Sophomore Piano or Mu 2339 Sophomore Organ	3
Mu 2338 Sophomore Piano or Mu 2340 Sophomore Organ	3
Phys 1301 Music Acoustics	3
Total Semester Hours	59

*PE 1100 should be the first course taken in physical education.

To receive the associate in arts degree, students must complete one year of math or science and complete 12 hours of social science, including Hist 2301 and 2302 and Govt 2301 and 2302, in addition to the above courses.

**Course of Study for Certificate of Completion in Music
(Instrumental Major Leading to a B.M.E.)**

	Semester Hrs
General Education Requirements	24
Electives	6
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
*PE (Any three one-hour activity courses)	3
Spch 1310 Introduction to Speech Communication	3
Major Requirements	41
Applied Music: Principal Instrument	8
Mu 1101 Concert Band	1
Mu 1102 Concert Band	1
**Mu 1103 Jazz Ensemble	1
**Mu 1104 Jazz Ensemble	1
Mu 1137 Secondary Piano	1
Mu 1138 Secondary Piano	1
Mu 1335 Introduction to Music Literature	3
Mu 1336 Introduction to Music Literature	3
Mu 1376 Freshman Music Theory	3
Mu 1377 Freshman Music Theory	3
Mu 2101 Concert Band	1
Mu 2102 Concert Band	1
**Mu 2103 Jazz Ensemble	1
**Mu 2104 Jazz Ensemble	1
Mu 2137 Secondary Piano	1
Mu 2138 Secondary Piano	1
Mu 2333 Advanced Study of Harmony	3
Mu 2334 Advanced Study of Harmony	3
Phys 1301 Music Acoustics	3
Total Semester Hours	61

*PE 1100 should be the first course taken in physical education.
 **These are electives if the student is enrolled in concert band.

To receive the associate in arts degree, students must complete one year of math or science and complete 12 hours of social science, including Hist 2301 and 2302 and Govt 2301 and 2302, in addition to the courses listed above.

**Course of Study for Certificate of Completion in Music
 (Piano or Organ Major Leading to a B.M.E.)**

	Semester Hrs
General Education Requirements	24
Electives	6
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
*PE (Any three one-hour activity courses)	3
Spch 1310 Introduction to Speech Communication	3
Major Requirements	31
Mu 1123 Piano Accompanying and Ensemble	1
Mu 1124 Piano Accompanying and Ensemble	1
Mu 1237 Freshman Piano or Mu 1239 Freshman Organ	2
Mu 1238 Freshman Piano or Mu 1240 Freshman Organ	2
Mu 1335 Introduction to Music Literature	3
Mu 1336 Introduction to Music Literature	3
Mu 1376 Freshman Music Theory	3
Mu 1377 Freshman Music Theory	3
Mu 2237 Sophomore Piano or Mu 2239 Sophomore Organ	2
Mu 2238 Sophomore Piano or Mu 2240 Sophomore Organ	2
Mu 2333 Advanced Study of Harmony	3
Mu 2334 Advanced Study of Harmony	3
Phys 1301 Music Acoustics	3
Total Semester Hours	55

*PE 1100 should be the first course taken in physical education.

To receive the associate in arts degree, students must complete one year of math or science and complete 12 hours of social science, including Hist 2301 and 2302 and Govt 2301 and 2302, in addition to the above courses.

**Course of Study for Certificate of Completion in Music
 (Vocal Major Leading to a B.M.E.)**

	Semester Hrs
General Education Requirements	24
Electives	6
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
*PE (Any three one-hour activity courses)	3
Spch 1310 Introduction to Speech Communication	3
Major Requirements	44
Mu 1125 French Diction, Mu 1126 German Diction or Mu 1127 Italian Diction	3
Mu 1137 Secondary Piano	1
Mu 1138 Secondary Piano	1
Mu 1211 A Cappella Choir	2
Mu 1212 A Cappella Choir	2
Mu 1241 Freshman Voice	2
Mu 1242 Freshman Voice	2
Mu 1335 Introduction to Music Literature	3
Mu 1336 Introduction to Music Literature	3
Mu 1376 Freshman Music Theory	3
Mu 1377 Freshman Music Theory	3
Mu 2137 Secondary Piano	1
Mu 2138 Secondary Piano	1
Mu 2211 A Cappella Choir	2

Mu 2212 A Cappella Choir	2
Mu 2241 Sophomore Voice	2
Mu 2242 Sophomore Voice	2
Mu 2333 Advanced Study of Harmony	3
Mu 2334 Advanced Study of Harmony	3
Phys 1301 Music Acoustics	3
Total Semester Hours	68

*PE 1100 should be the first course taken in physical education.

To receive the associate in arts degree, students must complete one year of math or science and complete 12 hours of social science, including Hist 2301 and 2302 and Govt 2301 and 2302, in addition to the above courses.

Mu 1101, 1102, 2101, 2102 Concert Band (MUSI 1121, 1122, 2121, 2122)
 (0-3) 1 hour each
 Activities include music concerts, pep rallies and selected college functions. Includes many non-music majors. Requires participation in daily rehearsals and all major performances. Serves as required laboratory for instrumental music majors. Prerequisite: None.

Mu 1103, 1104, 2103, 2104 Jazz Ensemble (MUSI 1131, 1132, 2131, 2132)
 (0-3) 1 hour each
 Open to musicians having jazz experience or to those with instrumental skills and a desire for learning jazz techniques. Consists of minimum of three hours of rehearsal per week and playing at special college functions. Prerequisite: Admission by audition with acceptance based on musical ability.

Mu 1105, 1106, 2105, 2106 Orchestra (MUSI 1133, 1134, 2133, 2134)
 (0-4) 1 hour each
 Open to students who can play music of moderate difficulty upon some orchestral instruments. Admission by audition and acceptance by conductor. Prerequisite: Adequate ability on an instrument.

Mu 1107, 1108, 2107, 2108 Vocal Ensemble (MUSI 1151, 1152, 2151, 2152)
 (0-3) 1 hour each
 An elective designed to acquaint the student with chamber music for the small vocal ensemble of all periods of music and to provide advanced students with an opportunity to study the style and performance of a large collection of choral literature. Prerequisite: Selection from the A Cappella Choir by audition with expectation of participation in all major performances.

Mu 1109, 1110, 2109, 2110 Chamber Music (MUSI 1135, 1136, 2135, 2136)
 (0-3) 1 hour each
 Designed to examine and perform instrumental ensemble literature in which there is only one player to each part. Emphasizes ensemble, not the individual player, each instrument being as important as any other instrument. Prerequisite: Adequate facility on an instrument.

Mu 1211, 1212, 2211, 2212 A Cappella Choir (MUSI 1241, 1242, 2241, 2242)
 (0-5) 2 hours each
 Serves as laboratory for music majors whose primary instrument is the voice or as an elective for non-music majors. Studies include fundamental vocal techniques and choral literature representing many styles and composers from all periods of music. Participation in all major performances expected. Prerequisite: Admission by audition with acceptance based on musical ability and voice quality.

**Applied Music
 (Class Lessons)**

Mu 1113, 1114, 2113, 2114 Secondary Instrumental (MUSI 1141, 1142, 2141, 2142)
 (0-1/2) 1 hour each
 Designed for the non-instrumentalist who is a music major, the instrumental major on a secondary instrument or for elective credit. Presents rudimentary principles of the instrument and appropriate exercises. Representative repertoire chosen from solo listing of University Interscholastic League. Lab fee required. Prerequisite for Mu 1113: None.

Mu 1115 Brass (MUSI 1168)
 (0-3) 1 hour
 Designed for music education majors to meet minimum proficiency requirements on brass instruments through study of basic techniques, methods of teaching them and a limited repertoire. Culminates in ability to play scales on these instruments. Prerequisite: None.

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- Mu 1116 Percussion (MUSI 1188)** 1 hour
(0-3)
Designed to meet minimum requirements in percussion instruments for music education majors through study of snare drum rudiments, tuning and other techniques of playing the timpani and limited performance ability on other instruments of the battery. Lab fee required. Prerequisite: None.
- Mu 1117 Strings (MUSI 1189)** 1 hour
(0-3)
Designed for music education majors to meet minimum proficiency requirements on stringed instruments through study of basic techniques, methods of teaching them and a limited repertoire. Culminates in ability to play all scales on these instruments. Prerequisite: None.
- Mu 1118 Woodwinds (MUSI 1166)** 1 hour
(0-3)
Designed for music education majors to meet minimum proficiency requirements on woodwind instruments through study of basic techniques, methods of teaching them and a limited repertoire. Culminates in ability to play scales on these instruments. Prerequisite: None.
- Mu 1121, 1122, 2121, 2122 Opera Workshop (MUSI 1157, 1158, 2157, 2158)** 1 hour each
(0-3)
Serves as laboratory for students interested in dramatic music and its presentation. Requires outside preparation of various assignments for class and public presentations. Includes night rehearsals when necessary. Open to all students. Prerequisite: None.
- Mu 1123, 1124, 2123, 2124 Piano Ensemble and Accompanying (MUSI 1137, 1138, 2137, 2138)** 1 hour each
(0-3)
Designed to improve ensemble playing and to provide training in techniques of vocal and instrumental accompanying. Four semester hours required of all keyboard majors. Prerequisite: Consent of the instructor for all non-keyboard majors.
- Mu 1125 French Diction (MUSI 2161)** 1 hour
(2-0)
Emphasizes French language and diction. Designed to promote ability to sing in French. Vocabulary derived from words commonly used in song and opera. Student's own appropriate literature studied with other selections added at discretion of the instructor. Prerequisite: None.
- Mu 1126 German Diction (MUSI 2160)** 1 hour
(2-0)
Emphasizes German language and diction. Designed to promote ability to sing in German. Vocabulary derived from words commonly used in song and opera. Student's own appropriate literature studied with other selections added at discretion of the instructor. Prerequisite: None.
- Mu 1127 Italian Diction (MUSI 1160)** 1 hour
(2-0)
Emphasizes Italian language and diction. Designed to promote ability to sing in Italian. Vocabulary derived from words commonly used in song and opera. Student's own appropriate literature studied with other selections added at discretion of the instructor. Prerequisite: None.
- Mu 1175, 1176, 2175, 2176 Blue Grass/Country Western (MUSI 1139, 1140, 2139, 2140)** 1 hour each
(0-3)
Teaches the style and repertoire of country western and blue grass music. Gives insight into professional performing opportunities. Prerequisite: Consent of the instructor.
- Mu 1177, 1178 General Foundations in Music (MUSI 1101, 1102)** 1 hour each
(0-1/2)
Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation and necessary skills for satisfactory performance in listening, creating rhythmic responses and developing an increasing ability to manage notation (music reading). Lab fee required. Prerequisite: None.
- Mu 1179, 1180 Instrumental Foundations in Music (MUSI 1103, 1104)** 1 hour each
(0-1/2)
Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation and the necessary skills for satisfactory performance in playing an instrument, listening, creating rhythmic responses and developing an increasing ability to manage notation (music reading). Lab fee required. Prerequisite: None.

Mu 1181, 1182 Keyboard Foundations in Music (MUSI 1105, 1106) 1 hour each
 (0-1/2)
 Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation and the necessary skills for satisfactory performance in playing a keyboard instrument, listening, creating rhythmic responses and developing an increasing ability to manage notation (music reading). Lab fee required. Prerequisite: None.

Mu 1183, 1184 Vocal Foundations in Music (MUSI 1107, 1108) 1 hour each
 (0-1/2)
 Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation in singing, listening, creating rhythmic responses and developing an increasing ability to manage notation (music reading). Lab fee required. Prerequisite: None.

Mu 1185, 1186, 2185, 2186 Class Piano (MUSI 1181, 1182, 2181, 2182) 1 hour each
 (1-2)
 Designed to develop basic skills related to playing the piano, developing the keyboard skills through both class and individual participation. Begins with fundamental elements of music, including music reading, basic concepts of elementary music theory (melody, rhythm, harmony), chord structure, harmonization, ensemble playing and improvisation. Prerequisite: None for Mu 1185; consent of the instructor thereafter.

Mu 1187 Musical Theatre (MUSI 1159) 1 hour
 (1-2)
 Includes study and performance of works from musical theatre repertoire. Open to all students. Prerequisite: None.

Mu 1203, 1204, 2203, 2204 Jazz Ensemble (MUSI 1227, 1229, 2227, 2229) 2 hours each
 (0-5)
 Open to musicians having jazz experience or to those with instrumental skills and a desire for learning jazz techniques. Consists of a minimum of five hours of rehearsal per week and playing at special college functions. Prerequisite: Admission by audition with acceptance based on musical ability.

Mu 1329 Music Fundamentals (MUSI 1300) 3 hours
 (3-0)
 Introduces elements of music, including study of the staff, clefs, key signatures, scales, time signatures, notation, meter and rhythm, sightsinging, major and minor chords, application of theory at the keyboard and rhythmic, melodic and harmonic ear training. Prerequisite: None.

Mu 1376, 1377 Freshman Music Theory (MUSI 1311, 1312) 3 hours each
 (3-3)
 Reviews basic music theory, followed by study of diatonic melody, diatonic triadic and seventh chord harmony, embellishing tones, modes and motivic variation procedures through analysis, partwriting, composition, eartraining, sightsinging, rhythmic reading and keyboard applications. Prerequisite: For Mu 1377: Mu 1376.

Mu 2231, 2232 Advanced Sightsinging and Eartraining (MUSI 2216, 2217) 2 hours each
 (2-1)
 Correlation of eartraining, sightsinging, rhythmic reading and keyboard drills with theoretical material of Advanced Study of Harmony. Sightsinging includes modal melodies and partsinging. Prerequisite: Mu 1377.

Mu 2333, 2334 Advanced Study of Harmony (MUSI 2311, 2312) 3 hours each
 (2-1)
 Presents secondary seventh chords, modulation, chromatic melody and harmony and small forms through analysis, partwriting and composition. Twentieth century melody and harmony and large forms studied during the second semester. Prerequisite: Mu 1377.

Music History and Literature

Mu 1328 Music Appreciation (MUSI 1306) 3 hours
 (3-0)
 Offered to all students, except music majors, who wish to acquire basic information and techniques necessary for intelligent appreciation of the art of music, as related to major style periods in music history. Guided listening experiences, through use of the extensive record collection in the listening laboratory, an important part of the course. Prerequisite: None.

- Mu 1335, 1336 Introduction to Music Literature** (MUSI 1308, 1309) 3 hours
(3-0)
A chronological survey course, the prime objective of which is to introduce students to various periods of musical composition from ancient to present time. Seeks to acquaint students with both the historical aspect and the music itself. Extensive use made of large collection of phonograph records in listening laboratory. Required of all music majors. Prerequisite to Mu 1336: Mu 1335.
- Mu 1373, 1374 Piano Literature** (MUSI 1307) 3 hours each
(3-0)
Surveys and studies solo literature for piano. Emphasizes individual and period idioms and styles. Presents, in the first semester, origins of keyboard and solo piano and, specifically, piano literature of the 18th century. Presents solo piano literature of the 19th and twentieth centuries during second semester. Phonograph records and tape recordings utilized for listening assignments. Presentations in class include live performances, phonograph records and tape recordings as appropriate. Prerequisite: Consent of the instructor.
- Mu 1375 Channeling Performance Stress** (MUSI 1370) 3 hours
(3-0)
Directed toward students in performance classes. Addresses psychological and physiological stress responses with regard to their effect on performing ability. Presents training in both systemic and muscular relaxation techniques. Prerequisite: None.

Applied Music

Final grades in applied music are determined by jury audition each semester, the final performance in each course being rated in accordance with the progress achieved and based on the minimum daily required hours of practice as set forth in the catalog.

Private Lessons

- Mu 1237, 1238 Freshman Piano** (MUAP 1269, 1270) 2 hours each
(0-1)
Designed for the music education major whose primary instrument is piano or for elective credit. Minimum representative requirements: Bach: four Two-part Inventions or two Preludes and Fugues or the equivalent; Sonatas: easier opus numbers by Haydn, Mozart, Beethoven; Technique: all scales and arpeggios, four octaves, four notes to the beat, achieve minimum speed MM 120 at end of second semester; Czerny, Op. 299 or equivalent; standard Etudes; standard literature from Romantic and Contemporary periods, at least five pages memorized; sight reading; ensemble. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1238: Mu 1237.
- Mu 1337, 1338 Freshman Piano** (MUAP 1371, 1372) 3 hours each
(0-1)
Designed for a performance major in piano. Minimum requirements: Bach: four Three-part Inventions or two Preludes and Fugues or the equivalent; Sonatas: two from Haydn, Mozart or Beethoven; Technique: all scales and arpeggios, four octaves, minimum speed MM 120, four notes to the beat at end of second semester; standard Etudes; standard literature from Romantic and Contemporary periods; everything from memory; sight reading; ensemble. Minimum practice required: 18 hours per week. Private lesson fee required. Prerequisite for Mu 1338: Mu 1337.
- Mu 1339, 1340 Freshman Organ** (MUAP 1365, 1366) 3 hours each
(0-1)
Designed for a performance major in organ. Minimum representative requirements: Gleason, *Method of Organ Playing*; Dupre, *Seventy-Nine Chorals*; Bach, *Eight Little Preludes and Fugues* and/or *Liturgical Year*; repertoire representative of "The Cathedral" Prelude and Fugue (Bach) and "Station of the Cross XI" (Dupre); standard sonatas; standard literature from Romantic and Contemporary periods, everything from memory; additional technic as needed. Prerequisite to Mu 1339: Ability to perform Bach Two-part and Three-part Inventions or equivalent on the piano. Minimum practice required: 18 hours per week. Private lesson fee required. Prerequisite for Mu 1340, Mu 1339.
- Mu 1239, 1240 Freshman Organ** (MUAP 1267, 1268) 2 hours each
(0-1)
Designed for music education majors whose primary instrument is organ. May also be taken for elective credit. Minimum representative requirements: Gleason, *Method of Organ Playing*; Dupre, *Seventy-Nine Chorals*; Bach, *Eight Little Preludes and Fugues* and/or *Liturgical Year*; standard sonatas; standard literature from Romantic and Contemporary periods; at least one composition memorized; additional technic as needed. Prerequisite for Mu 1239: Must be able to perform Bach two-part and three-part Inventions or equivalent on the piano. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1240: Mu 1239.

Mu 2337, 2338 Sophomore Piano (MUAP 2369, 2370)

(0-1) 3 hours each

A continuation of Mu 1338. Minimum representative requirements: Bach: Preludes and Fugues, Suites, Partitas, transcriptions; Sonatas: More difficult ones by Mozart or Beethoven or Concerto; Technic: scales and arpeggios in 10th, 6ths, two against three or others of similar difficulty; Etudes of the difficulty of Chopin, Cramer, etc.; Czerny, Op. 740 or equivalent; standard literature from Romantic and Contemporary periods, everything from memory; sight reading; ensemble. Requires public recital. Minimum practice required: 18 hours per week. Private lesson fee required. Prerequisite: Mu 1238.

Mu 2237, 2238, Sophomore Piano (MUAP 2371, 2372)

(0-1) 2 hours each

A continuation of Mu 1238. Minimum representative requirements: Bach: four Three-part Inventions or two Preludes and Fugues or the equivalent; Sonatas: by Mozart, Haydn, Beethoven or Concerto; Technic: all scales and arpeggios, four octaves, four notes to the beat, minimum speed MM 120; Czerny, op. 299 or equivalent; standard Etudes; standard literature from the Romantic and Contemporary periods; sight reading; ensemble. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite: Mu 1238.

Mu 1119, 1120 Applied Music (MUAP 1171, 1172)

(0-1/2) 1 hour each

Offered in any field of applied music on an elective basis to meet special needs of students. Designed to provide elective credit in any applied study of music and to improve performance ability in a specific field of performance. Minimum practice required: six hours per week. Private lesson fee required. Prerequisite: None.

Mu 2119, 2120 Applied Music (MU 2171, 2172)

(0-1/2) 1 hour each

A continuation of Mu 1119 and 1120. Offered in any field of applied music on an elective basis to meet special student needs. Designed to provide elective credit in any applied study of music and to improve performance ability in a specific field of performance. Minimum practice required: six hours per week. Private lesson fee required. Prerequisite: Mu 1120.

Mu 1137, 1138, 2137, 2138 Secondary Piano (MUAP 1173, 1174, 2173, 2174)

(0-1/2) 1 hour each

Designed to complete the piano proficiency examination for all music students except pianists. Minimum representative requirements for piano proficiency examination: Bach Invention or equivalent; one Sonata-form movement; four memorized pages of standard Romantic or Contemporary compositions: "Star Spangled Banner" and "America" memorized; ability to play a hymn from a selected list; sight reading of third grade difficulty; all scales and arpeggios, four octaves, four notes to the beat, at least MM 72; Czerny, Op. 299 or equivalent. Minimum practice required: six hours per week. Private lesson fee required. Prerequisite for Mu 1137: None.

Mu 2339, 2340 Sophomore Organ (MUAP 2365, 2366)

(0-1) 3 hours each

A continuation of Mu 1340. Minimum representative requirements: Gleason, *Method of Organ Playing*; Bach, Trio Sonatas, Little Fugue in "G" Minor or equivalent; Mendelssohn Sonatas or equivalent; "Poemes Evangeliques" by Langlais; Vierne, *Twenty-four Pieces in Free Style*; Bach, *Orgelbuchlein*; everything from memory; introduction to Service Playing; additional technic as needed; public recital required. Minimum practice required: 18 hours per week. Prerequisite for Mu 2339: Mu 1340. Private lesson fee required. Prerequisite for Mu 2340: Mu 2339.

Mu 2239, 2240 Sophomore Organ (MUAP 2367, 2368)

(0-1) 2 hours each

A continuation of Mu 1240. Minimum representative requirements: Gleason, *Method of Organ Playing*; Bach, *Orgelbuchlein*, Trio Sonatas, Little Fugue in "G" Minor or equivalent; Mendelssohn Sonatas or equivalent; "Poemes Evangeliques" by Langlais; Vierne, *Twenty-four Pieces in Free Style*; standard literature from Romantic and Contemporary periods; at least two compositions memorized; introduction to Service Playing; additional technic as needed. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2239: Mu 1240.

Mu 1139, 1140, 2139, 2140 Secondary Organ (MUAP 1165, 1166, 1167, 1168)
 (0-1/2) 1 hour each
 Designed for the music major whose primary instrument is not organ or for elective credit. Representative literature includes: Gleason, *Method of Organ Playing*; Bach: *Eight Little Preludes and Fugues*; and/or *Liturgical Year*; Dupre, *Seventy-nine Chorales*; and standard compositions, range of difficulty from easy arrangements and transcriptions upward, by Handel, Mendelssohn, Franck, Langlais, Peeters, etc. Additional technic is added as needed. Minimum practice required: six hours per week. Private lesson fee required. Prerequisite for Mu 1139: None, but previous organ or piano study is desirable.

Mu 1141, 1142 Secondary Voice (MUAP 1183, 1184)
 (0-1/2) 1 hour each
 Designed for the non-vocal concentration or non-vocal major who is a music major or for elective credit. Presents rudimentary principles of vocal production and appropriate exercises. A minimum of six memorized songs from the standard repertoire to be prepared for presentation at faculty jury for grade. Minimum practice required: six hours per week. Private lesson fee required. Prerequisite for Mu 1142: Mu 1141.

Mu 2141, 2142 Secondary Voice (MUAP 2183, 2184)
 (0-1/2) 1 hour each
 A continuation of Mu 1142. Requires exercises and studies of increased difficulty and length, plus Italian songs. A minimum of six memorized songs from the standard repertoire to be prepared for presentation at faculty jury for grade. Minimum practice required: six hours per week. Private lesson fee required. Prerequisite: Mu 1142.

Mu 1241, 1242 Freshman Voice (MUAP 1181, 1182)
 (0-1) 2 hours each
 Designed for the music education major who will study voice as primary instrument or for elective credit. Exercises to facilitate proper breath and tone production studied to promote vocal technique. Songs from early Italian literature studied, plus appropriate English songs at the discretion of the instructor. A minimum of seven memorized songs to be prepared for presentation at faculty jury for grade. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1242: Mu 1241.

Mu 2241, 2242 Sophomore Voice (MUAP 2181, 2182)
 (0-1) 2 hours each
 A continuation of Mu 1242. Scales, arpeggios and studies of increased variety, length, speed and numbers of vowels studied. Introduces German and French songs. Oratorio and/or opera arias may be added at the discretion of the instructor. A minimum of seven memorized songs and/or arias to be prepared for presentation at faculty jury for grade. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2241: Mu 1242.

Mu 1243, 1244 Freshman Violin (MUAP 1201, 1202)
 (0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is violin or for elective credit. Minimum representative requirements: Kreutzer *Etudes*, Sevcik technical exercises; all major and minor scales and arpeggios, three octaves in eighth notes at MM 100 memorized, at end of second semester; one Sonata by a standard composer (Bach, Vivaldi, Viotti, Nardini, etc.); pieces of similar difficulty by classic and contemporary composers; orchestra; ensemble. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1244: Mu 1243.

Mu 2243, 2244 Sophomore Violin (MUAP 2201, 2202)
 (0-1) 2 hours each
 A continuation of Mu 1244. Minimum representative requirements: Etudes, Kreutzer, Fiorillo, Sevcik; scales and arpeggios; four octaves in eighth notes at MM 160 memorized at end of sophomore year; two Sonatas by a standard composer (Handel, Bach, Mozart, Beethoven, Gade, Grieg, etc.); orchestra; ensemble. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite: Mu 1244.

Mu 1245, 1246 Freshman Viola (MUAP 1205, 1206)
 (0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is viola or for elective credit. Minimum representative requirements: scales and arpeggios in eighth notes at MM 100 at end of second semester; studies and exercises; sonatas and concertos; smaller pieces from the standard repertoire; Wohlfahrt-Isaac-Lewis, *Thirty Studies for the Viola, Book I*; Wohlfahrt, Book II; "Lyric Suite" by Grieg-Sitt. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1246: Mu 1245.

- Mu 2245, 2246 Sophomore Viola (MUAP 2205, 2206)**
 (0-1) 2 hours each
 A continuation of Mu 1246. Minimum representative requirements: scales and arpeggios in eighth notes at MM 160 at end of the sophomore year; scales in double stops; studies and exercises selected according to individual needs, such as C. Danel's *L'ecole du mechanisme, Books I and II*, Dont's 20 *Progressive Etudes* and R. Kreutzer-Consolini's *42 Etudes*; sonatas by Leclair, Marcello, Corelli, G. Faure; concertos and short solo pieces. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite: Mu 1246.
- Mu 1247, 1248 Freshman Cello (MUAP 1209, 1212)**
 (0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is cello or for elective credit. Minimum requirements: Klengel studies; Dotzaur *113 Selected Studies, Book II*; Sonatas by Eccles, Breval; thumb position; scales of three octaves in eighth notes at MM 120 at end of second semester; studies equivalent in difficulty to Dotzaur, Volume II; shorter compositions equivalent in difficulty to Beethoven G Minor Sonata. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1248: Mu 1247.
- Mu 2247, 2248 Sophomore Cello (MUAP 2209, 2210)**
 (0-1) 2 hours each
 A continuation of Mu 1248. Minimum representative requirements: scales and arpeggios from memory in eighth notes at MM 120 at end of sophomore year; double stops; studies equivalent to Dotzaur, Volume III and Grutzmacher, Opus 67; shorter compositions and compositions equivalent in difficulty to the Sammartini "G" Major Sonata. At end of second year, student must be able to play at sight moderately difficult ensemble music. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite: Mu 1248.
- Mu 1249, 1250 Freshman Double Bass (MUAP 1213, 1214)**
 (0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is double bass or for elective credit. Minimum course requirements: scales and arpeggios, three octaves in eighth notes at MM 100, from memory, at end of second semester; smaller pieces from the standard repertoire; orchestra studies; Franz Simandl, *Book I and Book II*. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1250: Mu 1249.
- Mu 2249, 2250 Sophomore Double Bass (MUAP 2213, 2214)**
 (0-1) 2 hours each
 A continuation of Mu 1250. Minimum requirements: scales and arpeggios; scales of Shmuklousky; four octaves in eighth notes at MM 120 at end of sophomore year; Harbe, *Etudes, Book I*; Franz Simandl, *Fundamental Method Book II*; Kreutzer bowing studies; shorter compositions and more advanced orchestra studies. Minimum practice required: 2 hours per week. Private lesson fee required. Prerequisite: Mu 1250.
- Mu 1251, 1252 Freshman Classical Guitar (MUAP 1261, 1262)**
 (0-1) 2 hours each
 Designed for the music education major whose primary instrument is classical guitar or for elective credit. Representative instructional materials: standard classical guitar literature from all periods of music, including transcriptions. Representative materials include: *Classical Guitar Method*, Mateo Carcassi (Carl Fisher edition); *Major and Minor Scales* (A. Segovia); the selection for any one semester is based on student's needs in relation to his previous study and current ability as determined by instructor. Prerequisite: Demonstrated knowledge of fingerboard; know diatonic major and minor scales, Terrega method preferred. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1252: Mu 1251.
- Mu 2251, 2252 Sophomore Classical Guitar (MUAP 2261, 2262)**
 (0-1) 2 hours each
 A continuation of Mu 1252. Representative instructional materials continue with standard literature from all periods of music, including transcriptions; Villa-Lobos *Etudes*; advanced technical studies; Albeniz *Leyenda de la Maza*, "Companatis del Alba" (Etude in Tremolo); compositions by Bach, Dowland, Llobet, Granadas, Rodrigo, Ponce, Mudarra, Frescobaldi, Rameau, Torroba, Turina, etc. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2252: Mu 2251.

- Mu 1253, 1254 Freshman Bassoon** (MUAP 1225, 1226) 2 hours each
(0-1)
Designed for the music education major or minor whose primary instrument is bassoon or for elective credit. Minimum technical requirements: all scales and arpeggios to be played in eighth notes at MM 120 in various articulations at end of second semester; all major scales in broken thirds to be played in eighth notes at MM 80, in various articulations at end of second semester. Representative repertoire chosen from complete works of Weissenborn *Op. 8*, the Jancourt Studies and solos selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1258: Mu 1257.
- Mu 2253, 2254 Sophomore Bassoon** (MUAP 2225, 2226) 2 hours each
(0-1)
A continuation of Mu 1254. Minimum representative requirements: all scales to be played in eighth notes at MM 160, in various articulations, all major scales in broken thirds to be played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional etudes and technical studies should include the Milde *Etudes Volume I*, the Gambaro *Studies* and such representative solos as the Vivaldi Concerto, the Weber Concerto and the Hindemith Sonata. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite: Mu 1254.
- Mu 1255, 1256 Freshman Flute** (MUAP 2225, 2226) 2 hours each
(0-1)
Designed for the music education major or minor whose primary instrument is flute or for elective credit. Minimum technical requirements: all scales and arpeggios to be played in eighth notes at MM 120, in various articulations at end of second semester; all major scales in broken thirds to be played in eighth notes at MM 60, in various articulations at end of second semester. Representative repertoire chosen from the studies of Anderson, Cavally, Berbiguier, Koehler and Boehm; and solos such as the Handel *Sonatas*, the Telemann *Suite* and the Bach Suite I. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1258: Mu 1255.
- Mu 2255, 2256 Sophomore Flute** (MUAP 2217, 2218) 2 hours each
(0-1)
A continuation of Mu 1256. Minimum representative requirements: all scales and arpeggios to be played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds to be played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional etudes and technical studies should include Anderson *Op. 15* and *63* and others equivalent to Cavally. Representative literature should include at least one Bach and one Handel Sonata. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2255: Mu 1256.
- Mu 1257, 1258 Freshman Clarinet** (MUAP 1229, 1230) 2 hours each
(0-1)
Designed for the music education major or minor whose primary instrument is clarinet or for elective credit. Minimum technical requirements: all scales and arpeggios to be played in eighth notes at MM 120, in various articulations at end of second semester. All major scales in broken thirds in eighth notes at MM 80 at end of second semester. Representative repertoire chosen from the Klose *Method*, the Lazarus *Method*, the Rose *32 Etudes*, the Rubank *Selected Studies* and solos selected from the Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1258: Mu 1257.
- Mu 2257, 2258 Sophomore Clarinet** (MUAP 2229, 2230) 2 hours each
(0-1)
Minimum requirements: all scales to be played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds to be played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional etudes and technical studies should include completion of the Klose *Method* or Lazarus *Method*, the Rose *40 Studies* and such representative solos as the Brahms Sonatas, the Weber or Mozart concertos and some contemporary works. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2257: Mu 1258.
- Mu 1259, 1260 Freshman Oboe** (MUAP 1221, 1222) 2 hours each
(0-1)
Designed for the music major or minor whose primary instrument is oboe or for elective credit. Minimum technical requirements: all scales and arpeggios to be played in eighth notes at MM 120, in various articulations at end of second semester; all major scales in broken thirds played in eighth notes at MM 80, in various articulations at end of second semester. Representative repertoire to be chosen from the Verroust *Studies*, the Rubank *Selected Studies* and the Barret *Progressive Exercises* and solos such as the Handel Concertos and Sonatas, the Dittersdorf Concertos and equivalent works. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1260: Mu 1259.

Mu 2259, 2260 Sophomore Oboe (MUAP 2221, 2222)

(0-1) 2 hours each

A continuation of Mu 1260. Minimum representative requirements: all scales to be played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds to be played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional etudes and technical studies should include the Barret *Grand Studies*, the Ferling *48 Etudes*, the Andraud *Vade Mecum* and the Sellner *Duets*. Representative literature should include at least two preclassical sonatas and the orchestral solos for the oboe. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2259: Mu 1260.

Mu 1261, 1262 Freshman Saxophone (MUAP 1233, 1234)

(0-1) 2 hours each

Designed for the music education major or minor whose primary instrument is saxophone or for elective credit. Minimum technical requirements: all scales and arpeggios to be played in eighth notes at MM 120, in various articulations at end of second semester; all major scales in broken thirds are to be played in eighth notes at MM 80, in various articulations at end of second semester. Additional technique will be taken from *Selected Studies* by Rubank, Pares *Scale Studies* and others. Solo literature can be selected from the Group 1 listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1262: Mu 1261.

Mu 2261, 2262, Sophomore Saxophone (MUAP 2233, 2234)

(0-1) 2 hours each

A continuation of Mu 1262. Minimum representative requirements: all scales and arpeggios to be played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds to be played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional etudes and technical studies should be equivalent to Ferling, *48 Etudes*, Klose-Derigny, *Complete Method* and solos by Handel, Rascher, Creston, Ibert and other contemporary French recital pieces. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2261: Mu 1262.

Mu 1263, 1264 Freshman French Horn (MUAP 1241, 1242)

(0-1) 2 hours each

Designed for the music education major or minor whose primary instrument is French Horn or for elective credit. Minimum technical requirements: all scales to be played in eighth notes at MM 120, in various articulations at end of second semester; all major scales in broken thirds to be played in eighth notes at MM 80, in various articulations at end of second semester. Additional technical studies from Alphonse, *Book I*, Pottag, *Preparatory Melodies* and Kopprasch, *Book I*. Representative solo literature selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1264: Mu 1263.

Mu 2263, 2264 Sophomore French Horn (MUAP 2241, 2242)

(0-1) 2 hours each

A continuation of Mu 1264. Minimum representative requirements: all scales and arpeggios played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds played in eighth notes at MM 100, in various articulations at end of sophomore year. Continuation of technical studies taken from Alphonse, Pottag and studies from band and orchestra literature. Representative solos selected from the works of Gootwald, Painter, Mozart, Scarmolin, Wessel, Whittman and various transcriptions for the horn. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 2263: Mu 1264.

Mu 1265, 1266 Freshman Trombone or Baritone (MUAP 1245, 1246)

(0-1) 2 hours each

Designed for the music education major or minor whose primary instrument is trombone or baritone or for elective credit. Minimum technical requirements: all scales and arpeggios played in eighth notes at MM 160, in various articulations at end of second semester; all major scales in broken thirds played in eighth notes at MM 100, in various articulations at end of second semester; continuation of the technical studies taken from Kopprasch, *Etudes*; and Mueller, *Technical Studies*. Representative solos taken from works of Guilmant, Zimmerman, Pryor, Simmons and transcriptions for trombone or baritone. Minimum practice required: 12 hours per week. Private lesson fee required. Prerequisite for Mu 1266: Mu 1265.

Mu 2265, 2266 Sophomore Trombone or Baritone (MUAP 2245, 2246)

(0-1) 2 hours each
 A continuation of Mu 1266. Minimum representative requirements: all scales and arpeggios played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds played in eighth notes at MM 120, in various articulations at end of sophomore year; continuation of technical studies taken from Kopprasch's *Etudes*; and Mueller's *Technical Studies*. Representative solos to be taken from works of Guilman, Zimmerman, Pryor, Simmons and transcriptions for trombone or baritone. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 2265: Mu 1266.

Mu 1267, 1268 Freshman Cornet or Trumpet (MUAP 1237, 1238)

(0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is cornet or trumpet or for elective credit. Minimum technical requirements: all scales and arpeggios played in eighth notes at MM 120, in various articulations at end of second semester. All major scales in broken thirds in eighth notes MM 80 at end of second semester. Representative repertoire includes etudes and technical studies from Arban, St. Jacome, the Hering *Thirty-two Etudes* and the Clark *Technical Studies*. Solos selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 1268: Mu 1267.

Mu 2267, 2268 Sophomore Cornet or Trumpet (MUAP 2237, 2238)

(0-1) 2 hours each
 A continuation of Mu 1268. Minimum representative requirements: all scales played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional etudes and technical studies should include St. Jacome, *Selected Studies*; and Williams, *Transposition Studies*; plus representative solos as those of Balay, Fitzgerald, Hindemith and Busser. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 2267: 1268.

Mu 1269, 1270 Freshman Tuba (MUAP 1253, 1254)

(0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is tuba or for elective credit. Minimum technical requirements: all scales and arpeggios played in eighth notes at MM 120, in various articulations. All major scales in broken thirds in eighth notes at MM 80 at end of second semester. Additional technical studies taken from Eby *Method for Tuba* and the Hering *Thirty-two Etudes*. Representative solo literature selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 1270: Mu 1269.

Mu 2269, 2270 Sophomore Tuba (MUAP 2253, 2254)

(0-1) 2 hours each
 A continuation of Mu 1270. Minimum representative requirements: all scales and arpeggios played in eighth notes at MM 160, in various articulations at end of sophomore year; all major scales in broken thirds played in eighth notes at MM 100, in various articulations at end of sophomore year. Additional technical studies taken from the Eby *Method for Tuba* and the Rochut *Etudes, Volume I*; and special transposition studies will be undertaken. Representative solo literature selected from original works for tuba and available transcriptions. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 2269: Mu 1270.

Mu 1271, 1272 Freshman Percussion (MUAP 1257, 1258)

(0-1) 2 hours each
 Designed for the music education major or minor whose primary instrument is percussion or for elective credit. Minimum technical requirements: completion of the 26 rudiments through all the various dynamics on the snare drum at end of second semester; rudimental solos selected from the Burns-Moore *Art of Rudimental Drumming*, the N.A.R.D. Solo Book, the Gardner *Progressive Studies* and the Group I listing of the tympani using the Goodman *Modern Method for Timpani* for two tympani; and instruction in the correct method of playing accessory instruments. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 1272: Mu 1271.

Mu 2271, 2272 Sophomore Percussion (MUAP 2257, 2258)

(0-1) 2 hours each
 A continuation of Mu 1272. Minimum representative requirements: continued instruction on tympani to include three and four kettles; additional technical studies taken from Seitz' *Modern School of Timpani Playing* and orchestral literature; advanced rudimental solos for snare drum and multiple percussion solos including playing the trap set; beginning instructions of mallet instruments to be taken on the xylophone with appropriate solos to be chosen from the literature. Minimum practice required: 12 hours per week. Lab fee required. Prerequisite for Mu 2271: Mu 1272.

Nursing

Faculty: Dorothy Jackson, chairman, Odessa College Career Ladder Nursing Program and Associate Degree Nursing Evening Program; Dorothy Cook, Patty Chapman, Wanda Davis, Nancy Harris, Nancy Johnson, Rebecca Marcus, Eva Mauldin, Janet Phillips, Pat Ritchey, Robbie Rogers, Carol Boswell, Dr. Ann Winn. Irma Aguilar, coordinator, Evening Program. Norma Drennon, chairman, Kermit Vocational Nursing Program; Maurine Watson. Karen Paterno, chairman, Andrews Vocational Nursing Program; Madylon Coomer.

Odessa College offers comprehensive nursing programs during both day and evening hours. The Career Ladder Program provides learning opportunities to prepare both the licensed vocational nurse and the registered nurse. In addition, there are vocational nursing programs located in Kermit/Monahans and Andrews. These are 12-month programs beginning in the fall of each year. The Kermit and Andrews programs each has its own curriculum that is different from the Career Ladder.

The Career Ladder Program option on the Odessa College campus is designed to allow students maximum flexibility in education. Students have the option of progressing through the two levels of nursing after meeting requirements for each level. The vocational level prepares the vocational nurse, who qualifies, to write the licensing examination for the licensed vocational nurse. The student also will receive a certificate of technology from Odessa College. The associate degree level prepares the associate degree nurse, who qualifies, to write the licensing examination for registered nurse. Successful completion of the associate degree level also qualifies students to receive the associate in applied science degree. Classes are admitted to the vocational level in the fall and spring semesters and to the associate degree level in the fall semester.

The Evening Nursing Program option prepares students to take the licensing examination to become a registered nurse. Upon successful completion of the program, students receive an associate in applied science degree. All classes and clinicals are held during evening hours with the exception of the psychiatric clinical, which is held during daytime hours.

The transition/validation course is offered for persons who are licensed vocational nurses. The purpose of this course is to validate and enhance nursing skills and to bring the LVN to the level of the generic student entering the second year. Upon successful completion of the transition/validation course, the LVN will receive credit for the first year of the nursing curriculum.

Admission Requirements for the Career Ladder Program Option, Evening Program Option and the Transition Course for the Licensed Vocational Nurse

1. Official high school transcript or GED.
2. College cumulative GPA of 2.0 or higher in all course work.
3. Biology 1404 and Biology 1405. (Must not be more than five years old.)
4. Satisfactory scores on ASSET placement tests.
5. A score of the 35th percentile or higher on the Nursing Entrance Exam.
6. Current CPR certification (Course C, American Heart Association, or Basic Life Support for the Professional, American Red Cross).
7. Persons who have been convicted of felonies or misdemeanors must request a declaratory order as to their eligibility to receive a license as nurse in the state of Texas.
8. Applications should be submitted no later than March 1 for the fall semester and no later than October 1 for the spring semester.

In addition to the above requirements, students applying for the Transition Course for the Licensed Vocational Nurse must have completed Psychology 2302. Students applying for the Evening Program option should have completed Psychology 2302, Biology 2403 (not more than five years old), English 1311, Nursing 1201 and two credits in physical education.

Admission Requirements for the Extension Vocational Programs in Andrews and Kermit

1. Official high school transcript or GED.
2. College cumulative GPA of 2.0 or higher in all course work.
3. A score of the 35th percentile or higher on the Nursing Entrance Exam.
4. Current CPR certification (Course C, American Heart Association, or Basic Life Support for the Professional, American Red Cross).
5. Persons who have been convicted of felonies or misdemeanors must request a declaratory order as to their eligibility to receive a license as nurse in the state of Texas.
6. Applications should be submitted no later than June 1.

Although English language proficiency is not required for admission to the program, successful completion of the program necessitates good communication skills in English. Because of limited enrollment, students are urged to apply as early as possible before the proposed date of admission.

There is no discrimination due to age, sex, color, race, cultural background or national origin. The nursing programs focus on the nursing care of clients with common health problems. Clinical experience is concurrent within each course and includes medical, surgical, obstetrical, pediatric, psychiatric and geriatric nursing experiences as well as special selected services. All courses in the curriculum are required and must be completed no later than the prescribed semester. Students must satisfy the objectives for the respective level with a minimum grade of "C" in each required nursing course and all academic courses before progressing to the next semester. A grade of "D" or "F" in any nursing or academic course is unacceptable. Students may be required to withdraw from a course or courses if unsafe practice or practices are identified in the care of clients. Hospital experiences are scheduled during day and evening hours. Students must maintain a cumulative GPA of 2.0 or better in all course work in each level of the Career Ladder, Transition and Evening Program options. Upon completion of the first year of the program, the student is eligible to receive the certificate of technology.

All nursing students are expected to carry health and accident insurance. Professional liability insurance is mandatory. Students are responsible for their own transportation to clinical facilities. The department of nursing assumes no responsibility for students employed in an agency. Students are personally responsible and liable for any activity participated in while employed. Professional liability insurance purchased by students is valid in the student role and not in the employment role.

The vocational program is accredited by the Board of Vocational Nurse Examiners. The Career Ladder Program and the Evening Associate Degree Program are accredited by the National League for Nursing and the Board of Nurse Examiners for the state of Texas. All curriculum plans are approved by the Texas Higher Education Coordinating Board.

Transition/Validation Course for Licensed Vocational Nurses

Prior to taking the Transition/Validation Course, licensed vocational nurses must have already successfully completed Biol 1404, Biol 1405 and Psy 2302 and must be licensed to practice nursing in Texas. Upon successful completion of these courses, students will follow the curriculum for the associate degree level of the Career Ladder Program. All nursing students must have current cardiopulmonary resuscitation certification and are governed by policies in the Nursing Student Handbook.

First Year			
First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
*Nu 1604	6	Biol 2403	4
**Nu 1201	2	Engl 1311	3
		Nu 2501	5
		Spch 1310	3
		***PE	1
Second Year			
Third Semester			
Course	Sem Hrs		
Engl 1312	3		
Govt 2301	3		
Nu 2502	5		
Elective	3		
***PE	1		

*When students have successfully completed Nu 1604, they are eligible to enter the second year of the curriculum.

**Credit may be received by challenge examination.

***PE 1100 should be the first course taken in physical education.

Career Ladder Nursing

The Career Ladder Nursing Program is designed to allow students maximum flexibility in education. They have the option of progressing through the two levels of nursing. The vocational level prepares the vocational nurse, and the associate degree level prepares the associate degree nurse. All nursing students must have current CPR certification and are governed by policies in the Nursing Student Handbook.

**Vocational Level*
Certificate of Technology**

First Year

Summer Session I		Summer Session II	
Course	Sem Hours	Course	Sem Hours
Biol 1404	4	Biol 1405	4

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Nu 1201	2	**Nu 1904	9
Nu 1801	8		
Psy 2302	3		

Summer Sessions I and II	
Course	Sem Hrs
Nu 1905 (12 weeks)	9

*Students who successfully complete the vocational level with a cumulative GPA of 2.0 or better in all course work are eligible to write the State Board Examination for licensure as a vocational nurse and receive a certificate of technology.

**Students planning to enter the associate degree level may take an additional academic course from the curriculum for the second year.

Associate Degree Level*
Second Year**

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 2403	4	Engl 1312	3
Engl 1311	3	Govt 2301	3
Nu 2501	5	Nu 2502	5
Spch 1310	3	Elective	3
****PE	1	****PE	1

***Students successfully completing the Associate Degree Level are eligible to write the State Board Examination for licensure as a registered nurse.

****PE 1100 should be the first course taken in physical education.

Nu 1201 Pharmacology
(2-1) 2 hours
Provides activities to help students recognize selected drug classifications and their actions, identify common drugs within each classification and to become aware of some important implications for their administration. Prerequisites: Biol 1404 and Biol 1405. Corequisites: Nu 1801 and Psy 2302 or consent of the department chairman.

Nu 1604 Transition/Validation for the L.V.N.
(4-8) 6 hours
Presents major concepts basic to the curriculum and conceptual framework in order to assure orientation to nursing as a professional endeavor. Emphasizes communications, beginning physical assessment, nursing process, rationale for actions, unstable medical-surgical and pediatric conditions and obstetric complications. Stresses role change and issues and trends in nursing. Focuses on application of these concepts to clinical practice of nursing by using nursing process. Requires supervision by clinical instructor while in the hospital setting. Successful completion of course entitles students to receive credit for Nu 1904 and Nu 1905 and makes them eligible to enter second year of curriculum. Prerequisite: Biol 1404, Biol 1405 and Psy 2302. Corequisite: Nu 1201.

Nu 1801 Basic Nursing
(6-16) 8 hours
Prepares the student to perform selected basic nursing procedures for clients with self-care limitations and stable health deviations. Emphasizes communication skills, medical terminology and legal and ethical responsibilities. Introduces observing, recording and reporting. Begins process of problem solving, medical asepsis, nutrition and fluids, administration of medication, growth and development. Includes clinical experiences in hospitals, geriatric facilities, day care and simulated labs. Prerequisites: Biol 1404 and 1405. Corequisites: Nu 1201 and Psy 2302.

Nu 1904 Care of Clients with Unstable Health Conditions I

(7-20) 9 hours
 Presents learning opportunities to develop practical abilities required for assessing, identifying and meeting nursing requirements of hospitalized clients with medical/surgical conditions. Presents care of the newborn and pediatrics. Includes theory and clinical, including simulated labs relevant to care from all age groups and varied cultural backgrounds. Prerequisites: Biol 1404 and 1405, Nu 1801 and 1201 and Psy 2302.

Nu 1905 Care of Clients with Unstable Health Conditions II

[(10-26) 12 weeks] 9 hours
 Includes theoretical application of scientific principles and practices using the nursing process for total nursing care of clients with unstable medical-surgical problems and care of maternity clients during pregnancy, labor and delivery. Assists in preparing student for role of vocational nurse. Clinical includes care of clients in hospitals and simulated labs from varied age groups and cultural backgrounds. Prerequisites: Nu 1201, Nu 1801, Nu 1904, Biol 1404, Biol 1405 and Psy 2302.

Nu 2501 Nursing Care of Clients with Critical Health Deviations

(4-12) 5 hours
 Provides students with opportunities to apply, review and bring together previously acquired knowledge in caring for more acutely ill clients in the hospital environment. Requires recognition and response to all aspects of client problems -- human needs in face of crisis and problems regarding regulatory and body systems, for example. Includes operating room nursing. Care planned and given in critical care units. Prerequisite: Nu 1201, Nu 1801, Nu 1904, Nu 1905, Biol 1404, Biol 1405 and Psy 2302. Corequisite: Biol 2403, Engl 1311, Psy 1301 and PE.

Nu 2502 Complex Health and Nursing Problems

(4-12) 5 hours
 Introduces students to clients of various age groups and cultural backgrounds who have overt psychiatric illness. Includes introduction to agencies concerned with community health care. Presents opportunity to learn legal-ethical aspects of professional nursing, assigning priorities in administering care, methods of health-team communication, supervising activities of others and transcribing doctors' orders. Implements theoretical content in clinical environment. Prerequisites: Nu 1201, Nu 1801, Nu 1904, Nu 1905, Biol 1404, Biol 1405, Biol 2403, Psy 2302, Nu 2501, Engl 1311, Psy 1301, PE. Corequisite: Engl 1312, Govt 2301, Soc 1301 or approved elective and PE.

Nu 2399 Special Topics

(3-0) 3 hours

Nu 2299 Special Topics

(2-0) 2 hours

Nu 2199 Special Topics

(1-0) 1 hour
 Seminar sessions designed for persons in nursing and allied health. May include specialized instruction in arithmetic review and techniques in dosage calculations; nutrition and diet therapy; pediatrics and gerontology; adult health problems; obstetrics, mental health and the nursing process. Focuses on special interest to groups of students. Offered as need arises. May be taken three times for credit. Prerequisite: Consent of the department chairman.

Evening Nursing Program

The Odessa College Evening Nursing Program offers a sequence of evening classes leading to an associate in applied science degree and preparation to write the licensing examination for a registered nurse. Nursing courses begin in the fall semester of even numbered years. Psychiatric clinical experiences may be held during day hours. Prior to entering the nursing courses, the student must have completed the academic support course requirements designated in the first year of the curriculum and be currently certified in CPR. All students are governed by policies in the Nursing Student Handbook.

Course of Study for Nursing

First Year

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 1404	4	Biol 1405	4
Engl 1311	3	Psy 2302	3
*PE	1	*PE	1

Summer Session I		Summer Session II	
Course	Sem Hrs	Course	Sem Hrs
Biol 2403	4	Nu 1201	2

Second Year

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Nu 1901	9	Nu 1902	9

Summer Session I		Summer Session II	
Course	Sem Hrs	Course	Sem Hrs
Engl 1312	3	Govt 2301	3
Spch 1310	3	Elective	3

Third Year

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Nu 2901	9	Nu 2902	9

*PE 1100 should be the first course taken in physical education.

Evening Nursing Courses

Nu 1901 Nursing I

(5-15) 9 hours
 Prepares student to perform selected basic nursing procedures for clients with self-care limitations and stable health deviations. Presents communication skills as integral part of course. Including legal and ethical responsibilities. Introduces observing, recording and reporting; process of beginning problem-solving; medical asepsis; nutrition and fluids; administration of medications; and growth and development. Integrates clinical experience in medical-surgical environment. Prerequisites: Biol 1404, Biol 1405, Biol 2403, Engl 1311, Nu 1201, Psy 2302 and two one-hour PE courses.

Nu 1902 Nursing II

(5-15) 9 hours
 Provides learning opportunities to develop practical abilities required for assessing, identifying and meeting nursing requirements of hospitalized clients with medical-surgical conditions. Requires special skills for meeting basic needs of the maternity client during pregnancy, labor and delivery. Presents care of the newborn and pediatrics. Theory includes content relevant to caring for clients in all age groups and from varied cultural backgrounds. Provides clinical experiences in maternity, pediatric and medical-surgical units. Prerequisite: Nu 1901.

Nu 2901 Nursing III

(5-15) 9 hours
 Introduces students to clients of various age groups and cultural backgrounds who head over psychiatric illness. Continues use of previously learned skills. Provides opportunity to develop assessment and intervention skills relevant to care of these clients. Presents theory to assist understanding the impact of health problems on the bio-psychosocial integrity of the individual. Provides opportunity to assist clients of all age groups from varied cultural backgrounds in medical-surgical units and mental health facilities. Requires some mental health experiences during day hours instead of evenings. Prerequisites: Nu 1902, plus all academic course requirements.

Nu 2902

(5-15) 9 hours
 Provides theory and clinical practice to assist student in adapting to graduate role. Emphasizes meeting nursing needs of clients adapting to unstable and critical health problems. Presents legal-ethical aspects of professional nursing, as well as role of the nurse in planning and directing care of groups of clients in a health care agency. Provides opportunity to assist clients of all age groups from varied cultural backgrounds. Offers clinical experiences in critical care unit and in community facilities. Prerequisite: Nu 2901.

Nu 2399 Special Topics

(3-0) 3 hours

Nu 2299 Special Topics

(2-0) 2 hours

Nu 2199 Special Topics

(1-0) 1 hour

Seminar sessions designed for persons in nursing and allied health. May include specialized instruction in arithmetic review and techniques in dosage calculations; nutrition and diet therapy; pediatrics and gerontology; adult health problems; obstetrics, mental health and the nursing process. Focuses on special interest to groups of students. Offered as need arises. May be taken three times for credit. Prerequisite: Consent of the department chairman.

**Vocational Nursing
(Kermit/Monahans and Andrews Extension Centers)**

The vocational nursing programs in Kermit/Monahans and Andrews are 12-month programs beginning in the fall of each year. Graduates are eligible to take the examination for licensure as vocational nurses. Enrollment is limited and students are urged to apply early.

Course of Study

	First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs	
VN 1601	6	VN 1603	6	
VN 1602	6	VN 1604	6	

Summer Session

Course	Sem Hrs
VN 1605	6

VN 1601 Vocational Nursing I
(20-0) 6 hours
Presents fundamentals of nursing as related to the client's need. Prepares the student to perform basic nursing procedures for comfort and safety of clients with self-care limitations. Includes study of personal and vocational relationships, Anatomy and Physiology I, mental health, nutrition, microbiology, pharmacological math and nursing skills. Prerequisite: None. Corequisite: VN 1602.

VN 1602 Vocational Nursing II
(8-7) 6 hours
Includes Anatomy and Physiology II, mental illness, Nursing Skills II, growth and development and geriatric nursing. Prerequisite: None. Corequisite: VN 1601.

VN 1603 Vocational Nursing III
[(7-13) for 20 weeks] 6 hours
Includes study of pharmacology, obstetrics and introduces the student to Medical Surgical Nursing I. Prerequisite: VN 1601 and VN 1602. Corequisite: VN 1604.

VN 1604 Vocational Nursing IV
[(3-14) for 20 weeks] 6 hours
Includes medical and surgical nursing and pediatric nursing. Prerequisite: VN 1601 and VN 1602. Corequisite: VN 1603.

VN 1605 Vocational Nursing V
[(5-35) for 11 weeks] 6 hours
Includes Pediatric Nursing II and Medical and Surgical Nursing III. Prerequisites: VN 1601, VN 1602, VN 1603 and VN 1604.

Office Education

Faculty: Dr. Rita Hurst, chairman; Billie Duncan, Carol Lemen, Kay Rutherford, Nancy Sturges.

The office education program is designed to offer the student intensive, individualized study. The intensive classes meet daily between 8 a.m. and 3 p.m. Monday through Friday and between 6 and 9 p.m. Monday through Thursday during the fall and spring semesters. The summer instructional schedule is 7 a.m. to 1 p.m. Monday through Thursday.

Students have the option of completing a certificate of technology in nine to 12 months or an associate in applied science degree in 18 to 24 months. Students may begin the certificate program either at the start of a regular semester or any quarter date listed in the current class schedule. Students seeking personal development courses rather than a certificate or degree may enroll in any individual class with the approval of the department chairman.

All students will be advised on their individual program course sequence based on their present skill level and desired goals. Individual advisement will be in Instructional Building, Room 223. Registration will be conducted through the regular college procedure.

Twice each year, the office education faculty administers the Certified Professional Secretary examination. Information regarding testing dates can be obtained by contacting the department chairman. Individuals who can document their professional certification are eligible to apply for 20 semester hours of credit at Odessa College after completion of 12 additional selected hours at Odessa College. Courses for which credit may be earned are as follows: BA 1301, Introduction to Business; Mgt 1301, Introduction to Management; OE 2201, Business Correspondence; OE 2202, Production Typewriting; OE 1402, Intermediate Typewriting; OE 1404, Office Bookkeeping; and OE 2403, Office Practice.

Students not desiring the associate in applied science degree may receive a certificate of technology upon successfully completing with a "C" (2.0) average all courses specified in the first and second semesters.

Course of Study for Certificate of Technology

	Semester Hrs
OE 1201 Business Calculations I (8 weeks)	2
OE 1202 Business Calculations II (8 weeks)	2
OE 1206 Secretarial Language Skills I (8 weeks)	2
OE 1207 Secretarial Language Skills II (8 weeks)	2
OE 1303 Introduction to Information Processing (8 weeks)	3
OE 1304 Information Processing Machine Operation I (8 weeks) (If taking OE 1401, delay until second semester)	3
OE 1306 Basic Spreadsheet Operations (8 weeks)	3
OE 1401 Beginning Typewriting or OE 1402 Intermediate Typewriting (16 weeks)	4
OE 1402 Intermediate Typewriting (16 weeks) or OE 2202 Production Typewriting (8 weeks) and OE 2203 Machine Transcription (8 weeks)	4
OE 1404 Office Bookkeeping (16 weeks)	4
OE 2201 Business Correspondence (8 weeks)	2
OE 2301 Information Processing Machine Operation II (8 weeks)	3
OE 2403 Office Practice (16 weeks)	4
Total semester hours	38

A total of 38 semester hours and a grade point average of 2.0 are required for a certificate of technology.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	26
BA 1301 Introduction to Business	3
Eco 2301 Principles of Economics	3
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Govt 2301 U.S. and Texas Government or Govt 2302 American National Government	3
Math -- College Level	3
*PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication, Spch 2340 Business and Professional Speech or Spch 2360 Voice and Diction	3
Major Requirements	38
OE 1201 Business Calculations I (8 weeks)	2
OE 1202 Business Calculations II (8 weeks)	2
OE 1206 Secretarial Language Skills I (8 weeks)	2
OE 1207 Secretarial Language Skills II (8 weeks)	2
OE 1303 Introduction to Information Processing (8 weeks)	3
OE 1304 Information Processing Machine Operation I (8 weeks) (If taking OE 1401, delay until second semester)	3
OE 1306 Basic Spreadsheet Operations (8 weeks)	3
OE 1401 Beginning Typewriting or OE 1402 Intermediate Typewriting (16 weeks)	4
OE 1402 Intermediate Typewriting (16 weeks) or OE 2202 Production Typewriting (8 weeks) and OE 2203 Machine Transcription (8 weeks)	4
OE 1404 Office Bookkeeping (16 weeks)	4
OE 2201 Business Correspondence (8 weeks)	2
OE 2301 Information Processing Machine Operation II (8 weeks)	3
OE 2403 Office Practice (16 weeks)	4
Total Semester Hours	64

*PE 1100 should be the first course taken in physical education.

HEd 1301 may be substituted for the two one-hour PE courses.

A total of 64 semester hours and a grade point average of 2.0 are required for associate of applied science degree.

**Course of Study for Certificate of Technology
Medical Emphasis**

	Semester Hrs
OE 1101 Medical Recordkeeping (four weeks)	1
OE 1201 Business Calculations I (eight weeks)	2
OE 1202 Business Calculations II (eight weeks)	2
OE 1206 Secretarial Language Skills I (eight weeks)	2
OE 1207 Secretarial Language Skills II (eight weeks)	2
OE 1304 Information Processing Machine Operation I (eight weeks) (If taking OE 1401, delay until second semester)	3
OE 1306 Basic Spreadsheet Operations (eight weeks)	3
OE 1307 Medical Office Terminology (first eight weeks)	3
OE 1401 Beginning Typewriting or OE 1402 Intermediate Typewriting (16 weeks)	4
OE 1402 Intermediate Typewriting (16 weeks)	4
or a combination of (depending on skill)	
OE 2203 Machine Transcription (8 weeks) and OE 1317 Beginning Medical Transcription (8 weeks)	5
(Must have department chairperson's approval when selecting combination)	
OE 1404 Office Bookkeeping (16 weeks)	4
OE 2301 Information Processing Operation II (8 weeks)	3
OE 2403 Office Practice (16 weeks)	4
OE 2417 Advanced Medical Transcription (16 weeks)	4
Total Semester Hours	38

A total of 38 semester hours and a grade point average of "C" or (2.0) are needed for the certificate of technology.

Options: Transcriptionist may substitute OE 2417 for OE 1401. Secretary may substitute OE 1404 for OE 2417. OE 2203 is not a prerequisite for OE 1317, but it is suggested that OE 2203 be completed before enrolling in OE 1317.

**Course of Study for Associate in Applied Science Degree
Medical Emphasis**

	Semester Hrs
General Education Requirements	27
Biol 1403 Human Anatomy and Physiology (16 weeks)	4
Eco 2301 Principles of Economics (16 weeks)	3
Elective	3
Engl 1311 Composition and Rhetoric (16 weeks)	3
Engl 1312 Composition and Literature (16 weeks)	3
Govt 2301 U.S. and Texas Government (16 weeks)	3
Math--College Level	3
*PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication, Spch 2340 Business and Professional Speech or Spch 2360 Voice and Diction	3
Major Requirements	38
OE 1101 Computerized Medical Recordkeeping (4 weeks)	1
OE 1201 Business Calculations I (8 weeks)	2
OE 1202 Business Calculations II (8 weeks)	2
OE 1206 Secretarial Language Skills I (8 weeks)	2
OE 1207 Secretarial Language Skills II (8 weeks)	2
OE 1304 Information Processing Machine Operation I (8 weeks) (If taking OE 1401, delay until second semester)	3
OE 1306 Basic Spreadsheet Operations (8 weeks)	3
OE 1307 Medical Office Terminology	3
OE 1401 Beginning Typewriting or OE 1402 Intermediate Typewriting (16 weeks)	4
OE 1402 Intermediate Typewriting (16 weeks)	4
or a combination of (depending on skill)	
OE 2203 Machine Transcription (8 weeks) and OE 1317 Beginning Medical Transcription (8 weeks)	5
(Must have department chairperson's approval when selecting combination)	

OE 1404 Office Bookkeeping (16 weeks)	4
OE 2301 Information Processing Machine Operation II (8 weeks)	3
OE 2403 Office Practice (16 weeks)	4
OE 2417 Advanced Medical Transcription (16 weeks)	4
Total Semester Hours	65

*PE 1100 should be the first course taken in physical education.
HEd 1301 may be substituted for the two one-hour PE courses.

Options: Transcriptionist may substitute OE 2417 for OE 1401. Secretary may substitute OE 1404 for OE 2417.

OE 2203 is not a prerequisite for OE 1317, but it is suggested that OE 2203 be completed before enrolling in OE 1317.

A total of 65 semester hours and a grade point average of 2.0 are required for associate of applied science degree. Students may substitute OE 1401 for Eco 2301.

OE 1100 Basic Keyboarding Skills

[(1-4) 4 weeks] 1 hour
Develops touch-method skills on alphanumeric keyboard, including numbers and symbols. Designed for students desiring minimal keyboard skills (approximately 20 wpm) or wanting keyboard review. Taught on computers when machines are available. Lab fee required. Prerequisite: None.

OE 1101 Computerized Medical Recordkeeping

[(1-4) 4 weeks] 1 hour
Designed to develop the ability to operate a computer system in a medical/dental office. Provides hands-on experience in major procedures involving patient billing and patient recordkeeping. Prerequisite: None.

OE 1201 Business Calculations I

[(3-2) 8 weeks] 2 hours
Designed to develop skill and accuracy in fundamental problems of business mathematics using the electronic calculator (10-key approach) and the computer. Prerequisite: None.

OE 1202 Business Calculations II

[(3-2) 8 weeks] 2 hours
Provides an intensive review of fundamental mathematical operations. Stresses computational skills relating to interest, discount, payroll, expense accounts, retail selling and insurance. Develops use of short-cut methods and the ability to work with speed and accuracy. Uses the electronic calculator and the computer. Prerequisite: OE 1201.

OE 1206 Secretarial Language Skills I

[(3-2) 8 weeks] 2 hours
Provides basic skills in English grammar, punctuation and style. Prerequisite: None.

OE 1207 Secretarial Language Skills II

[(3-2) 8 weeks] 2 hours
Reviews parts of speech and style, word and word references, sentence and paragraph writing and activities in composition. Prerequisite: OE 1206.

OE 1303 Introduction to Information Processing

[(5-0) 8 weeks] 3 hours
Introduces principles and purposes of word processing, including effect of automated office equipment, efficiency of automated office equipment, role of secretary in automated office and career opportunities for people with word processing skills. Prerequisite: None.

OE 1304 Information Processing Machine Operation I

[(1-5) 8 weeks] 3 hours
Provides training on word processing machines. Includes basic machine operations as well as practical applications. Lab fee required. Prerequisite: OE 1402 (may be taken concurrently) or type 45 wpm.

OE 1306 Basic Spreadsheet Operations

[(1-5) 8 weeks] 3 hours
Designed to help students develop skills recording transactions and manipulating data in spreadsheet and database formats. Includes applications in keyboarding, editing, formatting, printing and creating and using formulas. Prerequisite: OE 1401 or approval of the department chairman.

OE 1307 Medical Office Terminology

[(5-0) 8 weeks] 3 hours
Designed to develop an extensive medical vocabulary and to provide information about some of the basic reports used in a typical hospital or medical office. Prerequisite: None.

- OE 1317 Beginning Medical Transcription** 3 hours
 [(1-4) 8 weeks]
 Designed to develop skill in transcribing some of the basic reports used in a typical hospital or medical office. Provides transcription of actual dictation by doctors. Prerequisite: OE 1307, OE 1402, type 50 wpm, some word processing background or consent of department chairman. (OE 1216 helpful, but not required.)
- OE 1401 Beginning Typewriting** 4 hours
 [(1-5) 16 weeks]
 Develops touch-method skills on alphanumeric keyboard, including numbers, symbols and service mechanisms. Introduces proper form for business letters, reports, tabulations and other business documents. Designed for beginning typists or students with minimal typing experience. Taught on computers when machines are available. Lab fee required. Prerequisite: None.
- OE 1402 Intermediate Typewriting** 4 hours
 [(1-5) 16 weeks]
 Designed for students who have had typewriting in high school or who have had beginning typewriting. Includes composing and typing business letters, tabulating materials and typing manuscripts. Lab fee required. Prerequisite: OE 1401.
- OE 1404 Office Bookkeeping** 4 hours
 [(1-5) 16 weeks]
 Prepares students to perform elementary bookkeeping skills in accounting cycle: journalizing, posting, preparing a trial balance and completing income statements and balance sheets for small business firms. Prerequisite: None.
- OE 2201 Business Correspondence** 2 hours
 [(5-0) 8 weeks]
 Develops skill in writing letters of request, response, sales and collection. Further develops skills in writing follow-up letters, brief reports and in completing applications. Prerequisites: OE 1207, OE 1304, and OE 1401.
- OE 2202 Production Typewriting** 2 hours
 [(1-4) 8 weeks]
 Designed for students wishing to increase typewriting speed/accuracy and knowledge of business forms. Offers option to specialize in legal or medical and job simulation. Lab fee required. Prerequisite: OE 1402.
- OE 2203 Machine Transcription** 2 hours
 [(1-5) 8 weeks]
 Introduces machine transcription with work typical of the following types of business: travel agencies, insurance, medical, legal and government offices. Emphasizes proofreading, English grammar and production of mailable documents. Lab fee required. Prerequisite: OE 1206, OE 1207, OE 1304 and OE 1402.
- OE 2301 Information Processing Machine Operation II** 2 hours
 [(1-5) 8 weeks]
 Provides advanced training including merging, search and replace, decimal tabulation, mathematics functions, macros, sorting, incorporating spreadsheets, table of contents, speller and thesaurus functions. Lab fee required. Prerequisite: OE 1402 (may be taken concurrently) and OE 1304.
- OE 2401 Beginning Shorthand** 4 hours
 [(1-5) 16 weeks]
 A complete course in Gregg shorthand. Presents theory, dictation and transcription. Emphasizes correct formation of shorthand symbols and brief forms. Requires extensive practice in correct phrasing, reading, writing and transcribing of shorthand characters. Prerequisite: None.
- OE 2403 Office Practice** 4 hours
 [(3-2) 16 weeks]
 Introduces the study of modern office practices which affect the office worker. Gives an overview of procedures necessary in office work: the importance of good human relations, time management, proofreading, telephone techniques, records management and simulation material designed for use on the word processor. Prerequisite: OE 1207. Corequisite OE 1304 and OE 1402.
- OE 2417 Advanced Medical Terminology and Transcription** 4 hours
 [(3-3) 16 weeks]
 Designed to provide the student with an extensive list of standard and contemporary terms and to develop skills in transcribing different types of medical reports in 15 medical specialties. Provides transcription of actual dictation by doctors. Prerequisite: OE 1307, OE 1317, type 50 wpm; Some word processing background will be needed for some reports.

Petroleum Technology

Faculty: J. D. Roberts, chairman.

The Odessa College petroleum technology program is designed for people entering the industry for the first time and for employees in the industry who want to upgrade their skills. The two-year program is suggested for men and women who plan to work for producers, manufacturers, service firms or supply firms.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	22
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Geol 1401 Physical Geology	4
Geol 1402 Historical Geology	4
Math -- College Level	3
*PE (Any two one-hour activity courses)	2
Major Requirements	36
Pet 1300 Petroleum Overview	3
Pet 1310 Rotary Drilling Fluids	3
Pet 1311 Well Completion Methods	3
Pet 1320 Production Methods	3
Pet 1380 Computers for Petroleum	3
Pet 2310 Drilling Methods	3
Pet 2325 Well Workover Methods	3
Pet 2360 Corrosion	3
Pet 2390 Petroleum Regulations	3
Pet 2395 Petroleum Safety	3
*Petroleum Electives (Any petroleum course not already required)	6
Related Requirements	3
Mgt 1304 Employee-Management Relationships	3
Elective	3
Total Semester Hours	64

*PE 1100 should be the first course taken in physical education.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing 39 semester hours of petroleum courses approved by the department chairman.

Pet 1300 Petroleum Overview ✓

(3-0) 3 hours

Provides overview of major divisions within petroleum industry: exploration, drilling, production, transportation, marketing and refining. Prerequisite: None.

Pet 1301 Basic Oilfield Hydraulics

(3-0) 3 hours

Introduces oil field hydraulics applicable to drilling, completion and production. Includes characteristics of flowing and static fluids: the effect of velocity, viscosity and fluid type in tubular systems. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 1302 Drilling Rig Equipment

(3-0) 3 hours

Emphasizes technical information covering care and use of drilling equipment, hoists, power units, derricks, masts, pumps and derrick equipment. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 1310 Rotary Drilling Fluids

(3-0) 3 hours

A study of the functions and properties of oil well drilling fluids. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 1311 Well Completion Methods

(3-0) 3 hours

Focuses upon effects of drilling through the production formation, logging, drill stem testing, running pipe, cementing, perforating, completion techniques and methods of formation stimulation. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 1320 Production Methods ✓

(3-0) 3 hours
 Introduces petroleum production. Includes effect of well completion methods upon production, artificial lift, natural flow, lease layouts, lease equipment and basic problems and solutions in production efforts. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 1370 Petroleum Instrumentation

(3-0) 3 hours
 Surveys instrumentation, measurement and control devices used within most major aspects of the petroleum industry. Emphasizes application, installation and operation of each. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 1380 Computers for Petroleum

(3-0) 3 hours
 Designed for the student in the petroleum technology program. Introduces fundamentals of computers and computer language. Emphasizes knowledge of use of computers rather than programming. Stresses application of the computer in the petroleum industry. Prerequisite: Consent of the department chairman.

Pet 1800 Drilling Fluids Technology

[(5-15) 12 weeks] 8 hours
 A comprehensive study of all aspects of drilling fluids. Designed to prepare the student for work as a drilling fluids technician. Covers functions and testing of drilling fluids, calculations relating to mud work, composition and properties, flow characteristics, solids control, fluid loss, inhibitive muds, oil muds and completion fluids. Class meets four hours per day, five days per week, for 12 weeks. Lab fee required. Prerequisite: Consent of the department chairman.

Pet 2303 Petroleum Geology

(2-2) 3 hours
 A survey course on principles of geology related to petroleum properties, accumulation, distribution, structures, migration and discovery. Includes study of actual fields for learning characteristics of different trapping mechanisms. Lab fee required. Prerequisites: Geol 1401, Geol 1402 and Pet 1300 or consent of the department chairman.

Pet 2310 Drilling Methods

(3-0) 3 hours
 Emphasizes the actual drilling process. Analyzes problems encountered, including control of downhole pressures. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 2325 Well Workover Methods

(3-0) 3 hours
 Presents basics of well completion, oil well servicing, well workover, plugging, reentry, equipment needs and maintenance programs. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 2331 Natural Gas Processing

(3-0) 3 hours
 Presents all aspects of natural gas processing and field handling techniques. Includes handling corrosives, corrosive and inert gases and equipment for separation, dehydration and control of natural gas. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 2340 Refining Methods

(3-0) 3 hours
 Emphasizes basics of petroleum refining techniques, processes, equipment and support personnel. Prerequisite: Pet 1300 or consent of the department chairman.

Pet 2350 Pipelining

(3-0) 3 hours
 Provides an overview of construction, repair and maintenance on the following pipeline systems: product, oil, natural gas, salt water and fresh water. Determines appropriate lines for size, pressure and type (steel, PVC, PE, etc.). Prerequisite: Pet 1300 or consent of the department chairman.

Pet 2360 Corrosion

(3-0) 3 hours
 Presents problems of corrosion in downhole, surface equipment, pipelines, etc. Seeks basic causes and recommends most reliable solutions. Emphasizes terminology and techniques. Prerequisite: Pet 1300 or consent of the department chairman.

- Pet 2380 Petroleum Land Titles**
 (3-0) 3 hours
 Presents land titles and related documents, both current and historical, of concern to the petroleum industry. Includes titles, mineral take offs, rights of way and claim of the surface estate, mapping, metes and bounds description, surveys and land systems. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2382 Well Stimulation Methods**
 (3-0) 3 hours
 Presents detailed study in methods of well stimulation. Develops students' skills necessary to design acid or fracture treatment. Concentrates on needs of Permian Basin. Prerequisite: None.
- Pet 2383 Chemical Treating in Production Operations**
 (3-0) 3 hours
 Stresses chemical treating in all areas of production. Presents demonstration sessions using chemicals. Designed for Permian Basin production applications. Prerequisite: None.
- Pet 2388 Artificial Lift**
 (3-0) 3 hours
 Designed for students who have completed production methods and for individuals who want to further their knowledge of various lift systems. Stresses practical aspects of artificial lift in conventional production systems. Includes such topics as sucker rod pumps, tubing and rod strings, tubing anchors, beam pumps, gas lift and submersible pumping systems, wellheads and equipment involved in secondary recovery systems. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2389 Gas and Liquid Measurement**
 (3-0) 3 hours
 Provides instruction in accuracy, quality and validity of gas and liquid measurement techniques for field and plant operating personnel. Emphasizes correct techniques of measurement and proper procedures to correct errors. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2390 Petroleum Regulations**
 (3-0) 3 hours
 Concerned with regulatory requirements and strictures placed upon petroleum industry by agencies such as the RRC, DOT, FERC, DOE and OSHA. Includes effects of such rulings and proper responses. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2391 Special Problems**
 (1-9) 3 hours
 Includes selected topics for individual study or research under staff supervision. Presents drilling, oil production, natural gas production, well servicing, oil and gas supplies, transportation problems and any area related to the petroleum industry. Prerequisite: Consent of the department chairman.
- Pet 2395 Petroleum Safety**
 (3-0) 3 hours
 Presents overview of safety in the petroleum industry. Includes CPR, multi-media, defensive driving and laws affecting individuals in the petroleum industry, as well as case studies of accidents, their causes and cures. Prerequisite: Consent of the department chairman.
- Pet 2398 Petroleum Cooperative Work Experience**
 (2-20) 3 hours
 A joint venture between student and employer. Stresses student's industrial experience as related to academic studies. Develops complete analysis of student's job task, including planning, supervision, execution, problems encountered, safety hazards, etc. Prerequisite: Consent of department chairman. Application must be completed at least one semester prior to enrollment.
- Pet 2399 Petroleum Technology Special Topics**
 (3-0) 3 hours
- Pet 2299 Petroleum Technology Special Topics**
 (2-0) 2 hours
- Pet 2199 Petroleum Technology Special Topics**
 (1-0) 1 hour
 Provides instruction in specialized topics pertinent to the oil industry. May include basic petroleum technology, corrosion control, drilling, energy conservation, management, production, reservoirs and geology, safety, hazardous waste, sales and marketing, well control and workover, as well as other special programs when technology advances or special needs arise. May be repeated for college credit whenever topics vary. Prerequisite: Sophomore standing in petroleum technology or consent of the department chairman.

Physical Education

Faculty: Jay Box, chairman; Jimmy Carlson, Ken Hefner, Kenneth Hines, Pat Hodges, Kyle Howard, Betty Hudson, Bill Lawrence, Larry McColloch (ret.), Herbert Que McMaster, Elizabeth Parke, Rick Zimmerman.

Physical education is the sum of all those changes that take place in individuals as the result of movement experience.

The principal objectives of this department are as follows: (1) to develop the students' neuromuscular skill and organic system through movement experiences, (2) to increase the students' knowledge, insight, understanding and interest in movement experiences and (3) to improve the students' recreational and leisure-time skills as well as their standards of behavior in these selected movement areas.

Since movement is the medium through which this department achieves its objectives, students have several opportunities to select those movement experiences (from 42 different areas in the physical education curriculum) that will best contribute to their well-being, their leisure-time skills and to their total educational development. The physical education department offers three options for the associate degree.

Course of Study for Associate in Science Degree Exercise and Sport Science Option

	Semester Hrs
General Education Requirements	49
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra or More Advanced	3
Math 1361 Mathematical Statistics or More Advanced	3
*PE (Any four one-hour activity courses)	4
**Biol 1401 General Biology I	4
Biol 1402 General Biology II	4
Biol 1403 Human Anatomy and Physiology	4
Major Requirements	6
PE 1301 Orientation in Health, Physical Education and Recreation	3
HEd 2302 Prevention and Care of Athletic Injuries	3
Elective	3
***Approved Electives	9
Total Semester Hours	67

*PE 1100 should be the first course taken in physical education.

Students majoring in exercise and sport science in preparation for a teaching career are required to take four semesters of activity classes in the following areas:

One class of gymnastics or tumbling	One class of individual activity
One class of team activity	One class of dance activity

Athletics courses will not be counted as part of the four activity classes for exercise and sport science majors.

**Chem 1301 and Chem 1302 may be substituted for Biol 1401 and Biol 1402.

***Electives will be selected from the following three-hour classes based on senior institution requirements: HEd 1202, HEd 1301, HEd 2301, PE 1303, PE 2301, PE 2302, PE 2303, PE 2304, Chem 1301, Chem 1302, Psy 1301, Soc 1301 and Spch 1310.

It also is recommended that exercise and sport science majors take more than the minimum of four one-hour activity classes in their preparation for a teaching career. Students should also consider the requirements of the senior college to which they intend to transfer and plan their junior college scholastic schedule accordingly.

Physical education activity classes meet three hours weekly for one semester-hour credit. An activity class may be repeated once for credit. All physical education activity classes require a lab fee.

**Course of Study for Associate in Science Degree
Athletic Training Option**

	Semester Hrs
General Education Requirements	40
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra or More Advanced	3
*PE (Any two one-hour activity courses)	2
Biol 1401 General Biology I	4
Biol 1402 General Biology II	4
Major Requirements	18
HEd 1301 First Aid	3
HEd 2301 Personal and Community Health	3
HEd 2302 Prevention and Care of Athletic Injuries	3
HEd 1100 Athletic Training Clinical Practicum I	1
HEd 2100 Athletic Training Clinical Practicum II	1
HEd 2304 Nutrition in Exercise and Sport	3
Biol 1403 Human Anatomy and Physiology	4
Elective	3
**Approved Electives	6
Total Semester Hours	67

*PE 1100 should be the first course taken in physical education.

** Approved Electives: Chem 1301, Chem 1302, CIS 1401, HEd 1202, PE 1301, PE 1303, Psy 1301 and Soc 1301.

The athletic training program is designed to meet the lower level requirements of the National Trainers Association and the state of Texas Licensure Act for Athletic Trainers. The program is a practical education-work experience approach to gaining the knowledge and skills needed to fulfill requirements for national certification as determined by the NATA and Texas state licensure as determined by the Texas Department of Health.

The Odessa College physical education degree option in athletic training is designed to meet the first two-year needs of students interested in pursuing a career in athletic training and meeting the specific educational and practicum requirements outlined by these two organizations.

**Course of Study for Associate in Science Degree
Dance Option**

	Semester Hrs
General Education Requirements	36-38
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Two semesters of either foreign language, math or science	6-8
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Art 1300/Mu 1328 Art Appreciation/Music Appreciation	3
Spch 1310 Introduction to Speech Communication	3
Major Requirements	27
Danc 1210 Tap and Jazz I	2
Danc 1212 Tap and Jazz II	2
Danc 1220 Introduction to Dance Performance	2

Danc 1222 Dance Practicum	2
Danc 1230 Modern Dance Technique I	2
Danc 1232 Modern Dance Technique II	2
Danc 1240 Ballet Technique I	2
Danc 1242 Ballet Technique II	2
Danc 2210 Tap and Jazz III	2
Danc 2212 Tap and Jazz IV	2
Danc 2230 Modern Dance Technique III	2
Danc 2232 Modern Dance Technique IV	2
Danc 2330 Improvisation and Composition	3
Elective	3
*PE Electives	2
Total Semester Hours	68-70

*PE 1100 should be the first course taken in physical education.

Approved electives may be selected from the following courses: Precision Dance, Aerobic Dance or Social Dance.

Fitness Activities

- PE 1100 Lifestyle Assessment and Modification (PHED 1100)**
 (0-3) 1 hour
 Provides learning opportunities to introduce and maintain higher education health standards. Includes assessment of cardiovascular endurance, muscular strength and endurance, flexibility, body composition, nutrition, lung capacity, stress and blood pressure. Includes introduction to fitness activities and culminates with an individualized lifelong wellness plan. Lab fee required. Prerequisite: None.
- PE 1101 Aerobic Dance (PHED 1101)**
 (0-3) 1 hour
 A conditioning program emphasizing muscle tone, strength, flexibility, coordination and cardiovascular endurance. Lab fee required. Prerequisite: None.
- PE 1117 Cycling (PHED 1102)**
 (0-3) 1 hour
 Designed to give basic understanding of principles of cycling; includes pedal cadence, shifting, gear ratio, training safety and maintenance. Requires special fee. Prerequisite: None.
- PE 1118 Defensive Tactics (PHED 1103)**
 (0-3) 1 hour
 Includes lectures, demonstrations and practice in basic skills and techniques of a variety of defensive movements and protection methods. Lab fee required. Prerequisite: None.
- PE 1119 Advanced Defensive Tactics (PHED 1104)**
 (0-3) 1 hour
 Includes lectures, demonstrations and practice in basic advanced techniques of self-protection as well as striking and delivering a variety of kicks. Lab fee required. Prerequisite: PE 1118.
- PE 1133 Gymnastics (PHED 1105)**
 (0-3) 1 hour
 Includes instruction in performance of various gymnastics skills on all apparatus. Also includes flexibility and strength training as well as spotting techniques. Lab fee required. Prerequisite: None.
- PE 1139 Jogging/Walking (PHED 1106)**
 (0-3) 1 hour
 Develops and improves physical fitness through jogging and/or walking. Introduces fitness concepts and jogging/walking skills. Lab fee required. Prerequisite: None.
- PE 1140 Judo/Karate (PHED 1107)**
 (0-3) 1 hour
 Emphasizes basic skills and techniques of American karate. Includes demonstrations of techniques and identifies vulnerable areas of the human body. Lab fee required. Prerequisite: None.
- PE 1149 Physical Conditioning, Aerobic Super Circuit (PHED 1108)**
 (0-3) 1 hour
 Combines weight lifting with aerobic activities in a conditioning program that trains the whole body. Workouts personalized to match current level of individual fitness; computer monitored. Includes a preliminary one-time, two-hour lab. Requires special fee. Prerequisite: None. (Must be at least 16 years old.)

PE 1152 Physical Conditioning, Aerobic Super Circuit -- Advanced
 (0-3) 1 hour
 Combines weightlifting with aerobic activities in a conditioning program that trains the whole body. Workouts are personalized to match current level of individual fitness; computer monitored. Also includes instruction in the proper techniques of training specific body parts. Requires special fee. Prerequisite: PE 1149 or consent of the instructor. (Must be at least 16 years old.)

PE 1174 Trampoline (PHED 1110)
 (0-3) 1 hour
 A gymnastics class specializing in acquisition of various trampoline skills, including spotting and flexibility. Lab fee required. Prerequisite: None.

PE 1179 Weight Training (PHED 1111)
 (0-3) 1 hour
 Emphasizes increasing strength and proper techniques in lifting and weight training. Lab fee required. Prerequisite: Must be at least 16 years old.

Lifetime Activities

PE 1107 Badminton (PHED 1116)
 (0-3) 1 hour
 Includes lectures, demonstrations, rules and practice in basic skills and techniques of badminton. Lab fee required. Prerequisite: None.

PE 1115 Bowling (PHED 1117)
 (0-3) 1 hour
 Includes basic skills and techniques such as stance, approach, ball release, safety and strategy. Requires special fee. Prerequisite: None.

PE 1160 Social Dance (PHED 1118)
 (0-3) 1 hour
 Includes instruction in all levels of country and western, ballroom, Latin, as well as current and most popular social dances. Lab fee required. Prerequisite: None.

PE 1130 Golf (PHED 1119)
 (0-3) 1 hour
 Covers basic skills and techniques such as club selection, grips, strokes and etiquette. Requires special fee. Prerequisite: None.

PE 1153 Racquetball (PHED 1121)
 (0-3) 1 hour
 Teaches basic skills, rules and strategies; includes class tournaments. Lab fee required. Prerequisite: None.

PE 1156 Recreational Sports (1122)
 (0-3) 1 hour
 Presents skills and rules for pool, ping-pong and a variety of board games. Lab fee required. Prerequisite: None.

PE 1178 Skiing (PHED 1123)
 (0-3) 1 hour
 Teaches basic skills and safety techniques of snow skiing. Offered during Mid-winter session only. Special fee required. Prerequisite: None.

PE 1171 Tennis, Beginning (PHED 1124)
 (0-3) 1 hour
 Emphasizes beginning skills in execution of forehand and backhand strokes, the serve and the volley. Includes rules, strategies and etiquette in both singles and doubles. Lab fee required. Prerequisite: None.

PE 1172 Tennis, Advanced (PHED 1125)
 (0-3) 1 hour
 Emphasis placed on proper execution of basic strokes as well as specialty shots such as the lob, overhead and spins. Includes competitive activities in singles and doubles. Lab fee required. Prerequisite: PE 1171 or consent of the instructor.

PE 1147 Precision Dance (DANC 1132)
 (0-3) 1 hour
 Presents skills and techniques of precision group performance; designed for the experienced performer. Lab fee required. Prerequisite: Consent of the instructor.

Team Sports

- PE 1110 Basketball, Men's** (PHED 1128) 1 hour
 (0-3)
 A conditioning program which emphasizes individual and team fundamentals as well as techniques of basketball. Lab fee required. Prerequisite: None.
- PE 1113 Basketball, Women's** (PHED 1129) 1 hour
 (0-3)
 A conditioning program which emphasizes individual and team fundamentals as well as techniques of basketball. Lab fee required. Prerequisite: None.
- PE 1116 Cheerleading** (PHED 1130) 1 hour
 (0-3)
 Introduces basic skills and techniques of cheerleading such as partner stunts, incorporation of pyramids, safety techniques and jumps. Lab fee required. Prerequisite: Consent of the instructor.
- PE 1124 Football, Touch** (PHED 1131) 1 hour
 (0-3)
 Covers basic skills and techniques of touch football. Lab fee required. Prerequisite: None.
- PE 1158 Rodeo** (1132) 1 hour
 (0-3)
 Teaches basic skills needed for the sport. Lab fee required. Prerequisite: Consent of the instructor.
- PE 1163 Softball** (PHED 1133) 1 hour
 (0-3)
 Presents rules and strategies of softball; develops skills and includes rules. Class tournaments conducted. Lab fee required. Prerequisite: None.
- PE 1176 Volleyball** (PHED 1134) 1 hour
 (0-3)
 Emphasizes basic skills, techniques, history, rules and terminology. Lab fee required. Prerequisite: None

Competitive Athletics

- PE 1195 Varsity Baseball** (PHED 1136) 1 hour
 (0-3)
 Designed for advanced baseball players competing on collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.
- PE 2195 Varsity Baseball** (PHED 2136) 1 hour
 (0-3)
 Designed for advanced baseball players competing on collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.
- PE 1181 Basketball, Varsity** (PHED 1137) 1 hour
 (0-3)
 Designed for advanced basketball players competing on collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.
- PE 2181 Basketball, Varsity** (PHED 2137) 1 hour
 (0-3)
 Designed for advanced basketball players competing on collegiate level. May be repeated once for credit. Prerequisite: Consent of the instructor.
- PE 1183 Golf, Varsity** (PHED 1138) 1 hour
 (0-3)
 Designed for advanced golfers competing on collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.
- PE 2183 Golf, Varsity** (PHED 2138) 1 hour
 (0-3)
 Designed for advanced golfers competing on collegiate level. May be repeated once for credit. Prerequisite: Consent of the instructor.
- PE 1193 Rodeo, Varsity** (PHED 1139) 1 hour
 (0-3)
 Designed for advanced participants in rodeo competing on collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.

PE 2193 Rodeo, Varsity (PHED 2139) 1 hour
 (0-3)
 Designed for advanced participants in rodeo competing on collegiate level. Course may be repeated once for credit. Prerequisite: Consent of the instructor.

PE 1189 Tennis, Varsity (PHED 1140) 1 hour
 (0-3)
 Designed for advanced tennis players competing on collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.

PE 2189 Tennis, Varsity (PHED 2140) 1 hour
 (0-3)
 Designed for advanced tennis players competing on collegiate level. May be repeated once for credit. Prerequisite: Consent of the instructor.

PE 1191 Track and Field, Varsity (PHED 1141) 1 hour
 (0-3)
 Designed for advanced participants in track and field competing on the collegiate level. May be repeated a maximum of two times for credit. Prerequisite: Consent of the instructor.

PE 2191 Track and Field Varsity (PHED 2141) 1 hour
 (0-3)
 Designed for advanced participants in track and field competing on the collegiate level. May be repeated once for credit. Prerequisite: Consent of the instructor.

Aquatics

PE 1159 Red Cross Life Saving (Life Guarding) (PHED 1146) 1 hour
 (0-3)
 Presents lifesaving and water safety for leaders in schools, camps and recreation centers; leads to senior and lay-instructor American Red Cross certification. Lab fee required. Prerequisite: None.

PE 1165 Swimming, Beginning (PHED 1147) 1 hour
 (0-3)
 Presents adaptation to water environment and fundamentals of support and propulsion in the water. Lab fee required. Prerequisite: None.

PE 1166 Swimming and Diving, Advanced (PHED 1148) 1 hour
 (0-3)
 Teaches enhancement of water skills. Stresses improvement in seven or eight basic swim strokes, basic dives, self-safety and conditioning. Lab fee required. Prerequisite: PE 1165 or consent of the instructor.

PE 1167 Water Sports/Games (PHED 1149) 1 hour
 (0-3)
 Presents basic skills rules and strategies of water sports. Lab fee required. Prerequisite: Intermediate or advanced level of ability.

PE 1168 Water Aerobics (PHED 1150) 1 hour
 (0-3)
 A water conditioning program emphasizing muscle tone, strength, flexibility, coordination and cardiovascular endurance. Lab fee required. Prerequisite: None.

PE 1164 Scuba Diving (PHED 1152) 1 hour
 (0-3)
 Teaches basic skills of scuba diving. Students held responsible for qualifying dives. Offers certification. Requires special fee. Prerequisite: PE 1165 or consent of the instructor.

Lecture Classes

PE 1301 Orientation in Health, Physical Education and Recreation (PHED 1301) 3 hours
 (3-0)
 Presents aims, objectives, curriculum and philosophical and historical orientation of physical education, health education and recreation. Includes acquisition of motor skills, relationship of education principles of practice, and the psychological, sociological and biological aspects. Prerequisite: None.

122 Physical Education

- PE 1303 Movement and Recreation (PHED 1331)** 3 hours
(2-2) 3 hours
Consists of recreational activity training in basic movement skills, movement exploration, apparatus work, manipulative activities, rhythmic activities, basic stunts and tumbling, perceptual motor experiences and simple games applied to children on the lab site. Lab fee required. Prerequisite: None.
- PE 2301 Techniques of Officiating Sports I (PHED 1308)** 3 hours
(2-2) 3 hours
Presents effective officiating methods and techniques for basketball and track. Includes rules, mechanics, tournaments and officials' associations. Lab fee required. Prerequisite: Consent of the instructor.
- PE 2302 Techniques of Officiating Sports II (PHED 1309)** 3 hours
(2-2) 3 hours
Presents effective officiating methods and techniques for gymnastics, tennis and volleyball. Includes rules, mechanics, protests, tournaments and officials' associations. Lab fee required. Prerequisite: Consent of the instructor.
- PE 2303 Techniques of Coaching Sports I (PHED 1321)** 3 hours
(2-2) 3 hours
Presents fundamental skills, individual and team play, organization of practices and handling of teams during competitive season of basketball and track. Lab fee required. Prerequisite: Consent of the instructor.
- PE 2304 Techniques of Coaching Sports II (PHED 1322)** 3 hours
(2-2) 3 hours
Presents fundamental skills, individual and team play, organization of practices and handling of teams during the competitive season for gymnastics, tennis and volleyball. Lab fee required. Prerequisite: Consent of the instructor.

Health Education

- HEd 1202 Personal Health Assessment and Strategies (PHED 1238)** 2 hours
(2-0) 2 hours
Provides instruction in lifestyle assessment. Presents behavior change strategies in areas of physical fitness, nutrition and stress management. Includes analysis of blood chemistry, body fat percentage, posture, strength, flexibility, endurance, diet and personality type. Prerequisite: None.
- HEd 1301 First Aid (PHED 1306)** 3 hours
(3-0) 3 hours
Consists of multi-media, CPR and standard American Red Cross first aid. Covers bandaging and transporting of injured. Includes prevention of injuries. Prerequisite: None.
- HEd 2301 Personal and Community Health (PHED 1304)** 3 hours
(3-0) 3 hours
Presents study of body organs and systems, individual health problems, health concepts, public health organizations, social problems and social services. Prerequisite: None.
- HEd 1101 Athletic Training Clinical Practicum I (PHED 1171)** 1 hour
(0-3) 1 hour
Designed to satisfy the first-year practical experience of the athletic training student. Includes hands-on preparation in the athletic training room under the director supervision of a NATA certified and state of Texas licensed athletic trainer in the areas of competition/practice preparation, competition/practice and therapeutic settings. Services provided include, but are not limited to, taping, bandaging, illness/injury evaluation, first-aid/emergency care, rehabilitation and related services. Prerequisite: Admission to the student athletic training program and consent of the instructor.
- HEd 2101 Athletic Training Clinical Practicum II (PHED 2171)** 1 hour
(0-3) 1 hour
Continuation of HEd 1101 for the second year athletic training student. Includes practice experience in athletic training room management, medical referral and disposition of athletic injuries, injury administration and related services. Prerequisite: HEd 1101, second year standing and/or consent of the instructor.
- HEd 2302 Prevention and Care of Athletic Injuries (PHED 2376)** 3 hours
(3-0) 3 hours
Presents study of massage, taping, bandaging, care of sprains, bruises, strains, wound and problems of the athletic training room. Prerequisite: None.

HEd 2304 Nutrition in Exercise and Sport (PHED 2278)

(2-0) 2 hour
 A multidisciplinary undergraduate seminar/lecture course emphasizing the importance of proper nutrition in regard to physical activity and specifically sports participation. This includes basic introduction to nutrition, optimal weight determination and maintenance, ergogenic aids to athletic performance and proper hydration and fluid maintenance. Three lecture hours a week for one semester.

Dance Classes**Danc 1210 Tap and Jazz I (DANC 1210)**

(1-3) 2 hours
 Introduces basic movements of tap and jazz dance forms. Emphasizes participation as well as vocabulary and theory of tap and jazz styles. Lab fee required. Prerequisite: None.

Danc 1212 Tap and Jazz II (DANC 1211)

(1-3) 2 hours
 A continuation of Danc 1210. Lab fee required. Prerequisite: Dance 1210 or consent of the instructor.

Danc 1220 Introduction to Dance Performance (DANC 1271)

(0-3) 1 hour
 Presents students the opportunity to refine movement skills by working with a choreographer and performing in a dance concert. May be repeated for a maximum of two credit hours. Lab fee required. Prerequisite: Consent of the instructor.

Danc 1222 Dance Practicum (DANC 1212)

(1-3) 2 hours
 Gives students the experience of working on all aspects of a dance concert including choreography, performance and production. May be repeated for a maximum of four credit hours. Lab fee required. Prerequisite: None.

Danc 1230 Modern Dance Technique I (DANC 1245)

(1-3) 2 hours
 Introduces basic theory and techniques of modern dance. Emphasizes time, space and movement dynamics. Lab fee required. Prerequisite: None.

Danc 1232 Modern Dance Technique II (DANC 1246)

(1-3) 2 hours
 A continuation of Danc 1230 with more complex movement material. Lab fee required. Prerequisite: Danc 1230 or consent of instructor.

Danc 1240 Ballet Technique I (DANC 1241)

(1-3) 2 hours
 Introduces classical ballet with emphasis on technique, theory alignment and terminology. Lab fee required. Prerequisite: None.

Danc 1242 Ballet Technique II (DANC 1242)

(1-3) 2 hours
 A continuation of Danc 1240. Lab fee required. Prerequisite: Danc 1240 or consent of the instructor.

Danc 2210 Tap and Jazz III (DANC 2208)

(1-3) 2 hours
 A continuation of Danc 1212. Lab fee required. Prerequisite: Danc 1212 or consent of the instructor.

Danc 2212 Tap and Jazz IV (DANC 2209)

(1-3) 2 hours
 A continuation of Danc 2210. Lab fee required. Prerequisite: Danc 2210 or consent of the instructor.

Danc 2230 Modern Dance Technique III (DANC 2245)

(1-3) 2 hours
 A continuation of Danc 1232. Incorporates more intricate movement patterns and designs. Lab fee required. Prerequisite: Danc 1232 or consent of instructor.

Danc 2232 Modern Dance Technique IV (DANC 2246)

(1-3) 2 hours
 Presents advanced modern dance techniques. Lab fee required. Prerequisite: Danc 2310 or consent of the instructor.

Danc 2330 Improvisation and Composition (DANC 1301)

(2-2) 3 hours
 Explore movement as a basis for choreography. Choreographic tools of time, space, dynamics, floor pattern and level change. Lab fee required. Prerequisite: Consent of the instructor.

Physical Therapist Assistant

Faculty: S. Lynn Dammann, chairman; Peggy Manning, Molly Neiers.

The physical therapist assistant program leads to an associate in applied science degree and encompasses a two-year, six-semester course of study. New classes begin with the fall semester of each year. The program is designed to prepare skilled technical health workers to perform certain physical therapy procedures and related tasks under the direction and supervision of a licensed physical therapist. The physical therapist assistant performs treatment procedures delegated by the professional physical therapist that involve the therapeutic use of heat, cold, electromagnetic radiations, water, massage, ultrasound and therapeutic exercise.

The curriculum balances general educational and technical courses and includes supervised practicum work at local hospitals and private clinics. These combined experiences provide students with an opportunity for educational development as well as occupational competence.

Because practicum space is limited, students are admitted selectively. To be considered for admission to the program, prospective students must be a high school graduate or equivalent, must achieve a satisfactory score on selected entrance examinations, must have good character references and must be approved by the program admissions committee. After being accepted, students must maintain a "C" average in all physical therapist assistant courses and an average of "C" in all other courses, or they will be dropped from the program. Liability insurance is required for all PTA courses.

Applicants or other interested persons seeking additional information should contact the counseling center at Odessa College. Testing deadline is March 31 and application deadline is April 30.

Course of Study for Associate in Applied Science Degree

		Summer Session II			
		Course		Sem Hrs	
		Engl 1311		3	
		College Level Math		3	
First Year					
First Semester			Second Semester		
Course		Sem Hrs	Course		Sem Hrs
Biol 1100		1	Biol 1405		4
Biol 1404		4	Govt 2301 or 2302		3
Psy 1301		3	PTA 1302		3
PTA 1301		3	PTA 1502		5
PTA 1401		4			
Summer Session I			Summer Session II		
Course		Sem Hrs	Course		Sem Hrs
PTA 1441		4	Spch 1310		3
			Elective		3
Second Year					
First Semester			Second Semester		
Course		Sem Hrs	Course		Sem Hrs
PTA 2401		4	PTA 2702		7
PTA 2601		6	PTA 2443		4
PTA 2342		3	*PE		1
*PE		1			

*PE 1100 should be the first course taken in physical education.

PTA 1301 Clinical Pathophysiology

(3-0) 3 hours

This course is designed to acquaint first-year students with the pathophysiology, etiology, symptomatology, management, and prognoses of various pathological and injury-related problems treated in physical therapy. Particular emphasis is placed on diseases and injuries involving the musculoskeletal and neuromuscular systems as well as the need for physical therapy intervention. Corequisite: PTA 1401.

PTA 1302 Topics in Communication and Human Development

(3-0) 3 hours

This course is designed to enable students to understand patterns of interaction in the health care setting. It encompasses psychosocial aspects of health care as well as verbal, non-verbal and written communication skills. Fundamental concepts of computer use as they relate to physical therapy are included. Human development from birth to death with special emphasis on normal sensorimotor development and aging is presented. Corequisites: PTA 1502. Prerequisites: PTA 1301 and 1401.

- PTA 1401 Introduction to Physical Therapy**
(3-3) 4 hours
This course is designed to orient first-year students to the profession of physical therapy and the role of the physical therapist assistant. It includes historical background, legal aspects and ethical concepts. Terminology used in the profession is presented. Body mechanics, transfers, activities of daily living, gait, vital signs, medical asepsis and bandaging are introduced. Corequisite: PTA 1301.
- PTA 1441 Clinical Practicum I**
(0-16) 4 hours
This practicum provides the initial exposure to the clinical environment. Students will be observing as well as utilizing skills obtained in the classroom and laboratory. It consists of approximately six weeks full-time experience under close supervision of a licensed physical therapist. Prerequisites: PTA 1301, 1401, 1302 AND 1502.
- PTA 1502 Fundamentals of Physical Therapy**
(4-3) 5 hours
This course is designed to instruct students in application of therapeutic modalities and massage. Specific emphasis is placed on indications and contraindications, medical efficacy and physiological effects pertinent to the various physical agents introduced. Corequisites: PTA 1302. Prerequisites: PTA 1301 and 1401.
- PTA 2342 Clinical Practicum II**
(0-12) 3 hours
This practicum provides continued exposure to the clinical environment. Students will be observing as well as utilizing skills obtained in the classroom and laboratory. Close supervision by a licensed physical therapist is required. Corequisites: PTA 2401 AND 2601. Prerequisites: PTA 1301, 1401, 1302, 1502, and 1441.
- PTA 2401 Kinesiology**
(3-3) 4 hours
This course is designed to provide the student with a working knowledge of human bone, bony landmarks, muscles, joints and ligaments and how they all work together to provide efficient human movement. It incorporates assessment of muscle function by use of manual muscle testing. Corequisites: PTA 2342 and 2601. Prerequisites: PTA 1301, 1401, 1302, 1502 and 1441.
- PTA 2443 Clinical Practicum IV**
(0-16) 4 hours
This practicum provides the final supervised clinical experience. It consists of an approximate six-week, full-time affiliation and is designed to, as closely as possible, simulate an actual working experience. During this time, the student will be able to improve upon the skills already learned as well as add additional techniques specific to individual facilities. Close supervision by a licensed physical therapist is required. Corequisite: PTA 2702. Prerequisites: PTA 1301, 1401, 1441, 1302, 1502, 2401, 2601 and 2342.
- PTA 2501 Principles of Therapeutic Exercise**
(5-3) 6 hours
This course is a study of basic theories and therapeutic application of exercise. The neurophysiological elements of normal and abnormal function, as well as facilitation of responses desired in the performance of exercise is emphasized. It incorporates assessment of range of motion by use of goniometry. Corequisites: PTA 2401 and 2342. Prerequisites: PTA 1301, 1401, 1302, 1502 and 1441.
- PTA 2702 Topics in Rehabilitation**
(5-6) 7 hours
This course integrates previously learned skills and techniques into the rehabilitation effort. Sections of study will include long-term disability, prosthetics, orthotics, cardiac rehabilitation, respiratory care, sports medicine, work hardening, burn care, pediatrics and orthopedics. The course is completed during the first 10 weeks of the semester to allow for the full-time clinical practicum the last five weeks. Corequisite: PTA 2443. Prerequisites: PTA 1301, 1401, 1302, 1502, 1441, 2401, 2601 and 2342.

Physics

Faculty: Dr. E. Don Taylor, chairman; Dr. Ashok Khosla.

The principal objective of the department of physics is to train physicists at the college level. In addition, it seeks to provide for certain other majors the foundation in the fundamental physical principles necessary for effective work in engineering, medicine, dentistry, chemistry and technology.

Course of Study for Associate in Science Degree

	Semester Hours
General Education Requirements	59
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	3
Spch 1320 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U. S. History to 1877	3
Hist 2302 U. S. History from 1877	3
*Math 2331 Calculus I	3
Math 2333 Calculus II	3
Math 2335 Calculus III	3
Math 2351 Differential Equations	3
**PE (Any two one-hour activity courses)	2
Language 1411	4
Language 1412	4
Language 2311	3
Language 2312	3
CIS 2406 FORTRAN 77--Scientific	4
Elective	3
Major Requirements	8
Phys 1403 Engineering Physics I	4
Phys 2401 Engineering Physics II	4
Total Semester Hours	67

*Prerequisite to Math 2331 should be taken during the summer prior to freshman enrollment. Students with strong mathematics background should consider advanced standing examinations.

**PE 1100 should be taken first course taken in physical education.

Phys 1301 Music Acoustics (PHYS 1371)

(3-0) 3 hours
A study of sound as it relates to speaking, singing and playing musical instruments. Includes physical principles of sound production, transmission, interference, hearing, resonance, pitch, quality, musical intervals, stringed instruments, wind instruments, acoustics of rooms and associated electronic equipment. Prerequisite: None.

Phys 1401 College Physics I (PHYS 1401)

(3-3) 4 hours
A study of classical mechanics, molecular physics and heat with applications. Recommended for students of medicine, dentistry, veterinary medicine, optometry, biology and architecture. Knowledge of elementary algebra and trigonometry needed. Lab fee required. Prerequisite: None.

Phys 1402 College Physics II (PHYS 1402)

(3-3) 4 hours
A study of classical electricity, magnetism, mechanical wave motion, optics and practical aspects of modern physics. Lab fee required. Prerequisite: Phys 1401.

Phys 1403 Engineering Physics I (PHYS 2425)

(3-3) 4 hours
A study of classical mechanics, waves, thermodynamics for students aspiring to professional academic degrees in the fields of physical science, various engineering specialties and mathematics. Lab fee required. Prerequisite or corequisite: Math 2331.

Phys 2401 Engineering Physics II (PHYS 2426)
 (3-3) 4 hours
 A study of classical electricity, magnetism and optics from a theoretical and engineering application viewpoint. Lab fee required. Prerequisite: Phys 1403. Prerequisite or corequisite: Math 2333.

Phys 2402 Engineering Physics III (PHYS 2427)
 (3-3) 4 hours
 A study of modern physics including atomic and nuclear phenomena, relativity and quantum effects. Lab fee required. Prerequisite: Phys 2401.

Physical Science

Physical Science is a survey course of the physical sciences, physics and chemistry, intended to satisfy a science requirement for non-science majors. The course emphasizes the nature of science as a creative human enterprise, the key role which it plays in modern society, its relationship to technology and thereby to the environment and the human qualities of scientists and their social responsibility. The course assumes no prior work in science and very little in mathematics, certainly no more advanced than arithmetic and simple algebra.

PhSc 1101 Physical Science Laboratory I (PHYS 1115)
 (0-3) 1 hour
 A laboratory course which illustrates and reinforces principles and concepts of PhSc 1301 by use of individual experiments. Emphasizes techniques of handling scientific equipment and analyzing data acquired. Prerequisite: None. Corequisite: PhSc 1301.

PhSc 1102 Physical Science Laboratory II (PHYS 1117)
 (0-3) 1 hour
 A laboratory course which illustrates and reinforces principles and concepts of PhSc 1302 by use of individual experiments. Emphasizes techniques of handling scientific equipment and analyzing data acquired. Prerequisite: None. Corequisite: PhSc 1302.

PhSc 1301 Physical Science I (PHYS 1315)
 (3-0) 3 hours
 A lecture course designed to satisfy a physical science requirement for liberal arts, elementary education majors, etc. Concentrates on basics of chemistry. Uses environmental problems as underlying theme to present material. Prerequisite: None. Corequisite: PhSc 1101.

PhSc 1302 Physical Science II (PHYS 1317)
 (3-0) 3 hours
 A lecture course designed to satisfy a physical science requirement for liberal arts, elementary education majors, etc. Concentrates on basics of physics. Current energy problems and their impact discussed. Prerequisite: None. Corequisite: PhSc 1102.

Psychology and Sociology

Faculty: Gordon Gillette, chairman; Mary Barker (ret.), Carla Wells.

This department furnishes foundation courses for those students preparing to teach in elementary or secondary school as well as those planning to major in psychology or sociology. The subjects offered are often taken by students because of their general social and cultural value.

Both psychology and sociology majors should plan their programs with the assistance of a counselor. Psychologists and sociologists are frequently hired as college teachers and researchers. Applied fields for either include the following: counselors, personnel workers, ministers, social case workers, group workers, community organizers, labor-management mediators, medical social workers, etc.

State law determines requirements for certification of public school teachers. Prospective teachers should keep in mind that they must complete a teacher training program as outlined by their selected senior college. Therefore, students should plan their course work at Odessa College to include those courses which the senior college requires at the freshman and sophomore levels. Prospective teachers also should plan to take the required pre-entry test before applying for admission to any education program at the Texas senior college of their choice.

While Odessa College cannot offer courses in education, freshman and sophomore core curriculum courses that apply to elementary and secondary education teaching certificates are offered. These courses satisfy requirements for the associate in arts degree at Odessa College.

**Course of Study for Associate in Arts Degree
(Psychology Option)**

	Semester Hrs
General Education Requirements	52
*Approved Elective	3
Biol 1401 General Biology I; Chem 1301/1101 General Inorganic Chemistry I/Fundamentals of Chemistry Lab I; or Phys 1401 College Physics I	4
Biol 1402 General Biology II; Chem 1302/1102 General Inorganic Chemistry II/Fundamentals of Chemistry Lab II; or Phys 1402 College Physics II	4
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra	3
Math 1361 Mathematical Statistics	3
Phil 2302 Introduction of Philosophy II	3
**PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication	3
Major Requirements	12
Psy 1301 Introduction to Psychology	3
Psy 2302 Child Psychology	3
Psy 2303 Social Psychology	3
Soc 1301 Principles of Sociology	3
Total Semester Hours	64

*Approved Electives: Anth 2301, Anth 2302, Eco 2301, Geog 2301, Math 1343, Psy 2301, Soc 2301, Soc 2302 and Soc 2304.

**PE 1100 should be the first course taken in physical education.

**Course of Study for Associate in Arts Degree
(Sociology Option)**

	Semester Hrs
General Education Requirements	52
*Approved Electives	6
Biol 1401 General Biology I; Chem 1301/1101 General Inorganic Chemistry I/Fundamentals of Chemistry Lab I; or Phys 1401 College Physics I	4
Biol 1402 General Biology II; Chem 1302/1102 General Inorganic Chemistry II/Fundamentals of Chemistry Lab II; or Phys 1402 College Physics II	4
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra	3
Math 1361 Mathematical Statistics	3
**PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication	3
Major Requirements	12
Psy 1301 Introduction to Psychology	3
Soc 1301 Principles of Sociology	3
Soc 2303 Social Psychology	3
***Sociology Elective	3
Total Semester Hours	64

*Approved Electives: Anth 2301, Anth 2302, Eco 2301, Geog 2301, Phil 2302, Psy 2302, Soc 1302, Soc 2301, Soc 2302 and Soc 2304.

**PE 1100 should be the first course taken in physical education.

***Sociology Electives: Soc 1302, 2301, 2302, 2303 and 2304.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Associate in Arts Degree
(Elementary Education Option)**

	Semester Hrs
General Education Requirements	56
Biol 1401 General Biology I	4
Biol 1402 General Biology II	4
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Geog 2301 Principles of Geography I or Geog 2302 Principles of Geography II	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra	3
Math 1343 Plane Trigonometry	3
*PE (Any two one-hour activity courses)	2
Physical Science (Chem 1301/1101 General Inorganic Chem I and Fundamentals of Chem Lab I or EaSc 1401 Nature of the Earth and Universe I or Geol 1401 Physical Geology)	4
Spch 1310 Introduction to Speech Communication, Spch 1320 Public Speaking or Spch 2340 Business and Professional Speech	3
Major Requirements	9
Psy 1301 Introduction to Psychology	3
Psy 2302 Child Psychology	3
**Psychology or Sociology Elective	3
Total Semester Hours	65

*PE 1100 should be the first course taken in physical education.

**Psychology and Sociology Electives: Psy 2301, Personal Appreciation of Psychology, Psy 2303, Social Psychology and Soc 1301, Principles of Sociology.

**Course of Study for Associate in Arts Degree
(Secondary Education Option)**

	Semester Hrs
General Education Requirements	58
Art 1300 Art Appreciation (Self-Paced)	3
Biol 1401 General Biology I	4
Biol 1402 General Biology II	4
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Geog 2301 Principles of Geography I or Geog 2302 Principles of Geography II	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 2301 U.S. History to 1877	3
Hist 2302 U.S. History from 1877	3
Math 1341 College Algebra	3
Math 1343 Plane Trigonometry	3
Mu 1328 Music Appreciation	3
*PE (Any two one-hour activity courses)	2
Phil 2302 Introduction to Philosophy II (Ethics)	3
Physical Science (Chem 1301/1101 General Inorganic Chem I and Fundamentals of Chem Lab I or EaSc 1401 Nature of the Earth and Universe I or Geol 1401 Physical Geology)	4

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Spch 1310 Introduction to Speech Communication, Spch 1320
Public Speaking or Spch 2340 Business and Professional Speech 3

Major Requirements 9

 Psy 1301 Introduction to Psychology 3

 Psy 2302 Child Psychology 3

 Soc 1301 Principles of Sociology 3

Total Semester Hours 71

*PE 1100 should be the first course taken in physical education.

Psychology

Psy 1301 Introduction to Psychology (PSYC 2301)
(3-0) 3 hours
Presents basic problems and principles of experience and behavior. Includes heredity and environment, growth and development, aging, learning and conditioning, emotions, motivation, perception, psychological testing, personality, adjustment, normal and abnormal behavior and therapies. Prerequisite: None.

Psy 2301 Personal Applications of Psychology (PHYS 2315)
(3-0) 3 hours
Emphasizes study of psychological principles and methods important in practical control of human behavior. Includes applications of psychology for increasing human efficiency, improving personalities and harnessing emotions. Prerequisite: Psy 1301.

Psy 2302 Child Psychology (PHYS 2308)
(3-3) 3 hours
Emphasizes development processes, including biological and environmental factors which shape personality and affect achievement from prenatal through preadolescence. Requires observation and study of children in lab. Prerequisite: None.

Psy 2303 Social Psychology (PHYS 2319)
(3-0) 3 hours
Surveys research and theories dealing with human behavior in social situations. Includes attitudes, prejudices, interpersonal attraction, group behavior, conformity, motivation and conflict. Student may elect subject area heading appropriate to his major. Students may not receive credit for both Psy 2303 and Soc 2303. Prerequisite: Psy 1301, Soc 1301 or consent of the instructor.

Sociology

Soc 1301 Principles of Sociology (SOCI 1301)
(3-0) 3 hours
Provides basic concepts of sociology and emphasizes the relationship of culture and social interaction to group behavior. Includes analysis of social organization, deviant behavior, urbanization and social change. Prerequisite: None.

Soc 1302 Sociology of the Family (SOCI 2301)
(3-0) 3 hours
Analyzes human relationships pertaining to varied aspects of courtship, mate selection and marital adjustment. Includes problems of adjustment in each stage of the life cycle. Prerequisite: None.

Soc 2301 Social Problems (SOCI 1306)
(3-0) 3 hours
Applies sociological concepts to analysis of current social problems. Includes family and community disorganization, crime and delinquency, racial and educational problems and conflicts, problems of mass communication and personal pathologies. Prerequisite: Soc 1301.

Soc 2302 American Minorities (SOCI 2319)
(3-0) 3 hours
Presents principal minority groups in American society and their sociological significance. Includes problems of inter-group relations, social movements and related social changes and theories to explain such changes. Prerequisite: Soc 1301 or consent of the instructor.

Soc 2303 Social Psychology (SOCI 2326)
(3-0) 3 hours
Surveys research and theories dealing with human behavior in social situations. Includes attitudes, prejudice, interpersonal attraction, group behavior, conformity, motivation and conflict. Students may elect subject area heading appropriate to their major. Students may not receive credit for both Psy 2303 and Soc 2303. Prerequisites: Psy 1301, Soc 1301 or consent of the instructor.

Soc 2304 Fundamental Research Design (SOCI 2371) (3-0) 3 hours
 Provides introduction to basic research designs utilized in social and behavioral sciences. Includes basic steps of scientific methods, descriptive and analytical studies, methods of data collection, use of available data, analysis and interpretation. Prerequisites: Math 1361 or Math 1343, Psy 1301 or Soc 1301. Offered only in spring semester of even-numbered years.

Radiologic (X-Ray) Technology

Faculty: Sue Leach, chairman; Sven Phillips, Dr. James Sheehan, medical advisor.

Odessa College, in cooperation with local hospitals, offers a radiologic technology program designed to provide understanding, proficiency and skill. The program is accredited by the Committee on Allied Health Education and Accreditation (CAHEA) in cooperation with the Joint Review Committee on Education in Radiologic Technology (JRCERT). Upon successful completion of the program, students are granted an associate in applied science degree, are eligible to apply for the certification examination given by the American Registry of Radiologic Technologists in diagnostic X-ray technology, and are eligible for state certification.

The curriculum balances general educational and technical courses with supervised practicums at local hospitals. These combined experiences provide students with an opportunity for educational development as well as occupational competence during the 24-month program.

Available practicum space limits enrollment; therefore, students are admitted on a selective basis. To be considered for admission to the program, prospective students must be a high school graduate or equivalent, must achieve a satisfactory score on selected entrance examinations, must have character references and must be approved by the program admissions committee. After being accepted, students must maintain a "C" average in all radiologic technology courses and an average of "C" in all courses or they will be dropped from the program.

Applicants or other interested persons seeking additional information should contact the radiologic technology program director at the college. Prospective students are encouraged to submit their applications for admission by April 30, for review by the admissions committee.

Liability insurance must be purchased by the student at the beginning of each fall semester.

Course of Study for Associate in Applied Science Degree

Summer Session II

Course	Sem Hrs
Math -- College Level	3
XT 1304	3
XT 1314	3

First Year

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 1403	4	Engl 1311	3
XT 1111	1	XT 1112	1
XT 1221	2	XT 1402	4
XT 1401	4	XT 1322	3
EMT 2302	3		

Summer Sessions

Summer Session I		Summer Session II	
Course	Sem Hrs	Course	Sem Hrs
Govt 2301 or 2302	3	Spch 2340	3
XT 1323 (12 weeks)	3	Elective	3

Second Year

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
CS 1300	3	XT 2202	2
XT 2201	2	XT 2302	3
XT 2301	3	XT 2322	3
XT 2221	2	PE	1
*PE	1	**Approved Elective	3

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Summer Session I

Course	Sem Hrs
XT 2223	2

*PE 1100 should be the first course taken in physical education.

**Approved Electives: Psy 1301, Soc 1301, Hist 2301 or 2302, Govt 2301 or 2302 or Engl 1312.

XT 1111 Radiographic Positioning II

(0-4) 1 hour
Includes discussion and demonstration of standard radiographic positioning of the thorax, abdomen, spine and routine contrast media procedures to include film critique. Produces standard radiographs on radiographic phantoms. Lab fee required. Prerequisite: XT 1314 or consent of the department chairman. Corequisites: XT 1221 and XT 1401.

XT 1112 Radiographic Positioning III

(0-2) 1 hour
Includes discussion and demonstration of radiographic projections of the cranium, including film critique. Produces standard radiographs on radiographic phantoms. Lab fee required. Prerequisite: XT 1111 or consent of the department chairman. Corequisites: XT 1322 and XT 1402.

XT 1304 Introduction to Radiologic Technology

(3-0) 3 hours
Introduces field of radiologic technology, basic radiation protection, professional ethics, darkroom procedures, medical terminology, prime exposure factors and technical factors of film quality. Introduces basic physics of X-ray equipment and auxiliary devices. Prerequisite: None.

XT 1314 Radiographic Positioning I

(0-12) 3 hours
Presents fundamentals of radiographic positioning and terminology used to describe radiographic projections. Discusses and demonstrates standard radiographic projections of the upper and lower extremities to include film critique. Produces standard radiographs on radiographic phantoms. Lab fee required. Prerequisite: None.

XT 1221 Clinical Practicum I

(0-16) 2 hours
Introduces the clinical environment at a major facility. Requires observing operation of the X-ray department by rotating through different work areas. Requires taking radiographs of chest, abdomen and extremities under close supervision of a radiographer and demonstrating specific exams with a model. Presents clinical introduction to fluoroscopic examinations and film critique. Prerequisite: XT 1314 or consent of the department chairman. Corequisites: XT 1111 and XT 1401.

XT 1322 Clinical Practicum II

(0-24) 3 hours
Requires taking standard radiographs of chest, abdomen and extremities under limited supervision and taking radiographs of spine, skull and sinuses under close supervision by a radiographer to include film critique. Requires assisting radiologist with fluoroscopic examinations and demonstrating specific exams with a model. Clinical rotations include fluoroscopic and orthopedic experiences. Prerequisite: XT 1221. Corequisites: XT 1112 and XT 1402.

XT 1323 Clinical Practicum III

[(0-32) 12 weeks] 3 hours
Emphasizes practice of basic radiographic procedures in positioning, on darkroom techniques and on becoming more professional in use of anatomical terms. Requires taking all standard radiographs under limited supervision and assisting radiographers in obtaining radiographs on trauma patients. Includes film critique and demonstration of specific exams with a model. Includes the following in clinical rotations: special procedures, CT, breast imaging, MRI, quality assurance and heart catheterization. Prerequisite: XT 1322 or consent of the department chairman.

XT 1401 Radiographic Physics

(4-0) 4 hours
Analyzes physical principles related to matter, energy, basic electricity, magnetism, induction principles and transformers, basic X-ray circuits, methods of rectification and construction of X-ray accessories. Presents physical principles of X-ray production, interaction of X-rays in matter and methods of X-ray detection and measurement. Prerequisite: XT 1304. Corequisites: XT 1111 and XT 1221.

XT 1402 Principles of Radiographic Exposure

(4-2) 4 hours

Presents characteristics of radiographic film construction, design of radiographic darkrooms and automatic processing techniques. Includes advanced radiographic principles such as review of prime exposure factors, technique formation, body section radiography and conditions influencing radiographic exposure. Emphasizes radiation protection and image quality. Requires two laboratory hours per week. Lab fee required. Prerequisite: XT 1401 or consent of the department chairman. Corequisites: XT 1112 and XT 1322.

XT 2201 Special Imaging

(2-0) 2 hours

Presents cross-sectional anatomy, ultrasound and magnetic resonance imaging. Includes complete review of anatomy systems and procedures, topographic anatomy, routine diagnostic positioning and film critique. Prerequisite: XT 1112 or consent of the department chairman. Corequisites: XT 2301 and XT 2321.

XT 2202 Department Design and Operation

(2-0) 2 hours

Presents evaluation and correction of film fault, processing errors and exposure factors in producing radiographs of optimum quality. Emphasizes quality assurance concepts. Discusses equipment maintenance, departmental design and administration. Explores innovative techniques of imaging. Prerequisite: XT 2201 or consent of the department chairman. Corequisites: XT 2402 and XT 2322.

XT 2301 Advanced Radiographic Procedures

(3-0) 3 hours

Presents specialized and highly-technical procedures in radiology. Includes neuroradiography, digital X-ray imaging, computed tomography, angiography, arteriography, female studies, pediatric radiography, foreign body localization, stereoradiography and interventional procedures. Prerequisite: XT 1402 or consent of the department chairman. Corequisites: XT 2201 and XT 2221.

XT 2221 Clinical Practicum IV

(0-24) 2 hours

Includes the following in clinical rotations: special procedures, CT, breast imaging, MRI, heart catheterization, ultrasound, nuclear medicine, radiation therapy and quality assurance to clinical rotations. Requires demonstrating specific exams with a model and practicing film critique. Prerequisite: XT 1224 or consent of the department chairman. Corequisites: XT 2301 and XT 2201.

XT 2322 Clinical Practicum V

(0-24) 3 hours

Includes the following in clinical rotations: ultrasound, nuclear medicine, radiation therapy and quality assurance. Requires demonstrating specific exams with a model and practicing film critique. Prerequisite: XT 2321. Corequisites: XT 2202 and XT 2302.

XT 2223 Clinical Practicum VI

[(4-26) 6 weeks] 2 hours

Includes basic physical concepts with expansion to increase depth and scope of underlying principles of radiology. Requires demonstrating proficiency in positioning, use of proper technique, recognizing and correcting errors in all radiographs and performing all duties required of a registered technologist. Prerequisite: XT 2322.

XT 2302 Radiation Biology & Pathology

(4-0) 3 hours

Presents a review of atomic physics. Stresses radiation biology and protection. Includes topics of radiation therapy, nuclear medicine and radiologic pathology. Requires a term paper. Prerequisite: XT 2301 or consent of the department chairman. Corequisites: XT 2202 and XT 2322.

Reading

Faculty: Jana Bland, chairman; Dr. Imogene Freer (ret.), Jean McColloch, Elloui Moseley, Pam Williamson.

An effective citizen must read well, and reading courses develop efficient tools to use in today's environment. These courses implement the philosophy that the ultimate in reading is never reached and study skills are predominantly reading skills. Time spent in this program is an investment in self. All people, regardless of their reading ability or what kind of grades they make, can improve their reading skills.

All professional fields require above-average abilities in reading. Developing awareness of the competencies underlying effective reading and insight into the psychology of reading will be excellent preparation for those interested in reading as an academic major. Reading specialists, reading supervisors and reading clinicians are all in great demand.

Courses listed below do not satisfy requirements for any degree at Odessa College. Students who intend to transfer to another community college, senior college or university should check with that institution to determine whether hours earned in reading will transfer for degree credit.

Read 1300 Basic Reading

(3-0) 3 hours
Initiates instruction in developmental reading with emphasis on building vocabulary and comprehension skills. Includes individual diagnoses of reading strengths and weaknesses for placement in multileveled materials. Lab fee required. Prerequisite: None or placement by counselors.

Read 1301 College Reading

(3-0) 3 hours
Aims to improve speed and comprehension with a variety of materials. Includes diagnosis of reading strengths and weaknesses, timed reading practices, short lectures, study skills and vocabulary study. Lab fee required. Prerequisite: Read 1300 passed with a "C" or better or satisfactory placement score.

Read 1302 Advanced College Reading

(3-0) 3 hours
Continues independent work to maintain improved critical reasoning skills designed to meet specific needs in comprehension, vocabulary, rate and study skills. Lab fee required. Prerequisite: Read 1301 passed with a "C" or better, satisfactory placement score or consent of department chairman.

College Reading Techniques

The college reading techniques courses provide an alternative reading program with structured, individualized, self-paced instruction. Registration is open to everyone, and anyone may enroll for non-credit or for one, two or three semester hours of credit. Non-credit enrollment also is available for junior and senior high school students. Standardized tests are given to determine beginning reading performance levels and specific areas of need. Through student-teacher conferences, a self-paced plan of action is developed to set immediate and long-range goals. Pre-tests are scheduled by appointment with the instructor in the Electronics Technology Building, Room 123.

Students enrolling in any of the three lab courses should consult with the lab instructor as early as possible to arrange a meeting time. Materials covered and skills learned in the three one-hour reading lab courses -- Read 1101, 1102 and 1103 -- are equal to one three-hour college reading course.

Read 1101 Improving Reading Skills

(0-24) 1 hour
Functions to improve student's ability to understand his relationship with the academic demands of the college. Diagnostic testing determines student's need for following skills: vocabulary, reading, listening and spelling. Taught in an individualized setting. Lab fee required. Prerequisite: None.

Read 1102 Improving Reading Flexibility

(0-12) 1 hour
Aims to make student aware of importance of vocabulary and degree of comprehension expected when reading in a variety of materials at a variety of speeds. Lab fee required. Prerequisite: Read 1101 or consent of the department chairman.

Read 1103 Improving Reading Rate and Comprehension

(0-12) 1 hour
Provides opportunity to become a trained, successful reader able to handle large amounts of written materials by emphasizing purpose, concentration, recall, increased vocabulary and rapid reading. Lab fee required. Prerequisite: Read 1101, 1102 or consent of instructor.

Real Estate

Faculty: Larry Berthelsen, chairman.

The primary objective of the real estate program is to prepare students for full-time employment in the real estate field. Completion of this program leads to an associate in applied science degree in real estate. All courses in the program are designed to provide basic employment skills for individuals seeking employment in real estate as well as to upgrade the skills of those individuals presently employed in the industry.

Requirements for licensure: Pre-licensing for real estate salespersons requires successful completion of 12 semester hours of college course work; six of those hours must be in core real estate courses, with three semester hours of principles. License renewal requires six semester hours within the first three years of licensure. Students must complete a total of 12 semester hours in core real estate courses to retain their licenses.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
Eco 2301 Principles of Economics or Eco 2302 Economic Problems	3
*PE (Any two one-hour activity courses)	2
Major Requirements	31
RE 1301 (Core) Principles of Real Estate	3
RE 1302 (Core) Real Estate Appraisal I	3
RE 1303 (Core) Real Estate Finance	3
RE 1304 (Core) Real Estate Law	3
RE 1305 (Core) Fundamentals of Real Estate	3
RE 2117 Real Estate Internship	1
RE 2301 (Core) Real Estate Sales and Marketing	3
RE 2302 (Core) Real Estate Investment	3
RE 2303 (Core) Property Management	3
RE 2304 (Core) Real Estate Brokerage	3
RE 2305 Real Estate Problems	3
Related Requirements	15
Mgt 1301 Introduction to Management	3
Mgt 1303 Communications Management	3
Mgt 2303 Public Relations	3
BA 2311 Business Law I	3
Elective	3
Total Semester Hours	63

*PE 1100 should be the first course taken in physical education.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 30 semester hours in real estate courses.

RE 1100 Real Estate Selected Topics

(1-0) 1 hour
 Designed to meet the ongoing needs of the real estate industry. Includes directed study and research in selected topic areas, including legal updates. May be used to fulfill mandatory continuing education requirements. Prerequisite: Consent of the department chairman.

RE 1301 Principles of Real Estate

(3-0) 3 hours
 Introduces real estate as a profession. Includes study of land and real estate, concepts of home ownership, functions of real estate broker and legal aspects of titles and contracts. Covers in detail Texas Real Estate License Act. Includes three hours of instruction on federal, state and local laws governing housing discrimination, housing credit discrimination and community reinvestment. Prerequisite: None.

- RE 1302 Real Estate Appraisal I**
 (3-0) 3 hours
 Provides basic knowledge and skills necessary to demonstrate application of cost, income and market data approaches to real property value. Includes examination of nature of real property value, functions and purposes of appraisal and methods of estimating residential market value. Prerequisite: None.
- RE 1303 Real Estate Finance**
 (3-0) 3 hours
 Presents basic knowledge involved in real estate financing and investment. Includes study of institutions involved in real estate financing and investment transactions, instruments of transactions and financing, terminology of financing and real property taxation. Prerequisite: None.
- RE 1304 Real Estate Law**
 (3-0) 3 hours
 Presents principles of laws governing interests in real estate. Includes concepts of acquisition, encumbrance, transfer, rights and obligations and state and federal statutes applicable to those concepts. Aids analysis of legal consequences of various real estate relationships and transactions to determine when an attorney should be consulted. Prerequisite: None.
- RE 1305 Fundamentals of Real Estate**
 (3-0) 3 hours
 A continuation of RE 1301. Includes study of title transfer, records, real estate financing, leases, property appraisal and development and residential construction. Prerequisite: RE 1301.
- RE 1306 Real Estate Mathematics**
 (3-0) 3 hours
 Presents basics of mathematics used in real estate business. Gives attention to mathematics of finance, appraisal, development, management and investment. Prerequisite: None.
- RE 2117 Real Estate Internship**
 (1-20) 1 hour
 Requires working 20 hours per week minimum in an approved firm: real estate broker's office, title company, real estate mortgage company or building construction company. Requires employment in occupational situations that give practical training and experience compatible with real estate career objectives. Includes one-hour seminar and 20 internship hours per week. Prerequisite: Minimum of six semester hours in real estate courses.
- RE 2301 Real Estate Sales and Marketing**
 (3-0) 3 hours
 Presents information needed in effective selling of real estate. Includes opportunities in real estate, basic elements of listing property, of offers between buyer and seller and of basic financing elements. Emphasizes professional marketing procedures, advertising and regulations. Prerequisite: RE 1301.
- RE 2302 Real Estate Investment**
 (3-0) 3 hours
 Presents characteristics and benefits of real estate investment. Includes investment analysis and taxation as well as forms of ownership, methods of financing investments and various types of considerations involved in investments. Prerequisites: RE 1301 and RE 1303.
- RE 2303 Property Management**
 (3-0) 3 hours
 Presents information needed to manage income-producing property. Includes utilizing sound accounting and reporting principles; securing, qualifying and contracting of tenants and lessees; legal aspects of property management; and maintaining, rehabilitating, renovating and remodeling income-producing properties. Prerequisites: RE 1301.
- RE 2304 Real Estate Brokerage**
 (3-0) 3 hours
 Presents factors necessary to establish and operate a real estate sales and brokerage office. Includes required terminology and salesperson-broker relationships. Intends to identify and utilize effective practices in coordinating and promoting a successful real estate brokerage. Prerequisites: RE 1301 and RE 2301.
- RE 2305 Real Estate Problems**
 (3-0) 3 hours
 Designed to provide opportunity to solve practical problems encountered in real estate profession. Requires working in small groups with each participant filling a different real estate position in the group. Requires individual participation in problems which cover various facets of real estate practice. Prerequisite: Individual approval of the instructor. Recommended for persons who hold real estate license.

RE 2306 Real Estate Law: Contracts

(3-0) 3 hours
 Designed to review general contract law requirements as required by the Texas Real Estate License Act, Broker-Lawyer committee knowledge, experience with all promulgated contract forms and other areas needed to keep students abreast of contract forms and legal applications. Prerequisite: RE 1304.

RE 2307 Real Estate Appraisal II

(3-0) 3 hours
 Provides a study of advanced techniques in real estate appraisal. The course includes the use of the market, cost and income approaches to property value and emphasizes methods of estimating commercial market value. Prerequisite: RE 1302.

Refrigeration and Air Conditioning

Faculty: Norman Witcher, chairman; James Bates.

Refrigeration, heating and air conditioning is one of the fastest growing industries in the world today. Food preparation and storage, personal comfort, medical procedures and industrial processes have been radically changed and improved by refrigeration. At present, the demand for trained personnel has far exceeded the supply and every new phase of the industry creates greater demands.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Govt 2301 U.S. and Texas Government	3
Math -- College Level	3
*General Education Elective	3
**PE (Any two one-hour activity courses)	2
Major Requirements	40
R/AC 1400 Basic Control Theory	4
R/AC 1401 Refrigeration Theory	4
R/AC 1505 General Welding	5
R/AC 2204 Refrigeration and Air Conditioning System Troubleshooting	2
R/AC 2302 Air Conditioning Design	3
R/AC 2401 Electrical Machinery and Control	4
***R/AC Electives (Any three four-semester-hour R/AC courses)	12
***R/AC Electives (Any one three-semester-hour R/AC courses)	3
Related requirements	6-7
Mgt 1304 Employee-Management Relationships	3
Engr 1301 Engineering Drawing or DT 1401 Technical Drafting I	3-4
Elective	3
Total Semester Hours	63-64

*General Education Electives: Any general education course selected from fine arts, humanities, mathematics, physical science or social science as approved by the department chairman.

**PE 1100 should be the first course taken in physical education.

***R/AC Electives: Select any course in the R/AC program not already required.

Students not desiring the A. A. S. degree may receive a certificate of technology by completing a minimum of 40 semester hours in R/AC courses.

R/AC 1400 Basic Control Theory

(3-3) 4 hours
 Introduces basic electricity and progresses to electric motors, design and function of starters, contractors, relays, capacitors, overloads and control circuits applicable to refrigeration and air conditioning industry. Lab fee required. Prerequisite: None. Corequisite: R/AC 1401.

R/AC 1401 Refrigeration Theory

(3-3) 4 hours
 Presents theory of a sound, basic understanding of heat transfer, behavior of gases, refrigeration cycle, component parts of the compression refrigeration machine and its accessories. Lab fee required. Prerequisite: None.

R/AC 1402 Plumbing Fundamentals	
(2-4)	4 hours
Presents theory and application of basic plumbing. Involves practical instruction in both new construction and repair work. Includes preparation for students interested in obtaining a state plumbing license. Lab fee required. Prerequisite: None.	
R/AC 1403 Commercial Refrigeration	
(3-3)	4 hours
Focuses on commercial refrigeration components. Designed for understanding of theory and application of metering devices, evaporators, compressors, condensers, driers, sight glasses, system accessories and sizing of walk-in and reach-in boxes. Lab fee required. Prerequisite: R/AC 1401.	
R/AC 1404 Heating	
(3-3)	4 hours
Includes gas controls, properties of gas and gas piping, gas combustion, burners, troubleshooting, venting of heating systems and electrical strip heat. Presents theories of control and principles of heat pumps, sizing, installing, servicing and troubleshooting. Lab fee required. Prerequisite: None.	
R/AC 1405 Fundamentals of Sheet Metal Pattern Drafting and Layout	
(3-3)	4 hours
Presents principles of basic sheet metal. Includes use of sheet metal tools, basic sheet metal layout and construction of components. Lab fee required. Prerequisite: None.	
R/AC 1505 General Welding	
(2-6)	5 hours
Introduces oxy-fuel and electric arc welding. Emphasizes torches and regulators, flame adjustment, soldering, silver soldering, brazing and arc welding on common metals and safe procedures for handling welding equipment. Lab fee required. Prerequisite: None.	
R/AC 2204 Refrigeration and Air Conditioning System Troubleshooting	
(2-0)	2 hours
Presents troubleshooting refrigeration and air conditioning systems. Emphasizes the mechanical refrigeration system. Prerequisite: R/AC 1400 and 1401.	
R/AC 2205 Mechanical Code	
(2-0)	2 hours
Presents mechanical codes used in refrigeration and air conditioning industry. Includes preparation for student interested in obtaining a state air conditioning license. Prerequisite: R/AC 1401 or industrial experience.	
R/AC 2302 Air Conditioning Design	
(3-0)	3 hours
Presents sizing and selecting air conditioning equipment and designing air distribution systems. Emphasizes estimating loads of residential and commercial applications. Lab fee required. Prerequisite: None.	
R/AC 2305 Refrigeration and Air Conditioning Business Operations	
(3-0)	3 hours
Designed to give basic understanding of setting up and operating a small business. Topics include types of ownership, types of loans, accounting, marketing, taxation, cash flow, legal aspects and equipment and material control. Prerequisite: None.	
R/AC 2308 Special Problems	
(1-5)	3 hours
R/AC 2208 Special Problems	
(1-3)	2 hours
R/AC 2108 Special Problems	
(1-1)	1 hour
Provides assigned problems to meet specific needs. Emphasizes modern techniques. All assignments made on individual basis. Lab fee required. Prerequisite: Consent of the department chairman.	
R/AC 2401 Electrical Machinery and Controls	
(3-3)	4 hours
Investigates the theory, principles, performance and construction of electric motors, generators, transformers, voltage regulators and various electro-mechanical circuits to control these devices. Introduces programmable controllers, making and reading of complex control diagrams. Lab fee required. Scientific calculator required. Prerequisites: R/AC 1400 or consent of the department chairman.	

R/AC 2405 National Electrical Code

(3-3) 4 hours
 Applies course information covering the National Electrical Code for industrial, commercial and residential wiring. Lab fee required. Prerequisite: None.

R/AC 2409 Building Energy Audit Training

(3-3) 4 hours
 Presents methods of performing a building energy audit. Identifies and evaluates energy conservation options available. Emphasizes savings opportunities in an understandable fashion. Lab fee required. Prerequisite: None.

Respiratory Care

Faculty: Phyllis Brunner, chairman; Elizabeth Essig, Tricia Putnam, Dr. John Bray, medical director; Dr. David Gloyna and Dr. Anthony Talbert, associate medical directors.

Through its ladder concept curriculum in respiratory care, Odessa College offers an intensive program for therapists and technicians. The therapist program requires two years of study and leads to an associate in applied science degree. The technician program requires one year of study and leads to a certificate.

Therapists and technicians employ a variety of techniques to assist in the treatment of cardiopulmonary diseases and abnormalities. They also perform diagnostic testing.

The curriculum balances general educational and technical courses with supervised clinical work in local hospitals under the direction of qualified therapists and technicians. Medical doctors proficient in pulmonary medicine provide medical direction. This setting provides students with an excellent opportunity for educational development and occupational competence.

Students are admitted prior to the second summer semester on a selected basis because of limited space in the clinical area of study. Requirements for admission are high school graduation or its equivalent, satisfactory achievement on the college entrance examination, evidence of good health, personal interview and approval of the admissions committee for the program.

Students may not receive a grade lower than "C" in any respiratory care course and must maintain a "C" average or better in all other courses. Students failing to meet these scholastic requirements will be dropped from the program. All respiratory care courses must be taken in the proper sequence as shown in the catalog and progression to the second year requires successful completion of the technician program.

All respiratory care students are required to have health and accident insurance. Liability insurance also is required and is a part of the regular college fee schedule.

The Odessa College respiratory therapist and technician program is accredited by the Council on Medical Education of the American Medical Association through the recommendations of the Joint Review Committee for Respiratory Therapy Education.

Students wishing to apply for admission or seeking additional information should contact the counseling center. All persons wishing to apply should submit their applications before June 15 of each year.

**Course of Study for Associate in Applied Science Degree
 and Course of Study for Certificate of Technology
 (Technician Option)**

First Year

Summer Session II

Course	Sem Hrs
Math College Level	3
Engl 1311	3

First Semester

Second Semester

Course	Sem Hrs	Course	Sem Hrs
Biol 1403	4	CS 1300	3
Spch 1310	3	RT 1112	1
RT 1101	1	RT 1312	3
RT 1111	1	RT 1222	2
RT 1300	3	RT 1332	3
RT 1304	3	*PE	1

Summer Sessions I and II

Course	Sem Hrs
RT 1140	1
RT 1360	3
RT 1333	3

**Therapist Option
Second Year**

Third Semester		Fourth Semester	
Course	Sem Hrs	Course	Sem Hrs
Chem 1101	1	Biol 2403	4
Chem 1301	3	Psy 1301	3
Govt 2301 or 2302	3	RT 2330	3
RT 2312	3	RT 2262	2
RT 2252	2	*PE	1
RT 2364	3	Elective	3

*PE 1100 should be the first course taken in physical education.

RT 1101 Fundamentals of Respiratory Care I Lab
(0-3) 1 hour
Applies techniques learned in RT 1300. Requires performance of all techniques in laboratory setting prior to performing them in a clinical setting. Lab fee required. Prerequisite: None. Corequisite: RT 1300.

RT 1111 Clinical Practicum I
(0-8) 1 hour
Provides initial exposure to hospital environment. Requires observation of administration of respiratory care modalities and patient assessment techniques. Stresses medical terminology necessary for a respiratory practitioner. Also provides opportunity to become familiar with sterilization techniques. Equipment fee of \$75 required. Prerequisite: None. Corequisites: RT 1101 and 1300.

RT 1112 Fundamentals of Respiratory Care II Lab
(0-3) 1 hour
Practices skills learned in RT 1312. Introduction of a mechanical ventilator and airway management. All techniques evaluated in laboratory prior to performance in clinical facility. Lab fee required. Prerequisite: RT 1101. Corequisite: RT 1312.

RT 1140 Respiratory Care Seminar
(1-0) 1 hour
Introduces most current literature in pulmonary care. Requires preparation of journal reports from recent publications. Provides a comprehensive review of competencies for the entry level technician. Prerequisite: RT 1312. Corequisite: RT 1333.

RT 1222 Clinical Practicum II
(0-16) 2 hours
Applies, in a clinical setting, skills learned in RT 1300. Permits rotation through critical care and pediatric hospital. Prerequisite: RT 1111. Corequisite: RT 1312.

RT 1300 Fundamentals of Respiratory Care I
(3-0) 3 hours
An in-depth presentation of oxygen therapy. Stresses other respiratory care modalities such as aerosol therapy, incentive spirometer and IPPB. Also includes arterial blood gas sampling and chest physiotherapy. Must be taken concurrently with RT 1101. Prerequisite: Admission to respiratory care program. Corequisite: RT 1101 and RT 1111.

RT 1304 Principles of Respiratory Care
(3-0) 3 hours
Introduces sciences used in respiratory care. Presents chemistry and its application in acid base balance. Introduces physics to emphasize Newton's laws, gas laws and measurement systems. Also introduces microbiology to emphasize techniques to identify bacteria, common disease-causing organisms. Prerequisite: Admission to respiratory care program. Corequisite: RT 1101, RT 1111 and RT 1300.

RT 1312 Fundamentals of Respiratory Care II
(3-0) 3 hours
Presents an extensive study of techniques involved in pharmacology. Introduces the theory and application of positive pressure. Presents techniques involved in airway management. Prerequisite: RT 1300. Corequisite: RT 1112, RT 1222 and RT 1332.

RT 1333 Clinical Practicum III

(0-27) 3 hours
 Applies to patient care skills learned in RT 1312. Emphasizes adult and pediatric intensive care. Requires assignment to general respiratory care. Testing fee of \$25 required. Prerequisites: RT 1222. Corequisite: RT 1140 and RT 1360.

RT 1360 Critical Care

(3-0) 3 hours
 Introduces third generation ventilators. Emphasizes clinical application of new modes of ventilation, including EMMV, pressure support and inspiratory assist. Presents clinical application of compliance curves. Also introduces clinical application of hemodynamic monitoring. Prerequisite: RT 1312. Corequisite: RT 1333.

RT 1332 Cardiopulmonary Pathophysiology

(3-0) 4 hours
 Introduces normal and abnormal physiology of cardiopulmonary system. Includes oxygen transport, gas exchange, electrophysiology of the heart, ABG interpretation and pulmonary function testing. Presents disorders that affect the cardiopulmonary system and their management. Prerequisites: RT 1300. Corequisite: RT 1312.

RT 2330 Clinical Specialties

(3-0) 3 hours
 This course will introduce students to other areas of medicine that are disorders encountered in clinical practice. An emphasis will be placed on disorders that are encountered in the critical care unit. Prerequisites: RT 2312 and RT 2364. Corequisite: RT 2262.

RT 2252 Clinical Practicum IV

(0-16) 2 hours
 Allows application of skills learned. Emphasizes care of critically ill patient. Permits rotation through operating room and pediatric and neonatal intensive care units. Requires continuing development of skills in respiratory care. Prerequisite: RT 1333. Corequisites: RT 2312 and RT 2364.

RT 2262 Clinical Practicum V

(0-16) 2 hours
 Integrates all previously learned skills. Requires rotation to adult, pediatric and neonatal intensive care units, home care and pulmonary rehabilitation. Students will simulate roles in management and education. Testing fee of \$60 required. Prerequisites: RT 2312, RT 2364 and RT 2252. Corequisite: RT 2330.

RT 2312 Cardiopulmonary Dynamics

(3-0) 3 hours
 Presents advanced concepts related to electrocardiography and hemodynamic monitoring. Requires learning techniques relating to clinical respiratory care. Prerequisite: RT 1312 and RT 1332. Corequisite: RT 2364.

RT 2364 Neonatal/Pediatric Respiratory Care

(3-0) 3 hours
 This course will introduce the student to neonatal and pediatric respiratory care. Topics to be covered include embryology, neonatal and pediatric abnormalities, disease and mechanical ventilation of the neonatal and pediatric patient. Prerequisite: RT 1312 and RT 1332. Corequisite: RT 2312.

Social Sciences

Faculty: Dr. Dick Kennedy, chairman; Dr. Brian Dille, Dr. Tom Heiting, Truett Hilliard, Jack Kitzmiller, Robert Porter, Dr. Helen Reinhart, Bill Rutherford, Dr. Bob Sturges, Dr. Kenneth Yeilding.

Social sciences deal with the three basic relationships that mankind has dealt with since time began. These relationships involve man with his fellow man (history, economics, government, psychology and sociology), man with God (religion) and man with himself (philosophy). No one can challenge the effect that philosophers, historical events, political and social theories, economic ideas and religious concepts have had on mankind.

The four-semester curricula outlined below lead to an associate in arts degree in economics, government and history. Courses are offered in philosophy and religion, but they should be taken as electives only. Students desiring to major in philosophy or religion should consult with the senior college or upper-level institution to which they will transfer regarding transferability of courses.

The social sciences department also offers honors courses in both government and history. These classes, which have limited enrollment, provide an innovative and non-traditional learning experience for students who qualify. Contact the department chairman or the director of honors for more information.

The social sciences provide students with analytical tools needed for effective participation in a democratic society; they also open doors to various career opportunities. A background in the social sciences is particularly suitable to government employment (such as in the Social Security Administration), social welfare employment, the Federal Reserve banks and other types of government jobs. The social sciences also provide a background that is useful for a career in business, teaching and other professions.

**Course of Study for Associate in Arts Degree
(Economics, Government and History Options)**

	Semester Hrs
General Education Requirements	43
*Approved Elective	3
Elective	3
Engl 1311 Composition and Rhetoric	3
Engl 1312 Composition and Literature	3
Engl (Sophomore Level)	6
Foreign Language	14
Math 1341 College Algebra or More Advanced	3
Math 1361 Mathematical Statistics	3
**PE (Any two one-hour activity courses)	2
Spch 1310 Introduction to Speech Communication	3
Major Requirements	24
Eco 2301 Introduction to Economics	3
Eco 2302 Economic Problems	3
Govt 2301 U.S. and Texas Government	3
Govt 2302 American National Government	3
Hist 1301 History of Modern Europe to 1815	3
Hist 1302 History of Modern Europe since 1815	3
***Hist 2301 U.S. History to 1877	3
***Hist 2302 U.S. History from 1877	3
Total Semester Hours	67

*Approved Electives: Hist 2303 and 2304; Psy 2303; and Soc 2302 and 2303.
 **PE 1100 should be the first course taken in physical education.
 ***Hist 2303 may be substituted for either Hist 2301 or 2302.

Economics

- Eco 1301 Introduction to Economics (ECON 1301)**
 (3-0) 3 hours
 Permits average citizen to increase economic literacy. Includes discussion of economic resources, basic economic decisions, price system, role of money and banking, problems of inflation and employment and other personal and public economic issues. Recommended for management majors and others who want a general knowledge of economics. Does not replace Eco 2301 and/or 2302. Prerequisite: None.
- Eco 2301 Principles of Economics (ECON 2302)**
 (3-0) 3 hours
 Designed to provide fundamental analytic concepts of economic theory and practice. Emphasizes microeconomic theory. Includes basic theory, price and output determination under varying conditions and income distribution and factor prices. Prerequisite: None.
- Eco 2302 Economic Problems (ECON 2301)**
 (3-0) 3 hours
 Provides basic analytic concepts relevant to aggregate economy. Emphasizes macroeconomic theory and practice. Includes money and banking, national income and employment, economic growth, public spending and international economy. Prerequisite: None.

Government

- Govt 2301 U.S. and Texas Government (GOVT 2301)**
 (3-0) 3 hours
 Traces development of American political thought, the origins and development of the U.S. Constitution, federalism, public opinion and the political processes of American democracy. Includes the Texas Constitution, governor, state Legislature, court system, bureaucracy, state politics and local government. This course satisfies the government requirement for teacher certification by the Texas Education Agency. Prerequisite: None.

Govt 2302 American National Government (GOVT 2302) 3 hours
 (3-0) 3 hours
 Examines the presidency, Congress, courts and bureaucracy of U.S. government. Includes study of domestic and foreign policy issues such as managing the economy, national defense, welfare, civil liberties and civil rights. This course does not satisfy the government requirement for teacher certification by the Texas Education Agency. Prerequisite: None.

Govt 2303 Introduction to International Relations (GOVT 2303) 3 hours
 (3-0) 3 hours
 Presents theory and practice of international as well as foreign and domestic policy issues. Prerequisite: None.

Govt 2304 Introduction to Public Administration (GOVT 2331) 3 hours
 (3-0) 3 hours
 Presents processes involved in management of men and materials in accomplishment of purposes of government. Analyzes structure and procedure of administrative or executive branch of government with particular reference to national, state and local governments in United States. Prerequisite: None.

History

Hist 1301 History of Modern Europe to 1815 (HIST 2311) 3 hours
 (3-0) 3 hours
 Surveys social, economic and political developments in Medieval and Modern Europe. Emphasizes the Renaissance, Protestant Reformation, overseas expansion during 16th and 17th centuries, struggle for parliamentary government in England, French Revolution and Napoleonic period. Prerequisite: None.

Hist 1302 History of Modern Europe Since 1815 (HIST 2312) 3 hours
 (3-0) 3 hours
 Includes study of results of the Napoleonic era, rise of liberalism and nationalism, causes and results of World War II, post-war problems and prospective solutions. Prerequisite: None.

Hist 2301 United States History to 1877 (HIST 1301) 3 hours
 (3-0) 3 hours
 Deals with European background, establishment of colonial foundations, rise of American nationality, growth and sectional crisis, and the Civil War and Reconstruction. Prerequisite: None.

Hist 2302 United States History from 1877 (HIST 1302) 3 hours
 (3-0) 3 hours
 Deals with the growth of big businesses and accompanying problems. Includes American imperialism, causes and results of World War I, causes of World War II, post-war adjustments and prospective solutions. Prerequisite: None.

Hist 2303 History of Texas (HIST 2301) 3 hours
 (3-0) 3 hours
 Surveys history of Texas. Stresses European approach to Texas, Spanish and French rivalry, exploration and control, Anglo-American colonization, relations with Mexico, Texas Revolution, Texas as a Republic, annexation, statehood, reconstruction and other political and economic developments. Prerequisite: None.

Hist 2304 Afro-American History (HIST 2381) 3 hours
 (3-0) 3 hours
 Surveys role and contributions of Afro-Americans to development and culture of the United States. Prerequisite: None.

Philosophy and Religion

Phil 2301 Introduction to Philosophy I (PHIL 1301) 3 hours
 (3-0) 3 hours
 Presents an adventure in ideas. Asks anew ultimate questions about the significance of life. With insights gleaned from world's greatest philosophers, students seek to clarify own ideas and beliefs concerning themselves, their world and their ultimate destiny. Prerequisite: None.

Phil 2302 Introduction to Philosophy II (Ethics) (PHIL 2306) 3 hours
 (3-0) 3 hours
 Introduces ethical theories based on answers given by the world's greatest philosophers to the questions, "What makes acts right?" and "What is the good life?" Discusses nature of goodness, duty and freedom. Considers selected ethical problems in light of each basic ethical system. Prerequisite: None.

Bib 1101 Acts of the Apostles (BIBL 1371) 1 hour
 (1-0) 1 hour
 Studies expansion of Christian beliefs, practices and fellowships from Palestine to outlying parts of the Roman Empire. Includes personality study of Peter, John, Paul and other apostles. Prerequisite: None.

- Bib 1301 Old Testament History** (BIBL 1372) 3 hours
(3-0)
Introduces survey of the Old Testament. Emphasizes historical setting, types of religious literature and religious element underlying the whole. Prerequisite: None.
- Bib 1302 New Testament History** (BIBL 1373) 3 hours
(3-0)
Introduces survey of the New Testament. Emphasizes life and teachings of Jesus as found in the Gospels, expansion of early Christianity, a brief study of Paul's epistles, the general epistles and Revelation. Prerequisite: None.
- Bib 2301 History of the Life of Christ** (BIBL 2371) 3 hours
(3-0)
Presents a study of the life of Christ as portrayed by Matthew, Mark, Luke and John. Prerequisite: None.
- Bib 2302 The Life and Letters of Paul** (BIBL 2372) 3 hours
(3-0)
Consists of a study of the life and ministry of the apostle Paul. Examines his writings and central ideas. Prerequisite: None.
- Relg 1301 Philosophy of Religion** (PHIL 2321) 3 hours
(3-0)
Examines the nature and meaning of religion and religious expression. Emphasizes development of religious thinking in western civilization. Includes faith and reason, religion's authority, science and religion, problems and implications of freedom, evil and conscience. Prerequisite: None.
- Relg 1302 History of Religion** (PHIL 1316) 3 hours
(3-0)
Investigates historically the development of the world from prehistory to modern times. Emphasizes role of religions in world history. Prerequisite: None.
- Relg 1303 Comparative Religions** (PHIL 1304) 3 hours
(3-0)
Surveys religions of the world. Includes Hinduism, Buddhism, Confucianism, Taoism, Shinto, Judaism, Christianity and Islam. Prerequisite: None.

Surgical Technology

Faculty: Leola Rutledge, chairman.

The surgical technology program prepares graduates to function in the operating room as surgical technologists under the direction of an operating room registered nurse. Duties include maintaining a safe environment for patients undergoing surgery, transporting patients, preparing supplies, operating equipment, handling instruments and serving as a member of the surgical team.

The first semester courses include medical terminology, asepsis, microbiology, pharmacology, sterilization/disinfection and an introduction to clinical experience. Anatomy and physiology and human development also are introduced. During the second semester, anatomy and physiology are continued, and the practicum and didactic instruction are expanded to include wound healing, anesthesia and surgical procedures. Opportunity also is given in the practicum to increase knowledge and skills in general surgical procedures. The six-week summer session allows students to perfect skills under supervision in the clinical sites.

Admission requirements to the program include submission of a completed Odessa College application, program application, high school graduation or its equivalent (GED) and evidence of good health. Also, prospective students must make a satisfactory score on the Allied Health Aptitude Test. Upon completion of the above, students must make arrangements for an interview with the program director.

Students may be required to take some college placement tests. Unsatisfactory scores on these placement or entrance tests may require that additional courses be taken concurrently with, or prior to, the regular curriculum.

All courses -- including the academic courses -- in the curriculum are required and must be completed no later than the prescribed semester with a minimum grade of "C." Progression to the next semester cannot be accomplished if a grade of "D" or "F" is received in any course.

All surgical technology students are required to have health and accident insurance. Liability insurance also is required and is a part of the regular college fee schedule.

Students who successfully complete the program receive a certificate of technology. Those interested in furthering their education may take the courses for an associate in applied science degree.

The Odessa College surgical technology program is accredited by the Committee on Allied Health Education and Accreditation with recommendations of the Accreditation Review Committee on Education for the Surgical Technologist.

Course of Study for Associate in Applied Science Degree**First Year**

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 1100	1	Biol 1405	4
Biol 1404	4	Hed 1301	3
HD 2301	3	ST 1601	6
ST 1611	6	ST 1602	6
ST 1411	4		

Summer Session I

Course	Sem Hrs
ST 1503	5

Second Year

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 2403	4	CS 1300	3
Engl 1311	3	Engl 1312	3
Govt 2301 or 2302	3	PE	1
Math -- College Level	3	Psy 1301	3
*PE	1	Spch 1310	3
Elective	3		

*PE 1100 should be the first course taken in physical education.

Course of Study for Certificate of Technology

First Semester		Second Semester	
Course	Sem Hrs	Course	Sem Hrs
Biol 1100	1	Biol 1405	4
Biol 1404	4	Hed 1301	3
HD 2301	3	ST 1601	6
ST 1401	4	ST 1602	6
ST 1411	4		

Summer Session I

Course	Sem Hrs
ST 1503	5

ST 1503 Surgical Technology Practicum III

(0-32) 5 hours
Offers extended clinical experience with rotation through surgical specialties. Prerequisites: ST 1611, ST 1601, ST 1411, ST 1602 and all academic courses.

ST 1411 Surgical Technology Practicum I

(0-14) 4 hours
Introduces skills in maintaining safe environment, patient safety, transportation of patients, care of instruments, aseptic technique and related nursing procedures. Lab fee required. Prerequisite: None. Corequisite: ST 1611.

ST 1601 Principles of Surgical Technology

(6-2) 6 hours
Presents operating room techniques, surgical procedures, record keeping and responsibilities of the surgical technologist. Prerequisites: ST 1611 and ST 1411. Corequisite: ST 1602.

ST 1602 Surgical Technology Practicum II

(0-21) 6 hours
Includes assignments in surgery for experience in all commonly done procedures, with opportunity to develop knowledge in specialty areas. Prerequisites: ST 1611 and ST 1411. Corequisite: ST 1601.

ST 1611 Introduction to Surgical Techniques

(6-2) 6 hours
Introduces career of surgical technologist. Includes terminology, weights and measures, medical-legal aspects, ethics, patient care and hospital and operating room environment. Prerequisites: None. Corequisite: ST 1411.

Welding Technology

Faculty: Duane Nobles, chairman.

Welding and cutting are among the most important methods used in the fabrication and construction of products and structures made of metal. The welding program provides the student with sufficient skill in electric arc and gas welding procedures for entry employment in these occupations. Students completing the associate degree program will have sufficient background in mathematics, communications, blueprint reading, and layout to interpret engineers' plans and instructions, and to work as a supporting technician with minimum orientation.

Course of Study for Associate in Applied Science Degree

	Semester Hrs
General Education Requirements	17
Engl 1311 Composition and Rhetoric	3
Spch 1310 Introduction to Speech Communication	3
Math -- College Level	3
Govt 2301 U.S. and Texas Government	3
*PE (Any two one-hour activity courses)	2
General Education Elective	3
Major Requirements	44
WT 1401 Blueprint Reading and Drawing or DT 1401 Technical Drafting I	4
WT 1501 Basic Shielded-Metal Arc Welding	5
WT 1502 Oxy-Fuel Welding	5
WT 1503 Intermediate Shielded-Metal Arc Welding	5
WT 1504 Basic Layout	5
WT 2501 Advanced Shielded-Metal Arc Welding	5
WT 2503 Gas Metal Arc Welding	5
WT 2504 Gas Tungsten Arc Welding	5
WT 2506 Metallurgy	5
Related Requirements	5
Elective	5
Total Semester Hours	64

*PE 1100 should be the first course taken in physical education.

Students not desiring the A.A.S. degree may receive a certificate of technology by completing a minimum of 44 semester hours in WT courses and one technical elective.

WT 1401 Blueprint Reading and Drawing

(2-4) 4 hours
Presents fundamental drafting used in welding industry. Emphasizes fabrication prints, dimensioning, sectional views, symbols and visualization of objects in pictorial form. Requires some shop print drawing. Prerequisite: Consent of the department chairman.

WT 1501 Basic Shielded-Metal Arc Welding

(2-6) 5 hours
Presents basic principles and practices involving electric arc welding and oxy-acetylene cutting. Includes related theory in field of metallurgy applicable to welding on common metals. Stresses orientation, safety, operation and machine maintenance. Lab fee required. Prerequisite: None.

WT 1502 Oxy-Fuel Welding

(2-6) 5 hours
Introduces oxy-fuel welding, cutting and preparing metal for welding. Emphasizes torches and regulators, flame adjustment for cutting and welding, applying hard surfacing, solder, silver solder, brazing and safe procedures for handling oxy-fuel equipment. Lab fee required. Prerequisite: None.

WT 1503 Intermediate Shielded-Metal Arc Welding

(2-6) 5 hours
Emphasizes proper execution of all-position V-groove carbon steel plate and pipe welding with "open stringer." Uses AWS testing standards. Lab fee required. Prerequisite or corequisite: WT 1501 or consent of the department chairman.

WT 1504 Basic Layout

(2-6) 5 hours
Emphasizes constructing layouts according to specifications. Stresses related theory and practice involved in design of welded fittings and structures. Lab fee required. Prerequisite or corequisite: WT 1503 or consent of the department chairman.

WT 1505 General Welding

(2-6) 5 hours
 Introduces oxy-fuel and electric arc welding. Emphasizes torches and regulators, flame adjustment, soldering, silver soldering, brazing, and arc welding on common metals and safe procedures for handling welding equipment. Designed for the non-welding major. Lab fee required. Prerequisite: Consent of the department chairman.

WT 2501 Advanced Shielded-Metal Arc Welding

(2-6) 5 hours
 Includes execution of all types of welds on various alloys and a study of electrodes. Continues fabrication and layout techniques with attention devoted to piping, job planning and cost factors. Emphasizes welding carbon steel plate and pipe with LH 7018 electrodes. Lab fee required. Prerequisite: WT 1503 or consent of the department chairman.

WT 2503 Gas Metal Arc Welding

(2-6) 5 hours
 Introduces gas metal arc welding (GMAW) on mild steel, aluminum and stainless steel. Includes different shield gases. Emphasizes mixture of gases and their effect on arc and welds. Lab fee required. Prerequisite or corequisite: WT 1503 or WT 2501 or consent of the department chairman.

WT 2504 Gas Tungsten Arc Welding

(2-6) 5 hours
 Introduces gas tungsten arc welding (GTAW) and carbon arc cutting of various metals. Presents advantages and disadvantages of different shield and purge gases. Lab fee required. Prerequisite or corequisite: WT 1502 or consent of the department chairman.

WT 2505 Industrial Fabrication

(2-6) 5 hours
 Provides job-related experience and practical application of print reading related to construction of non-critical industrial items. Includes building skids, fireboxes, non-pressure vessels and other noncoded items constructed by local industry. Lab fee required. Prerequisite or corequisite: WT 1504 or consent of the department chairman.

WT 2506 Metallurgy

(2-6) 5 hours
 Includes instruction in properties and uses of ferrous metals and alloys as well as uses of nonferrous metals and alloys. Includes forging and heat treating steels, specification numbers of steel and application of industrial tests to determine alloying elements. Stresses shop organization and management as well as shop safety. Lab fee required. Prerequisite or corequisite: MT 2502 or WT 2501 or consent of the department chairman.



Physics
Psychology
X-Ray
Radio/TV

ADMISSIONS

Admissions Policies

Welcoming all adults who want to learn, Odessa College has an open-door admissions policy. Whether high school graduates or not, all adults interested in learning can be admitted to Odessa College.

A counseling center is available to all students. Counselors discuss career and educational goals with students so that an educational plan can be drawn for each individual. The testing center also makes available various types of tests to help students determine their aptitudes, interests, scholastic strengths and weaknesses and other information helpful to a student making a career decision.

As a community college, Odessa College has students of all ages, from recent high school graduates to senior citizens. Many students are employed as they pursue their education. The college welcomes all students and intends to provide educational services to students of all ages and educational needs. Each student is important and each student finds his or her place at Odessa College.

Procedure

Students applying for admission should have their academic records sent to the director of admissions at Odessa College as soon as possible and should complete an application for admission. Students whose records are incomplete at the time of registration may be admitted to Odessa College, although some records must be furnished prior to registration. All necessary records must be furnished before a transcript from Odessa College can be obtained.

Students may be admitted to Odessa College by the following methods:

- * **By High School Graduation:** Graduates of accredited high schools satisfy minimum requirements for admission. These students must submit official copies of their high school transcripts which show the date of their graduation.
- * **Through the Early Admission Program:** When high school seniors are within four units or 12 quarter credits of graduation from high school, they may enroll in a maximum of two courses per semester at Odessa College. Early admission students must submit the prescribed documentation signed by a parent or guardian, their high school counselor and the high school principal.
- * **By Concurrent Enrollment:** High school students may earn credit for a high school course and college credit for enrollment in a college course. For example, a high school student might enroll in an approved history course at Odessa College, attend only the college history course and be granted credit at both the high school and the college levels. To participate in the program, high school students must have the approval of their principal and must have or exceed an overall grade point average of 3.0 in the semester immediately preceding enrollment in a college course, or have scored at or above the 90th percentile on the achievement subtest in the content area for which the students wish to enroll. Any high school student wishing to participate in the concurrent enrollment program must apply to his or her high school counselor who will determine the student's eligibility for the program and the course load.
- * **By Individual Approval:** All persons who are at least 18 years of age and whose class has graduated from high school may be admitted to Odessa College if it is determined that those individuals can benefit from study at this institution. Normally, persons admitted on individual approval will be asked to take basic skills tests before registering for classes in order to ensure that they are placed in the proper classes.
- * **By Written Examination:** Persons who have not graduated from high school may be admitted if they have passed the General Educational Development Test (GED), if they are 17 years of age, if they have not attended high school for one or more semesters and if they do not plan to return to high school. Proof that the GED has been passed must be submitted.
- * **By Re-entry:** Former students in good standing who have not attended another college since enrolling at Odessa College are eligible for readmission.
- * **By Transfer from Another College:** Persons transferring from another accredited college or university are ordinarily eligible for admission if they are eligible for readmission to the institution from which they are transferring. Scholastic deficiencies of transfer students will be reviewed by the director of admissions who will determine their eligibility. Transfer students must submit an official copy of their college or university transcripts as a final condition for admission. If possible, that record should be submitted prior to registration. Transfer students who are admitted to Odessa College but who do not submit prior educational records will be denied certified copies of their Odessa College transcripts. Transfer students must provide documentation of their TASP status prior to registration.

Placement Examination

To insure that all students have the opportunity to succeed in their academic pursuits, Odessa College requires that students take a placement examination in reading, writing and mathematics if they are enrolling in those subjects. If the results of the placement examination indicate a need for remediation in any of these areas, the student will be immediately placed into the appropriate remedial classes. Odessa College counselors use the results of the placement examination to enroll students in classes in which they have the necessary skills to succeed. The ASSET placement test is administered during registration periods and monthly in the testing center in Room 220 of the Student Union Building.

Orientation Requirement

HD 1101, Orientation, is a course designed to assist the student who is enrolled in college for the first time in gaining the knowledge necessary to function effectively in a college environment. It covers the policies, rules and regulations of Odessa College, as well as study skills and the state-mandated TASP testing requirements. The student will become acquainted with the college catalog, the student handbook and the campus.

At the first class meeting, the student will meet with the instructor for one hour and then will complete the course through eight hours of self-paced activities and a one-hour exam over the material covered in the course.

One hour of credit is awarded for the class.

All students who have never attended college before are required to enroll in HD 1101 during their first semester of attendance at Odessa College.

Texas Academic Skills Program (TASP) Testing Requirement

The Texas State Education Code requires that all students "who enter public institutions of higher education in the fall of 1989 and thereafter must be tested for reading, writing and mathematics skills." This includes all "full-time and part-time freshmen enrolled in a certificate or degree program," any non-degree students prior to the "accumulation of nine or more [college] credit hours or the equivalent," and "any transfer students with fewer than 60 semester credit hours or the equivalent who have not previously taken the tests."

Performance on the test will not be used as a condition of admission. The test fee will be paid by the student. Test fee waiver vouchers are available from the financial aid office for students who qualify as economically disadvantaged. If the student does not take the TASP test before the accumulation of nine college-level credits, he or she will only be allowed to take remedial courses until the TASP test is taken.

If a student has failed one or more portions of the TASP test, Texas state law requires that student to be enrolled in some form of remediation continuously until he or she passes all portions of the test. Furthermore, state law requires that the student who is enrolled in remediation as a result of a TASP failure must satisfactorily participate in that remedial program. Odessa College defines the student's satisfactory participation in remediation as consistent attendance coupled with continuous progress through the content of the remedial program. The following policies apply to any student placed in a remedial program as a result of his or her failing a portion of the TASP test:

1. In a three-hour credit course, if the student is absent for six (6) or more consecutive hours of the course's scheduled instruction, he or she is subject to complete withdrawal from the college. If the student is absent for a total of nine (9) hours of instruction throughout the course, he or she is subject to complete withdrawal from the college.
2. In a flexible-entry remedial course or program, if the student fails to meet with the instructor within one (1) week following registration or fails to meet with the instructor at least once every two (2) weeks thereafter, he or she is subject to complete withdrawal from the college.

Immunizations

Nursing and allied health students: Students enrolled in health related courses (student health care providers) that involve direct patient contact in medical care facilities, regardless of number of courses taken, must produce evidence of: a) measles, mumps, rubella (MMR) vaccine, as stated above; b) tetanus/diphtheria -- effective July 1, 1991, student health care providers must have received one dose of tetanus/diphtheria vaccine within the past 10 years.

Polio: Polio vaccine is not required for students to attend Odessa College but may be required at certain health facilities where students may have clinical training.

Provisional enrollment: All new and transfer students referred to above may be provisionally enrolled for up to one semester or quarter. The provisional enrollment will allow students to attend classes while obtaining the required vaccinations and documentation (immunization records) of required vaccinations. **Student health care providers cannot be provisionally enrolled without receipt of at least one dose of MMR vaccine, if direct patient contact will occur during provisional enrollment period.**

International Student Admissions

International students (F-1 visa) must meet all regular admissions criteria. In addition, they must take and score at least 575 on the Test of English as a Foreign Language (TOEFL). Scores between 500 and 575 will be considered on an individual basis if the applicant has U.S. sponsorship acceptable to Odessa College. A financial statement is also required. International students enrolling at Odessa College will need a minimum of \$8,000 for a calendar year for educational and living expenses, in addition to funds for transportation. International students must make a \$5,000 (U.S.) cash deposit with the college or present evidence of adequate medical insurance; they must also make a cash deposit (U.S.) for the amount of one-way airplane transportation to the home country. Deposits are refundable when an international student is no longer enrolled at Odessa College.

All required documents and information must be received in accordance with the following dates if international students expect their application to be processed for the semester indicated:

Summer School	March 3
Fall Semester	June 1
Spring Semester	Oct. 15

Academic records for international students must be official and must be translated into English. Copies will not be accepted. International students wishing to transfer to Odessa College from another U.S. college or university must also present official transcripts of all U.S. college work along with recommendations from the foreign student advisor from the school previously attended.

All applications from international students must be accompanied by a \$20 application fee. Persons wanting additional information on international student admissions should write to:

International Student Admissions
Odessa College
201 West University
Odessa, TX 79764

Early Registration

Early registration for a semester allows students, with the help of college counselors and faculty members, to select proper courses and to complete all registration prior to regular registration.

Students who register early have the option of paying fees at the time of early registration or by a specified later date. Students who do not pay and who do not have their early registration bill validated by the deadline date will automatically lose those classes chosen during early registration and will have to repeat the course selection process during the regular registration period. Schedule changes may not be made prior to the official schedule change dates for that semester.

Early registration begins from one to two months prior to regular registration. Exact information can be secured from the counseling center, the news and information office or the registrar's office. Students who register early have the advantage of selecting courses, instructors and times which best suit their needs.

Auditing

Permission to audit a course at Odessa College is granted only to those students who have already received credit for the course. The following items apply to persons seeking permission to audit:

1. **A student may not register for an audit until after the first class day.**
2. Audit permission must be obtained from the appropriate department chairman.
3. There must be seats available before an auditing student will be permitted to enter a particular class.
4. Auditing students are not required to meet course prerequisites listed in the catalog.
5. Students auditing a course may not under any circumstances claim credit for the course.
6. A student registering for a course may not change from audit to credit or from credit to audit after the 12th class day during a long semester or fourth class day during a summer term.
7. Charges for auditing a course are the same as for regular registration.

Class Membership

The only way to become an official member of a class at Odessa College is by following established procedures for registering and by paying tuition and fees. No person is officially enrolled until all registration requirements have been satisfied and all charges have been paid in full. Installment payment of tuition and fees is not permitted.

Change of Address

Students who change residence following registration must notify the registrar's office immediately. Students are held responsible for any communications mailed to them from the college to the last address which they supplied. Moving from a previous address does not relieve students of the responsibility of requests made through correspondence.

Equal Opportunity

Odessa College is committed to the basic right of all people to have an equal opportunity for education or employment at this institution. Every effort will be made by the board of trustees, the administration and the faculty to defend this right and to vigorously seek to promote its implementation in all areas of the institution.

In accordance with its admissions standards, Odessa College will admit as students any persons, who can benefit from the instructional programs offered. In addition, Odessa College will strive to meet post-secondary educational needs of its students by restructuring current programs and by creating new programs when so doing will benefit the students.

Title IX of the Civil Rights Restoration Act prohibits sex discrimination in all programs of institutions which receive federal funds. Inquiries regarding Title IX should be made to the Title IX compliance person in the personnel office, or to the Assistant Secretary for Civil Rights at the Department of Education, Washington, D.C. 20202.

Directory Information

Odessa College classifies as directory information the following student data: name, address, telephone number, date and place of birth, major field, participation in official activities and sports, weight and height of athletic team members, dates of attendance, degrees and awards received and most recent educational institution attended. Such information is normally released to individuals upon request. Students who do not want this directory information released must file a written statement to that effect with the registrar's office. The written statement must be filed each semester.

Identification Cards

Odessa College requires photo identification cards for all on-campus, credit-hour students. ID cards are used for admission to Odessa College student activities events, athletic events, fine arts presentations and library privileges. ID card fees are non-refundable in case of withdrawal from the college.

Full information regarding ID cards can be obtained from the business office, located in the Administrative Wing of the Student Union Building.

Oath of Residency

House Bill 1147, passed by the 69th Texas Legislature, requires each public institution of higher education to obtain an oath of residency from each individual who qualifies as a resident for tuition purposes.

Documentation of Residency

In addition to the oath of residency, each student who wishes to be classified as an in-state student for tuition purposes is required to submit substantiating documentation to affirm Texas residency. Documentation must show that the student has been residing in Texas for 12 consecutive months prior to enrollment in a public institution of higher education in the state. Documents acceptable for this purpose include, but are not limited to, the following:

1. Texas high school transcript (if you graduated within the past 12 months).
2. Employer statement of date of employment (employment dates must cover the past 12-month period).
3. Permanent Texas driver's license (at least one year old). Generally the license expiration date minus date of enrollment should not exceed three years.
4. Texas voter registration card (must cover the 12-month period prior to enrollment).
5. Lease agreement for house or apartment which includes the student's name and the period covered (must cover the 12-month period prior to enrollment).
6. Utility bills for the past 12 months or the 12-month history from one of the utility companies (bills for all 12 months required).
7. Property tax statement or other appropriate evidence of ownership of property in Ector County subject to ad valorem taxation by the junior college district.
8. Warranty deed or other proof of ownership of a home in Texas.

The Rules and Regulations for Determining Residence Status, published by the Texas Higher Education Coordinating Board are available for review in the office of the director of admissions and registrar. Questions regarding residence status or substantiating documentation should be directed to that office.

Any change in resident status for tuition purposes must be initiated by the student. Contact the admissions office at 335-6404 for information concerning a change in residency status.

Financial Information

Please note that the following tables reflect the 1992-93 tuition and fee rates developed by the Odessa College Board of Trustees. The schedule is subject to revision by the Legislature of the state of Texas, the Odessa College Board of Trustees and/or the administration of Odessa College.

These tables reflect only the tuition and fees required of ALL STUDENTS.

Parking fees and other courses may be applicable.

See: LABORATORY FEES
 PRIVATE LESSON FEES
 TRAVEL FEES
 TESTING FEES
 MISCELLANEOUS FEES
 on pages 155-156 for additional charges.

IN-DISTRICT TEXAS RESIDENT:					
Semester Hours	Tuition	Building Use Fee	Activity Fee	ID Fee (Non-Refundable)	** TOTAL BEFORE LAB, PARKING & OTHER FEES
1	36.00	6.00	1.00	1.00	44.00
2	36.00	12.00	2.00	1.00	51.00
3	36.00	18.00	3.00	1.00	58.00
4	48.00	24.00	4.00	1.00	77.00
5	60.00	30.00	5.00	1.00	96.00
6	72.00	36.00	6.00	1.00	115.00
7	84.00	42.00	7.00	1.00	134.00
8	96.00	48.00	8.00	1.00	153.00
9	108.00	54.00	9.00	1.00	172.00
10	120.00	60.00	10.00	1.00	191.00
11	132.00	66.00	11.00	1.00	210.00
12	144.00	72.00	12.00	1.00	229.00
13	156.00	78.00	13.00	1.00	248.00
14	156.00	84.00	14.00	1.00	255.00
15	156.00	90.00	15.00	1.00	262.00
16	156.00	96.00	16.00	1.00	269.00
17	156.00	102.00	17.00	1.00	276.00
18	156.00	108.00	18.00	1.00	283.00
19	156.00	114.00	19.00	1.00	290.00
20	156.00	120.00	20.00	1.00	297.00
21	156.00	126.00	21.00	1.00	304.00
22	156.00	132.00	22.00	1.00	311.00
23	156.00	138.00	23.00	1.00	318.00

OUT-OF DISTRICT TEXAS RESIDENT					
Semester Hours	Tuition	Building Use Fee	Activity Fee	ID Fee (Non-Refundable)	**TOTAL BEFORE PARKING & OTHER FEES
1	51.00	6.00	1.00	1.00	59.00
2	51.00	12.00	2.00	1.00	66.00
3	51.00	18.00	3.00	1.00	73.00
4	68.00	24.00	4.00	1.00	97.00
5	85.00	30.00	5.00	1.00	121.00
6	102.00	36.00	6.00	1.00	145.00
7	119.00	42.00	7.00	1.00	169.00
8	136.00	48.00	8.00	1.00	193.00
9	153.00	54.00	9.00	1.00	217.00
10	170.00	60.00	10.00	1.00	241.00
11	187.00	66.00	11.00	1.00	265.00
12	204.00	72.00	12.00	1.00	289.00
13	221.00	78.00	13.00	1.00	313.00
14	221.00	84.00	14.00	1.00	320.00
15	221.00	90.00	15.00	1.00	327.00
16	221.00	96.00	16.00	1.00	334.00
17	221.00	102.00	17.00	1.00	341.00
18	221.00	108.00	18.00	1.00	348.00
19	221.00	114.00	19.00	1.00	355.00
20	221.00	120.00	20.00	1.00	362.00
21	221.00	126.00	21.00	1.00	369.00
22	221.00	132.00	22.00	1.00	376.00
23	221.00	138.00	23.00	1.00	383.00

OUT-OF-STATE OR FOREIGN:					
Semester Hours	Tuition	Building Use Fee	Activity Fee	ID Fee (Non-Refundable)	**TOTAL BEFORE LAB, PARKING & OTHER FEES
1	240.00	6.00	1.00	1.00	248.00
2	240.00	12.00	2.00	1.00	255.00
3	240.00	18.00	3.00	1.00	262.00
4	240.00	24.00	4.00	1.00	269.00
5	240.00	30.00	5.00	1.00	276.00
6	240.00	36.00	6.00	1.00	283.00
7	240.00	42.00	7.00	1.00	290.00
8	240.00	48.00	8.00	1.00	297.00
9	240.00	54.00	9.00	1.00	304.00
10	240.00	60.00	10.00	1.00	311.00
11	240.00	66.00	11.00	1.00	318.00
12	240.00	72.00	12.00	1.00	325.00
13	240.00	78.00	13.00	1.00	332.00
14	240.00	84.00	14.00	1.00	339.00
15	240.00	90.00	15.00	1.00	346.00
16	240.00	96.00	16.00	1.00	353.00
17	240.00	102.00	17.00	1.00	360.00
18	240.00	108.00	18.00	1.00	367.00
19	240.00	114.00	19.00	1.00	374.00
20	240.00	120.00	20.00	1.00	381.00
21	240.00	126.00	21.00	1.00	388.00

Laboratory Fees

Art Metals and Jewelry (Art 2341, 2342)	10.00
Auto Body	24.00
Automotive Technology (Except AT 1301)	24.00
Biology (Except Biol 1100, 1300)	15.00
Building Trades	24.00
Chemistry (Chem 1101, 1102, 2101, 2102, 2103)	15.00
Child Development (Except CD 1304, 1310, 2110, 2301 and 2308)	10.00
Clinical Laboratory Science (1211, 1212, 2211 and 2212)	15.00
Computer Information Systems (Except CIS 1200, 2110 -- Internship and Special Problems)	15.00
Computer Science	15.00
Culinary Arts (Except 1222, 1320, 1321, 2215, 2217, 2223, 2224)	10.00
Culinary Arts (CA 2215)	24.00
Dance (Danc 2330)	5.00
Diesel Mechanics	24.00
Drafting (Except 1401, 2408 and 2418)	5.00
Drafting 2408 and 2418	24.00
Earth Science	15.00
Electrical and Electronics (Except ET 2201, 2203, 2205, 2302 and 2305)	24.00
Emergency Medical Technology (1501, 2801 and 2802)	15.00
Engineering (1300)	5.00
English (1311 Word Processing)	10.00
Foreign Language (1411 and 1412)	10.00
Geology (Except Geol 2301)	15.00
Health Education (HEd 1101, 2101)	5.00
Law Enforcement Lab (2310)	20.00
Law Enforcement (2411)	24.00
Law Enforcement Academy (2414, 2415, 2416)	24.00
Machine Technology and Equipment Rental	24.00
Maintenance Technology (Except MNT 2302)	24.00
Music (Mu 1177, 1178, 1179, 1180, 1181, 1182, 1183 and 1184)	20.00
Applied Music, Class Instruction (Mu 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184)	20.00
Nursing (Except 1201, 2199, 2299, 2399)	15.00
Petroleum Technology Lab (2303)	10.00
Petroleum Technology (1800)	24.00
Photography (Except 2370)	10.00
Physical Education (1100)	10.00
Physical Education (per activity class)	5.00
Physical Education (Bowling, Golf and Super Circuit)	24.00
Physical Science	15.00
Physics (Except Phys 1301)	5.00
Pottery (Art 2381, 2382)	24.00
Radio Broadcasting (R/TV 1111, 1112, 2111, 2112)	10.00
Radiologic Technology (1111, 1112, 1314, 1402)	15.00
Reading (per semester hour)	2.00
Refrigeration and Air Conditioning (Except 2204, 2205, 2302, 2305)	24.00
Respiratory Care (1101, 1112)	15.00
Sculpture (Art 2391, 2392)	15.00
Surgical Technology (1411)	15.00
Television (TV 1131, 1132, 2131, 2132)	10.00
Typewriting (OE 1217, 1401, 1402)	10.00
Typewriting (OE 1100, 2202, 2302)	5.00
Welding (Except WT 1401)	24.00
Word Processing (Engl 1311 WP)	10.00
Word Processing (OE 1304, 2301)	5.00
Private Lesson Fees	
Applied Music, Private Instruction (1/2 hour)	20.00
Applied Music, Private Instruction (1 hour)	40.00

Travel Fees

Courses which necessitate student travel—such as Span 1220, Conversation and Hispanic Culture for Travelers; Span 1320, Intensive Spanish Practicum; Biol 2301, General Ecology; and PE 1178, Skiing—will have additional fees for travel expenses. Check with the course instructor or department chairman for details.

Testing Fees

Course No.	Test	Cost/Test	Total
Nu 1901	1	6.00	6.00
Nu 1905	4	6.00	24.00
Nu 1604	4	6.00	24.00
Nu 2502	5	6.00	30.00
Nu 2901	3	6.00	18.00
Nu 2902	4	6.00	24.00
RT 1333	1	25.00	25.00
RT 2262	2	65.00	65.00
VN 1602 (Kermit Only)	2	6.00	12.00
VN 1603 (Kermit Only)	1	6.00	6.00

Miscellaneous Fees

Advanced Standing Examination	20.00
General Deposit (refundable)	10.00
LVN Nursing (Andrews and Kermit Equipment Fee VN 1601)	85.00
Respiratory Care (Equipment Fee RT 1111)	75.00
Schedule Change Fee	5.00
Student Identification Fee Each Semester (non-refundable)	1.00
*Student Liability Insurance (Fall and spring semester)	8.00
Student Liability Insurance (Summer I and II)	6.00
Student Liability Insurance (Cosmetology students, per course)	5.00
Transcript (First copy free)	1.00
**Vehicle Registration, Fall Semester, Spring Semester	4.00
**Vehicle Registration, Summer Semester I, Summer Semester II	1.00

In some areas of instruction, students provide their own tools, equipment, supplies, etc. When enrolling, they should inquire as to estimated total costs.

*Student liability insurance or proof of comparable coverage is required for students enrolled in child development, emergency medical technology, clinical lab science, nursing, radiologic technology, respiratory care, surgical technology, physical therapist assistant and cosmetology.

**Vehicle registration fees are refundable only upon complete withdrawal during the scheduled withdrawal period and only upon return of the parking sticker.

Refund Policy

Tuition and fees paid directly to the college by a sponsor, donor, grant, loan or scholarship shall be refunded to the source rather than directly to the student.

Class day means the day the session is designated to begin and each consecutive school day on which classes are held thereafter.

To have a refund authorized, a student must present a completed withdrawal request form to the business office. Refer to the section in the catalog or Student Handbook on "Withdrawal" for procedures.

Cancelled classes: If a class is cancelled by the college, all tuition and fees for that course will be refunded.

Dropped courses: Students who drop classes before the official day of record (12th class day during the fall and spring semesters and fourth class day during the summer) but remain enrolled at Odessa College will have 100 percent of applicable tuition and fees refunded, less a schedule change fee of \$5.00. Students who drop classes before the official day of record and are no longer enrolled at Odessa College will have tuition and fees refunded according to the percentages used when completely withdrawing from Odessa College.

Withdrawal from the college: Students who officially withdraw from Odessa College will have their tuition and mandatory fees refunded according to the following schedule:

Fall and Spring Semesters

When the withdrawal occurs:

Prior to the first class day (less \$15.00 processing charge)	100%
During the first five class days	80%
During the second five class days	70%
During the third five class days	50%
During the fourth five class days	25%
After the fourth five class days	none

Summer Semesters and Open-entry Classes

When withdrawal occurs:

Prior to the first class day (less \$15.00 processing charge)	100%
During the first, second, or third class day	80%
During the fourth, fifth, or sixth class day	50%
After the sixth class day	none

Extension courses: Students enrolled in extension classes may be charged an additional fee, depending upon the course and center in which the class is held.

Payment by check: Positive identification (drivers license preferred) is required for any payment to Odessa College. Checks are accepted for the exact amount of tuition and fees only. All checks are to be payable to Odessa College. The college does not accept two-party checks or payroll checks.

Payment by credit card: The college will accept VISA, MasterCard, American Express and Discover for payment of tuition and fees with proper approval.

Returned check policy: Checks for tuition and fees returned by the bank for any reason constitute the student's automatic withdrawal from all classes, unless the tuition and fees are paid within five days of the date notification is mailed to the student. All returned checks are collected through Check Systems. A returned check fee of \$15 is charged per check by Check Systems. Odessa College reserves the right to require payment in cash from individuals with a history of returned checks. Stop payments will be considered the same as returned checks.

Schedule change fee: A schedule change fee of \$5 will be charged for all schedule changes made during the first 12 class days of a regular semester or during the first four class days of a summer session except for the following situations:

- a. When a change or drop constitutes a withdrawal from the college.
- b. When semester hours are only added to the existing schedule.
- c. When the change is for the convenience of the college or has been caused by the college—cancelled class, change in class time, departmental request, etc.

All exceptions to the assessed schedule change fee will be made in the office of the registrar. No schedule change will be processed until all fees associated with the change are paid.

Residence Status for Tuition Purposes

Assessment of tuition and fees for students is based on the residency classification of the student. At Odessa College, a student's residence status for tuition purposes will fall in one of four categories.

1. **In-district resident:** Students who are 18 years or older must have been a resident of the state of Texas for 12 months prior to their enrollment, including six months as a resident in the Odessa Junior College District. In the case of students under 18 years, their parents must meet the above criteria.
2. **Out-of-district resident:** Students 18 years and older who have not lived within the Odessa Junior College District six months prior to registration, but who have been a resident of Texas at least 12 months prior to registration, are considered to be out-of-district students. In the case of students under 18, their parents must meet the above criteria.
3. **Out-of-state resident:** United States citizens who are 18 years of age or older and who have not lived in Texas for at least 12 months prior to registration, are considered out-of-state residents. When students are under 18 years of age, their family's residence for the prior 12 months determines whether they are out-of-state residents.
4. **Alien resident:** A citizen of another country who is in the United States on a student visa other than an immigrant visa will be classified as an alien student.

5. **Waiver of residence requirements:** Odessa College will waive the difference in the rate of tuition for resident and non-resident students and their dependents when those individuals own property, including land, homestead and property for business purposes, subject to ad valorem taxation. The student must present the admissions office with a certified copy of the warranty deed obtained from the Ector County Clerk's Office. This deed must show a record title of the Ector County property to be in the name of the student, spouse or parents, whichever is applicable.

The determination of a student's legal residence for purposes of establishing the appropriate tuition rates is made at Odessa College according to guidelines pursuant to Title 3, Texas Education Code: **Rules and regulations for determining residence status**, effective spring 1986. Students should be aware that these guidelines are subject to further revision.

Copies of these guidelines are available for inspection in the office of the director of admissions/ registrar. Questions or disputes regarding interpretation of these guidelines should be directed to this office.

Resident Classification: Student Responsibility

Students are responsible for registering under the proper residence classification. If there is any question regarding their right to classification as a resident of Texas, they should inquire at the registrar's office.

Students found to be non-residents will remain in that classification as long as they attend Odessa College or until they petition for and receive approval for change of status.

Students classified as a resident but who become non-residents at any time by virtue of a change of a legal residence by their own action or by the person controlling their domicile are required to notify the registrar's office.

Veterans

Veterans interested in taking advantage of their benefits to pursue or further their education are encouraged to contact the veterans officer at Odessa College. As with the other programs described above, students are strongly encouraged to inquire into the possible benefits of the Veterans Administration as far in advance of the semester of planned attendance as possible. This procedure facilitates the coordination of educational claims for benefits between Odessa College and the regional VA office and avoids delays that could occur in the award cycle. The veterans office is a component of the registrar's office and is located in Room 202 of the Student Union Building. Veteran students are responsible for following all regulations of the VA and for notifying both the regional VA office in Waco and the Odessa College veterans office of any change in enrollment that may affect their educational benefits.

Valedictorians

Valedictorians of Texas high schools are eligible for exemption from payment of tuition during both regular semesters at Odessa College following their graduation from high school. Since this is only a tuition exemption, valedictorians are encouraged to apply for other scholarships since their top-ranking status is certainly worthy of consideration for other awards.



Financial Aid

Odessa College is firmly committed to the philosophy of assisting those students who do not have the financial resources to pay for higher education but who wish to attend college. Of equal importance is the awarding of academic scholarships to recognize those students who exhibit superior scholastic abilities.

The financial aid office administers four broad program areas: grants, employment, scholarships and loans. An institutional application and a Family Financial Statement from the American College Testing Program are required for all need-based financial aid programs; only an institutional application is required for scholarships. Both the institutional application and the Family Financial Statement are available from the Odessa College financial aid office. Most high school counselors also have the Family Financial Statement.

When requesting information about financial aid programs, students should ask for an application packet and the Financial Aid Bulletin. The bulletin provides detailed information about aid programs, including general eligibility requirements and satisfactory academic progress.

Types of Student Financial Aid

Grants

The Federal Pell Grant Program provides the foundation of student financial aid and thus serves as the starting point in the aid process. A number of factors—including a student's range of eligibility, cost of education and enrollment status—determine the award. Pell Grants are awarded in three student-load categories: (1) enrollment in 12 or more semester hours for a full-time award; (2) enrollment in nine to 11 semester hours for three-fourths of a full-time award; and (3) enrollment in six to eight semester hours for one-half of a full-time award. Students enrolled in fewer than six semester hours are not eligible for a Pell Grant.

Application for a Pell Grant may be made by completing a Family Financial Statement from the American College Testing Program and entering the correct response on the form which will initiate application of a Pell Grant and the programs described below.

Students will receive a **Student Aid Report (SAR)** from the Pell Grant Processing Center as a result of their application. All copies of the SAR should be submitted to the financial aid office as soon as they are received to expedite processing of the award.

The Supplemental Educational Opportunity Grant (SEOG) is for students with high financial need and is usually combined with other forms of assistance to help students meet their cost of education. Application is made by completing a Family Financial Statement.

The Texas Public Education Grant (TPEG) is also for students with financial need and is designed to assist students in enrolling and remaining in college. The Family Financial Statement serves as the application.

The State Student Incentive Grant (SSIG) is a combination Texas-Federal grant for students with financial need. The Family Financial Statement serves as the application.

Loans

The Stafford Student Loan Program (formerly Texas Guaranteed Student Loan Program) is a long-term loan program which allows a student to borrow directly from a bank, savings and loan, credit union or other lending institution. Since not all financial institutions participate in the program, students may not be able to use their regular banking institution. The financial aid office will assist in trying to locate a lender if the student is unable to find one.

The higher education amendments of 1986 have changed many aspects of this program. Application requirements now include a Family Financial Statement from the American College Testing Program and an institutional aid application since the SSLP is now completely need-based. This program is fully described in the Financial Aid Bulletin.

For independent students who cannot qualify for a Guaranteed Student Loan (Stafford Loan) there is a non-subsidized loan program called the **SLS or Supplemental Loan for Students**. A student must go through the Family Financial Statement and all aspects of the financial aid process. The interest rate is variable, subject to change annually and it is not paid by the government. A student is deferred as long as he or she is in school but payments are due during summer months. Beginning Jan. 1, 1991, first installments of Stafford Loans and the SLS must be delayed 30 days for first-time, first-year undergraduate students.

Dependent students who cannot qualify for a Guaranteed Student Loan (Stafford Loan) may have their parents borrow for them under the **PLUS program**. It is not subsidized, the interest rate is variable and monthly payments must begin 60 days after disbursement. The amount borrowed may be as high as \$4,000. Parents do not have to fill out the Family Financial Statement.

Short-term institutional loans are made by Odessa College to assist students with registration costs. A student attempting to enroll at Odessa College is eligible to apply if the student does not have an existing short-term loan. The amount of the loan is for tuition and fees for the current semester. These loans are processed on a first-come, first-served basis.

Campus Employment

The College Work-Study Program (CWS) provides employment opportunities to students who have established financial need. Students work in a wide variety of jobs compatible with their interests and abilities and are paid at least the prevailing minimum wage. Although need determines the amount of total allowable earnings, students generally do not work over 20 hours per week and arrange their working hours so as not to conflict with classes. Application for the program is made by completing a Family Financial Statement.

The Texas College Work Study Program provides employment opportunities to students who have established financial need. Funds are very limited and athletes are not eligible for the program. Application for the program is made by filing a Family Financial Statement.

Non-Work-Study Jobs are available in some departments. These part-time jobs are not need related and the employing department has considerable flexibility in meeting employment needs. Applications may be made to the department in which the student is interested in working.

Scholarships

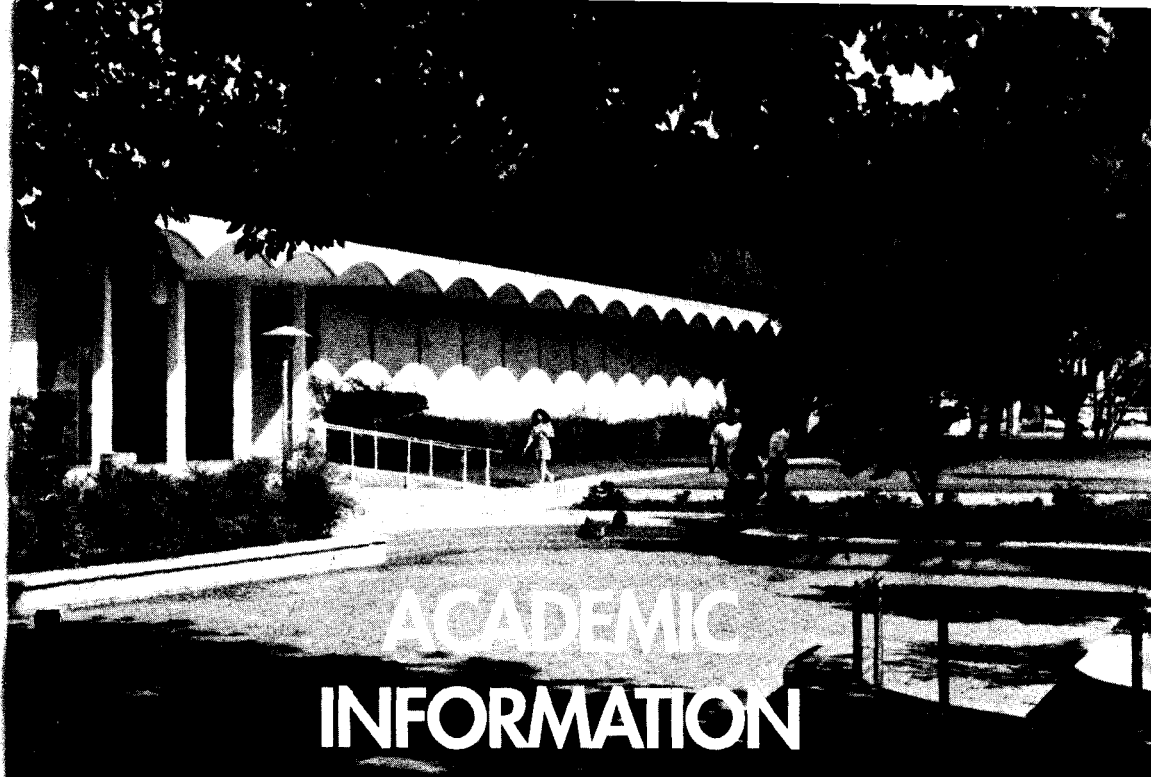
Odessa College academic scholarships are offered annually to recognize scholastic merit. **The Career Advancement Scholarship** has been established to encourage students to pursue career goals and although academic performance is part of the selection criteria, recipients need not be a high ranking honor student to receive the award. Need is not considered for either scholarship. Application should be made to the financial aid office.

Departmental scholarships are offered each year through the art, music, speech (forensics) and mass communication departments and are based upon performance, merit, skill and ability. Specific information and application requirements may be obtained by contacting the particular department chairperson of the scholarship area in which the student is interested.

The Noel Scholarship is available to students through generous gifts from Ellen and the late Bill Noel. The award is first restricted to children of employees of Rexene Corp. in amounts intended to cover tuition, fees and books.

The Permian Honor Scholarship Foundation invites graduating high school seniors who rank in the top 25 percent of their class to apply for a Permian Honor Scholarship. If selected, a student is granted \$250 per semester for eight consecutive, full-time semesters; four semesters are applicable at Odessa College while the remaining four semesters are available at the University of Texas of the Permian Basin. Students must complete each semester with a minimum of 12 credit hours and with a 2.50 grade point average to maintain their eligibility. Applications are available from the foundation or from area high school counselors.

Other scholarships in addition to the ones described above are also available to students attending Odessa College. Many individuals and organizations cooperate with Odessa College in their search for scholarship recipients. These awards are not controlled by, nor are selections made by the college, but every attempt is made to provide applications to these parties within the framework of applicable restrictions. Since some organizations do not contribute annually and other contributors are not known at print time, it is not possible to catalog and list each donor.



Academic Guidelines

That all students receive the best education possible is the primary goal of Odessa College. Whether they intend to transfer to other institutions after completing their studies at Odessa College or whether they intend to put their learning to immediate use in the job market, students are assured that they will obtain quality education at Odessa College. They will receive an education that will be meaningful in all areas of their lives.

Academic needs of all students are important at Odessa College. Programs have been initiated for students who need basic instruction to raise their proficiency in a particular subject area. Similarly, special programs are offered for students who excel. The college has well-equipped facilities for its reading and writing laboratory, its computer-assisted instruction center and its health sciences learning center. In addition, laboratories to assist in instruction in physical and natural science are provided. Also on an individualized basis, personal development courses are available. But perhaps the most important factor of all is a concerned faculty who want to help students succeed. As a result Odessa College practices its belief that quality instruction and academic excellence not be compromised.

University-parallel programs at Odessa College focus on academic excellence. As a result, the quality of its curriculum and its outstanding faculty have gained national recognition. Students who intend to transfer from Odessa College to other institutions build solid foundations for their educational pursuits. More often than not, their performance on the senior college level equals or surpasses that of those students who attend their selected senior college or university beginning with the freshman year.

Occupational-technical programs at Odessa College train students who exhibit outstanding proficiency with on-the-job skills. Program directors, supervisors and faculty work closely with advisory committees from business and industry to assure that students in occupational-technical programs learn the exact skills they will need on the job. As a result, students who complete these programs receive both practical education and professional training that contribute to their success in their respective skills.

To make college instruction even more accessible to more people, cosmetology offers open-entry classes. This procedure allows students to enroll in some courses at almost any time during a long semester rather than having to wait until a regular term begins. In addition, innovative instructional approaches and scheduling in some departments allow students to complete a three-semester-hour course in some subjects in only eight weeks. The instructional staff at Odessa College constantly searches for ways to better serve students without compromising instructional quality.

All instructional programs are reinforced by strong support services. A Learning Resources Center, which houses the library, provides rich resources to supplement classroom instruction. Faculty members also use the Learning Resources Center and the instructional media program to enrich their accumulated resources and to enhance their proven teaching methods.

Honors Program

Honors classes were initiated at Odessa College in fall 1990. Class offerings change from semester to semester. Consult the class schedule for the upcoming semester to see which courses will be available as honors classes.

By electing to take advantage of honors study, qualified students have the opportunity for stimulating educational experiences that go beyond the standard limits of most classes. Honors faculty members are challenged with the same standards of excellence as are their students. Instructional methods are innovative, and students in honors classes have privileges not always available to students in regular sections: smaller classes, individual attention, participation in the learning plan, seminar-style classes, independent study, out-of-classroom activities, etc.

Honors classes also provide an opportunity for students who are talented and motivated to establish a special sense of community both locally and nationally. Through association with other students who also are striving for high levels of achievement in their learning opportunities as well as in their future success, honors students are constantly stimulated and are able to utilize the critical thinking and problem solving skills that are the optimal outcomes of honors study. Honors study is not just more homework, a greater volume of factual material to memorize or more hours to spend in class. Honors incorporates individual stimulation and motivation coupled with natural ability to create a learning environment that is conducive to maximizing learning potential. Optimally, honors classes provide that special stimulation that helps drive the student who does well to do even better, to explore new ideas and frontiers and to come closer to reaching his or her full potential.

At Odessa College, honors students have priority for certain scholarships, student worker positions and registration privileges. In addition, honors classes are appropriately designated on the transcript. Students also have the option to earn an honors associate degree. The honors center is located in Room 110 of the Electronics Technology Building. Use of this center and its privileges is limited to honors students and Phi Theta Kappa members. Special student activities are planned for and by honors students; additionally, honors students often are sought after as student members of campus committees and special task forces.

If you are interested in the honors program and eligibility requirements, even for just one class, contact the honors director at 335-6538.

Learning Resources Center

The essential objective of the Murry H. Fly Learning Resources Center (LRC) is to support and enhance curriculum programs and classroom research needs. Utilizing the concept of an independent learning laboratory and classroom adjunct, the LRC proves a wide assortment of services and resources of about 70,000 books, 550 current periodicals, 10 daily or weekly state and national newspapers and 4,000 audiovisual holdings. In addition, numerous multimedia and computer-assisted instructional programs are available for particular disciplines, as well as extensive files of thousands of pamphlets, articles, reprints, etc. of information not otherwise accessible. The technical services department works closely with the faculty and staff in selecting and acquiring books and audiovisual materials to serve the instructional and support programs of the college.

Computer technology is used for several reference tools such as InfoTrac Academic Index, Health Index Plus, Stat Fact and Grolier's Electronic Encyclopedia. A specialized resource, Newsbank, a monthly compilation by subject of data from more than 2,000 U.S. and Canadian newspapers and journals, also is available. A comprehensive collection of U.S. college catalogs and telephone books also is maintained. Several microcomputers with printers are available for use with an extensive software collection containing the more popular word processing, database management and spreadsheet systems.

To further enhance readily available resources, the LRC contracts with a national database vendor for direct access to over 80 major educational-industrial commercial databases holding in excess of 50 million records. A reference interview is required to determine actual and particular needs. The reference department provides both general and specific instruction in the effective use of the LRC. Classroom instruction is also available upon request. The AV department provides viewing areas and assistance with all media formats. General classroom instruction efforts are assisted by scheduled delivery/pickup and maintenance of equipment.

The LRC has arranged with local community public libraries to support extension courses offered by Odessa College. Students enrolled in these courses should contact their public library.

Suggestions and comments regarding materials or services are continually and seriously invited.

Instructional Television

Telecourses, college-credit classes taught with the aid of television, are offered throughout the year. Courses offered vary each semester and are applicable toward several degree plans. All telecourses are identified in class schedules published each semester.

For those students who have work schedules that conflict with on-campus instructional times or who have difficulty commuting to campus, telecourses provide the opportunity to select a class time compatible with almost everyone's obligations. While telecourses are more convenient than on-campus classes, they are not easier than on-campus classes.

Telecourses combine televised lessons with related reading and writing assignments in addition to on-campus sessions for orientation, review and examination. All course components are supervised by a faculty member available to students by telephone during predetermined hours.

KOCV-TV/Channel 36, a member of the Public Broadcasting Service, broadcasts individual lessons at least once during the week and again on weekends. Typically there are 30 one-half hour tapes in a course. KOCV's signal can be received in an approximate 30-mile radius of Odessa. Cable companies in Andrews, Crane, Midland, Monahans, Odessa, Stanton and other surrounding communities also carry the signal. Copies of all the telecourse videotapes are available in the Learning Resources Center for students who miss a broadcast.

Students may register for the telecourses during all regularly scheduled registration periods both on campus and at all off-campus registration sites. Tuition and fees for telecourses are the same as for on-campus instruction.

Regulations Subject to Change

Information and regulations printed in this catalog are subject to change. The board of trustees and the administrative staff may revise programs, courses, tuition, fees or any other information stated in this publication. Anyone having questions regarding such information and changes thereto should check with the appropriate office, department, or division for current information.

Course Load

The normal course load that full-time students may carry during a regular semester will vary with the particular courses for which they have enrolled. Students are classified as full-time when they are enrolled in 12 or more semester hours, but students will normally enroll in 15 to 18 hours each semester as outlined in their course of study or degree plan. Students will not be permitted to take more than six courses of three or more semester hours in one semester without written approval from the registrar unless a particular course of study for an associate degree or a certain certificate of completion specifies a total semester-hour load exceeding 18 hours.

A normal load during each term of the summer session will vary from three to seven semester hours. Generally, the maximum credit that a student may earn during the entire summer sessions is 14 semester hours. In the midwinter session, one course may be taken for the normal amount of credit derived during a regular semester.

The maximum course load for students enrolled in evening classes depends on individual circumstances and ability of the students. The normal load for evening students who have full-time employment is six semester hours or two courses.

Students who are employed while attending classes or who have experienced difficulty previously in academic work should plan course loads in such a way that ample time can be given to all these demands. Usually, three hours of preparation time are needed for each hour of classroom time. Therefore, an average student should plan on investing nine hours of preparation time outside of class each week for each three-hour course taken. Students are encouraged to consult a college counselor to determine the best program possible.

Open-entry/Open-exit Program

Open-entry/open-exit classes are available in cosmetology. This area of instruction features continuous registration and admissions throughout the school year. This intensive program is designed to fit the individual needs of persons interested in learning a new skill or updating existing ones as quickly as possible.

A special advantage of this program is that students may register at any time and may begin classes immediately instead of waiting for the beginning of a term or semester. Skilled instructors who have many years of professional experience in their teaching field closely supervise students in their classes.

Information about this open-entry/open-exit program is available from the specific program director, the counseling center, the admissions office or the news and information office.

Flexible-entry Opportunities

Flexible-entry classes are also offered in the following academic and occupational programs: emergency medical technology, English, mathematics, office education, photography, reading, refrigeration/air conditioning and real estate. Students may register for these classes at various times during the semester. The program director or the admissions office should be contacted for information.

Student Classification

Students who have completed 29 semester hours or fewer will be classified as freshmen. Students with more than 29 semester hours will be classified as sophomores.

Students will be classified as full-time if they are enrolled in 12 or more semester hours. Students enrolled in fewer than 12 hours will be classified as part-time.

Grades

Grading measures the ability of students to master specific objectives within a given course. A grade is based upon the level of performance in examinations, term papers, reports, class discussion and the final examination in the course or project. Odessa College uses the following grade and grade point system:

Grade	Description	Grade Points Per Semester Hour
A	Excellent	4
B	Above average	3
C	Average	2
D	Passing, but poor	1
I	Incomplete	0
P	In progress/grade not reported	0
Z	No grade assessed; requires re-enrollment	0
F	Failure	0
N	Audit (not taken for credit)	0
W	Official withdrawal	0
S	Advanced Standing (credit by examination)	0
T	Transfer credit	0

Note: If a course is repeated, the latest grade will be computed in the GPA.

Students are obligated to know their standing and rating in college classes during the semester and to secure these ratings before registering for the next semester. Students are expected to be familiar with their scholastic status at all times. Advisors and counselors are available and will confer with students during and at the end of the semester concerning unsatisfactory work. Such conferences should help determine the cause of unsatisfactory work, and the counseling staff will advise students on ways to improve their performance and will offer any assistance which the faculty and staff can provide.

Grade Point Average and Semester Hours

There are two bases for computing the grade point average (GPA): the semester grade point average and the cumulative grade point average. The GPA for any semester is determined by multiplying the number of semester hours for each course by the number of grade points corresponding to the final grade for the course. The total of all such products for the semester is then divided by the number of semester hours attempted for that period. Incomplete grades are included in calculations of grade averages as an "F" when the final grades for that semester have been recorded. When the course is completed and a grade is assigned by the instructor, the grade point average is correspondingly recalculated. Grades of "W" are not included.

The cumulative grade point average is calculated by dividing the total number of grade points by the total number of semester hours attempted by the student in all semesters.

Scholastic Standards

Odessa College is dedicated to providing students with opportunities for success in their course work and with support services. The college recognizes, however, that students encounter scholastic difficulties. Consequently, the college has designed a system of scholastic probation and scholastic suspension to identify students with scholastic problems and to provide a mechanism to aid them in recognizing and solving such problems.

All Odessa College degree and certificate plans require that students have a GPA of 2.0 or higher for graduation; therefore, students are considered to be in good standing as long as they maintain a GPA of 2.0 or higher on a semester or cumulative basis.

Scholastic Probation

At the end of each semester, academic records of all students will be evaluated according to the following criteria:

1. The grade point average for the semester will be computed. If the GPA is 2.0 or higher, the student is considered to be in good standing.
2. If the GPA is less than 2.0, the cumulative GPA will be examined. If the cumulative GPA is 2.0 or higher, the student is still considered to be in good standing. If the cumulative GPA is less than 2.0, the student will be put on scholastic probation.

Scholastic probation warns students that they need to pay careful attention to academic progress. They will be given the opportunity to take advantage of special study-skills counseling through the Odessa College counseling center and appropriate assistance from the developmental studies department.

Removal from Scholastic Probation

Students on scholastic probation return to good standing status by earning a GPA of 2.0 or higher the next long semester of enrollment at Odessa College or by having a cumulative GPA of 2.0 or higher at the end of the next semester. A GPA of 2.0 for either the semester or on a cumulative basis will remove students from scholastic probation.

Scholastic Suspension

Students who are on scholastic probation and who do not earn a GPA of 2.0 for the next semester of enrollment at Odessa College or who do not bring the cumulative GPA up to at least a 2.0 by the end of the semester will be placed on scholastic suspension. Students in this category will not be allowed to enroll at Odessa College the next long semester.

Appeal of Scholastic Suspension

Students placed on scholastic suspension may appeal their status to the director of admissions. Extenuating circumstances may allow such students to enroll under continued scholastic probation with specified conditions. Students not in good standing at the end of the continued probation semester must withdraw for the next long semester.

Enrollment After Scholastic Suspension

Students who serve the designated semester of scholastic suspension may enroll for the next long semester. They are, however, still on scholastic probation. At the end of the semester, their GPA will be examined both on a semester and a cumulative basis to determine whether they have returned to good standing.

If their GPA meets minimum requirements, students may continue to enroll without special conditions. If, however, students do not meet minimum GPA requirements, they will again be placed on scholastic suspension. When scholastic suspension occurs a second time, the period of enforced withdrawal will be two long semesters. Following a two-semester enforced withdrawal, students must make a request in writing to the director of admissions for readmission on scholastic probation.

Special Conditions

Students on scholastic probation who enroll in summer school at Odessa College will not have their academic status altered as a result of summer school grades. Students on scholastic suspension who enroll in summer school at Odessa College, who earn a summer GPA of 2.0 or higher and who pass a minimum of nine semester hours for both sessions may petition the director of admissions for permission to enroll for the fall semester on a continued scholastic probation basis.

Transfer students who are on scholastic probation or the equivalent from the last institution attended and who apply for admission to Odessa College will be required to submit an official transcript for evaluation by the director of admissions. Students who would be eligible to enroll according to Odessa College standards will be admitted and enrolled on scholastic probation for the first semester. Their future academic standing will be determined in the same manner as for other Odessa College students.

Repetition of Courses

All courses, including repeated courses, in which a student is registered on the official day of record will be listed on the official transcript and will appear on the student's permanent academic record. If a course is repeated, the last grade earned will be the grade calculated in the cumulative grade point average. Withdrawals and incompletes, however, may not be used to replace an earned grade. This is not an automatic process. A student must request the change to be made in the registrar's office.

Incomplete Grades

The conditional grade of "I" means that students have not completed required work for a course, except in flexible entry classes. The grade may not be given unless students (1) have passed all work completed and (2) have completed a minimum of three-fourths of the required course work.

An "I" grade will not be assigned until conditions for completion of the course work are agreed upon by both the instructor and the student. Whenever possible, such an agreement should be in writing and should be signed by both the instructor and the student. The final decision as to whether a grade of "I" will be assigned rests with the instructor. When an "I" grade is assigned, incomplete work must be completed in the semester immediately following the one in which the grade was assigned.

Grade Changes

All grade changes must be made by the end of the semester following the one the original grade was assigned. For example, student requests for change of grade to "W" for an "F" received in the fall semester must make the request during the spring semester immediately following. Students wanting a grade change in a course taken during a summer session have until the end of the fall semester to effect the change. Any "I" grade not completed by the student and not changed by the instructor within the one-semester time limit will be computed as an "F" for grade point average purposes. Although an "I" is computed as an "F," the "I" remains on the student's record until the instructor completes a grade change.

Students are not routinely notified by the college when a grade change has been processed. Students should contact the instructor for the information or should request a new copy of their college transcript.

Withdrawal

So that all records are left in proper order, students who leave Odessa College before the end of a semester or before the end of a class for which they are registered must follow the official withdrawal procedure, which students themselves initiate in the registrar's office. Students who wish to withdraw should appear in person unless there are extenuating circumstances. When an individual other than the student initiates a withdrawal, that individual must be identified and verified for the student's protection. Students who stop attending class without officially dropping will receive an "F" in the class for the semester.

Students who drop classes or withdraw prior to the official census day for the semester will not be assigned a grade for the class or classes dropped. No record of the class will appear on their permanent academic record.

Grades of "W" will be assigned to all students who withdraw or drop semester-length classes during the first 12 weeks of classes during any long semester and before a specified date for summer and midwinter classes. Students who withdraw or drop classes will be responsible for contacting their instructors as a routine part of the withdrawal process. The instructor will assign a grade of "W" and sign the withdrawal form. Students will then return the form to the registrar's office. A grade of "W" is assigned through the 12th week of class in the long semesters.

The college reserves the right to withdraw students from any one or all of their classes if, in the judgment of college officials, such withdrawal is in the best interests of the students or the student body.

Class Attendance

Students are expected to regularly attend all classes in which they are enrolled. Records of student absences are kept by instructors; when students are absent from class, they are responsible for consulting with the instructor regarding the absence.

Students who plan to be absent to observe religious holy days must submit such notification in writing in person to the instructor of each class. Each instructor will date and sign an acknowledgment of receipt of the notification. The procedure may be handled in writing, in person or by certified mail with return receipt requested. Such notification to instructors must be made no later than the 15th day after the first day of the semester in which the absence is expected to occur. Within a reasonable time after students return to class following observance of religious holy days, they will be allowed to make-up examinations or to complete assignments scheduled during their absence.

Schedule Changes

At the beginning of each semester, the college designates a time for students to change their schedules by adding and/or dropping classes. These dates and times are specified in the class schedule for the semester. A schedule change fee of \$5 will be charged for all changes except those caused by the college or those in which a student is only adding hours to the existing schedule.

Advanced Standing and Credit by Examination

Odessa College is an open testing center for College Level Examination Program (CLEP) and will administer those examinations to anyone making application, subject only to restrictions established by the Educational Testing Service and the College Entrance Examination Board. Departmental examinations are administered in most areas in which CLEP examinations are not used at Odessa College. Specific information about CLEP examinations may be obtained in the testing center. Department chairmen should be contacted regarding applications for advanced standing examinations.

Odessa College will accept up to 15 semester hours of advanced standing credit awarded either by the College Level Examination Program subject examinations or by approved Odessa College departmental examinations (exceptions for additional hours may be granted in some specialized programs such as nursing). Before credit by examination will be noted on their permanent record card, students must complete in residence credits equal to the number received by examination.

Students who do not pass a departmental advanced standing examination may retake the test after a period of six months has elapsed, but they must receive permission from the respective department chairman in order to do so. No departmental examination may be repeated more than once.

Students who receive advanced standing credit in a course may not apply for advanced standing in courses considered lower level than the one for which they currently have credit or are currently enrolled.

Examinees should check with senior institutions of their choice concerning the acceptance of credit earned by advanced standing examinations. Transcripts will record credit given by examination but will not list a specific grade. Hours earned by examination will not be included in computing grade point averages, scholastic hours, residence requirements for graduation, or credit load requirements for Social Security or Veterans Administration benefits.

Concurrent Enrollment

In the concurrent enrollment program, high school students may earn both credit for a high school course and college credit for enrollment in a college course. For example, a high school student might enroll in an approved history course at Odessa College, attend only the college history course and be granted credit at both the high school and college levels.

To participate in the program, high school students must have the approval of their principal. Students must have or exceed an overall grade point average of 3.0 in the semester immediately preceding enrollment in a college course or have scored at or above the 90th percentile on the achievement subtest in the content area for which the students wish to enroll.

Any high school student wishing to participate in the concurrent enrollment program must apply to his or her high school counselor who will determine the student's eligibility for the program and the course load.

The high school counselor will work with the Odessa College director of admissions to ensure the availability of courses. In addition, the high school counselor will coordinate the student's concurrent schedules.

Concurrent enrollment students must submit to Odessa College the prescribed documentation signed by a parent or guardian, their high school counselor and the high school principal. The concurrent enrollment program has special regulations, and students participating in the concurrent enrollment program are responsible for following those regulations.

Further information on the concurrent enrollment program is available from the Odessa College admissions office and the high school counselors.

Early Admissions Program

The Early Admissions Program enables high school seniors to enroll simultaneously in Odessa College while completing their high school requirements. Students in the program can profitably accelerate their progress in college and achieve their educational goals in less time and with less expense than in the traditional program.

To be eligible for the program, high school seniors must be within four units or 12 quarter credits of graduation and have the recommendation of their high school counselor, their high school principal and the approval of their parents. They may then enroll in the regular manner at Odessa College.

Students in the Early Admissions Program may enroll in as many as two courses each semester. They will be expected to adhere to all policies of the college as well as those of their respective high school while in the program.

Participating students also have been given approval by the University Interscholastic League to retain their eligibility in league activities.

Information on the Early Admissions Program can be obtained from the Odessa College director of admissions or from counselors at participating high schools.

Honor Roll

Students enrolled in 12 semester hours or more during a long semester and making a grade of "A" in all courses are listed on the Summa Cum Laude Honor Roll. Full-time students who make no grade lower than "B" are listed on the Cum Laude Honor Roll.

Part-time and summer session students enrolled in two courses for a total of six semester hours or more and make a grade of "A" in all courses are listed on the Part-time Student or Summer Session Summa Cum Laude Honor Roll. Part-time students enrolled in two or more courses totaling six semester hours or more with no grade lower than "B" are listed on the Part-time Cum Laude Honor Roll.

Graduation Requirements

Students completing degree requirements during the summer or in December are encouraged to participate in spring graduation ceremonies. Students who complete requirements at the end of the spring semester will be expected to participate unless unusual circumstances prevent such participation.

To receive an associate degree from Odessa College, students must complete degree requirements as set forth in the catalog and complete a degree application in the office of the registrar by the deadline specified in the official college calendar. Summer graduates should observe the deadline for fall graduates.

Odessa College does not charge a graduation participation or a diploma fee. The cost for these items is paid by the college. Fees for caps and gowns and invitations are paid by students.

Graduation with Honors

A candidate for the associate degree who has completed at least 30 semester hours in residence at Odessa College will be eligible for graduation with honors. A student with a grade point average of 3.5 to 3.699 will be graduated **cum laude**, a student with a grade point average of 3.7 to 3.899 will be graduated **magna cum laude**, and a student with a grade point average of 3.99 to 4.0 will be graduated **summa cum laude**.

Transcript of Record

The transcript of record is an official copy of the student's permanent record. Copies will be supplied upon written request. Students may instruct the registrar's office to mail official transcripts to colleges or universities to which they are applying or to prospective employers, etc. The first copy of a transcript is provided at no cost. A charge of \$1 will be made for all subsequent copies.

To protect student records, Odessa College adheres to the conditions by which information about students can be released as set forth in The Family Educational Rights and Privacy Act of 1974, as amended.

Military Experience

Odessa College does not routinely give academic credit for military experience. If individuals have acquired skills normally learned in a course or in courses in their degree plan, they are encouraged to utilize the credit by examination option. Odessa College does award credit for physical education activity courses when a DD-214 is properly submitted to the registrar's office.

Students who have passed military CLEP examinations may have those results evaluated as if the testing were done under Odessa College guidelines. Credit will be awarded only if credit would be awarded on the basis of examinations taken at Odessa College.

If military credit has been awarded on an official transfer transcript from an institution accredited by the appropriate regional accrediting association, that credit will be evaluated in the same manner as any other transfer work.

Transfer Credit from Another Institution

Previous course work satisfactorily completed at regionally accredited institutions of higher education will be evaluated for transfer and may be applied toward a degree program at Odessa College.

A transcript will be evaluated after a student has registered for Odessa College credit classes and it will be evaluated only upon the request of the student. An official transcript is required from each college attended. The request for an evaluation should be made through the registrar's office, Room 202 of the Student Union Building.

When the evaluation is complete, the number of transferred hours will be recorded for degree audit purposes only and will not be posted to the Odessa College transcript until graduation when the student has satisfied all degree requirements. Only those transfer course accepted and listed on the student's degree plan will be posted to the Odessa College transcript.

Transfer to Another Institution

Courses taken at Odessa College normally transfer to all other accredited institutions at face value. Grades earned at one college cannot be lowered by another college or university. However, courses taken that are not required for graduation at the senior college or university will not apply and therefore should not be taken at this institution. Before registering, students should contact a counselor or advisor at Odessa College for maximum assistance in planning a program.

Senior colleges vary in their recognition of a grade of "D" in a course. Some senior institutions accept a grade of "D" if the student's overall average is "C" or better. Certain senior colleges may require that the student repeat any course in which a "D" has been made.

When enrolling at Odessa College, or before if possible, students should select the senior institution to which they want to transfer after leaving Odessa College. They should become familiar with transfer requirements by contacting the senior institution and then design a suitable course of study to follow while at Odessa College. Counselors and advisors will assist.

Generally speaking, senior institutions will not accept more than 66 semester credit hours in transfer. Students should avoid exceeding this number of hours. Senior colleges vary greatly in their practice regarding allowance of credit for courses pursued at junior or community colleges.

When students at Odessa College transfer to another institution, no transcripts will be released until all records at Odessa College have been cleared.

TASP Requirements

The Texas Academic Skills Program (TASP) is an instructional program designed to ensure that students attending public institutions of higher education in Texas have the academic skills to perform effectively in college-level course work. The TASP includes a testing component designed to assess the level of reading, writing and mathematics skills of students entering Texas public colleges and universities. Students must take the TASP exam before they have earned nine semester hours of non-remedial college credit.

The TASP is administered at Odessa College on the dates set by the Texas Higher Education Coordinating Board. Students who have accumulated 9 credit hours must take the TASP in the semester in which they acquire the said hours or they will not be able to register the following semester in other than remedial courses. Students who fail any portion of the TASP test must enroll in remediation in at least one of the subjects failed. Enrollment in remediation must occur in the semester immediately following the TASP test failure.

Technical/Vocational Programs

Odessa College offers a wide variety of technical/vocational programs designed to enable a student to enter his chosen career field as a skilled employee after one or two years of college work.

These programs were established only after studies verified that employment opportunities will exist at the time students complete training. The community's manpower requirements are matched with the ambitions and goals of the student. This realistic approach to occupational education is made possible by the excellent cooperation of local industry, businesses and public agencies that look to community colleges for skilled personnel.

Odessa College maintains continuous liaison with prospective employers to assist in placement of graduates and to keep training programs up-to-date with current job requirements. Skills needed on the job are taught in these classes by occupational-technical faculty who have many years working experience, as well as academic training.

Based on community studies that identify additional training needs that can be met by Odessa College, recommendations for adding new programs to the college offerings will be made periodically.

Technical and vocational courses carry college credit leading to an associate in applied science degree

or to a certificate of technology.

Articulation

An articulation agreement between Odessa College and the Ector County Independent School District provides the opportunity for advanced placement in Odessa College for Ector County Independent School District students enrolled in vocational/technical education identifiable with vocational/technical programs offered at Odessa College.

This agreement permits students to move directly into advanced courses upon presentation of evidence of skill mastery determined by appropriate documentation.

Information regarding the articulation policy can be obtained from the Odessa College admissions office, Odessa College counselors or ECISD high school counselors.

Developmental Studies

Many students enter Odessa College lacking some of the basic skills necessary for college level reading, writing and mathematics. The developmental studies program offers courses and activities designed to help students overcome such deficiencies.

To discover the level of his or her abilities, the student may go the testing center, where diagnostic and placement tests are used to identify which basic skills the student needs to acquire and determine which courses he or she needs to take.

Developmental studies are available in basic English, basic mathematics, reading, speech communications and personal development. All courses listed in this program grant from one to three credit hours, but these credit hours do not satisfy the requirements of any degree plan at Odessa College, nor will they transfer to another college or university.

In addition to the courses offered, the program maintains a tutoring center where any student can receive assistance with course work or skill development from either a more advanced fellow student or an instructor. The student should feel free to come to the center at any time it is open and request assistance.

Evening Classes

Evening classes represent an extension of curricula offered to day classes and are an integral part of the total educational program. Primarily, evening courses accommodate those individuals of the community who want to carry less than a full college course load because they are employed full-time during the day. A wide variety of courses is offered for those individuals who want to broaden their educational backgrounds.

Students may complete requirements for an associate degree or certificate plan in most programs during evening hours, although the length of time to complete the programs may be longer than suggested for full-time day students.

Summer Session

The summer session consists of two terms of 5-1/2 weeks each, although some programs may have courses that are shorter or longer, depending upon the need. Classes are held Monday through Thursday, both during day and evening hours. Students may enroll in as many as seven semester hours in each 5-1/2 week session. Credit earned in a course is equivalent to that offered in the same course during a regular semester. Information regarding the summer session can be obtained from the counseling center of Odessa College.

Midwinter Session

Odessa College offers a special short-term session to accommodate students who want to complete a course during the interim period between regularly-scheduled semesters. A midwinter interim session is held following the end of the fall semester and prior to the beginning of the spring semester. Students may complete a two or three semester hour course during this special session.

Radio and Television Stations

Odessa College owns and operates both an FM radio station and a public television station. KOCV-FM, 91.3, has been on the air since 1963 and serves not only as an alternative listening source for area residents but also is used to train students in the radio field. Since 1989 KOCV-FM has been affiliated with the Nation Public Radio network. KOCV-TV, Channel 36, is public television station for the Permian Basin and has been on the air since March 1986.

Continuing Education

Odessa College offers a wide variety of short-term, non-credit courses for members of the community who want to broaden their educational experiences but who are not interested in obtaining college credit. These courses may range from a one-day workshop to a full nine-month program, but typically their duration is shorter than the regular semester. Many professionals do obtain continuing education units (CEUs) through the program for certification and recertification requirements.

Non-credit short courses, seminars, teleconferences and workshops offer a wide range of activities intended to accommodate individuals of all ages. During the year, Odessa College will plan credit-free courses, seminars, teleconferences and workshops in cooperation with business, industry, individuals and organizations in the community. There are no entrance requirements for most continuing education courses; any individual who can profit from them may enroll. Extension classes in area cities also are offered.

Almost any course that is of public interest can be organized if enough students ask to be enrolled, provided that a competent instructor and suitable facilities are available. A schedule of adult vocational and community service courses may be obtained from the continuing education office drive-through registration booth or the news and information office.

Business Training Center

Continuing Education's Business Training Center opened in 1989 to provide customized training programs and serves as a resource and referral service to the Permian Basin's business community. The center's staff designs training courses for companies with specific training needs and utilizes college faculty and staff, as well as experts from the community, to conduct the training. The center is located on the Odessa College campus.

Business Incubator

The Odessa College Business Incubator, located at Noel Center in downtown Odessa, opened in November 1990. Designed to help small businesses in their start-up phase, the incubator is a flexible program meant to encourage the businesses' development and the enhancement of the local economy by diversifying and broadening the business base.

In general, incubators are facilities in which a number of new and growing businesses operate under one roof with affordable rents, on-site business counseling and advisement, shared services and equipment, and access to a wide range of professional, technical and financial programs.

As businesses mature and become profitable, they move into private sector facilities that they lease or purchase on the open market. The time limit set for tenant occupancy in the OC Business Incubator is generally two years.

The mission of the OC incubator is: to stimulate creation of jobs and to help in retaining area employment opportunities by providing an environment conducive to the start up and growth of small businesses; to provide increased training and education to incubator tenants to increase their potential for success; and to realize a return on the college's investment through jobs, diversification of the local economy, increased student enrollment, an expanded tax base and new opportunities for business investment.

Those interested in learning more about the OC Business Incubator are invited to call the incubator manager at 333-7409 or come by 619 N. Grant Ave. for a tour.

Community Recreation

Odessa College has developed a community recreation program designed to serve all area citizens, from children through senior citizens. Participants are categorized by age groups. The program includes special classes in tennis, gymnastics, exercise, aerobics, dance and jogging. The college also conducts a series of summer camp programs.

Adult Basic Education

Odessa College offers basic education classes for adults who have not completed high school. Classes range from level one instruction to teach adults to read and write to classes that prepare adults to successfully complete the state-administered General Education Development (GED) test. Classes are free, and textbooks are furnished. During a typical school year, enrollment in adult basic education classes averages about 6,000 students.

The five major subject areas are math, English, social studies, natural science and writing (literature and the arts). Morning, afternoon and evening classes are available at numerous locations in Odessa, as well as on the Odessa College campus. Adult basic education classes are sponsored, not only in Ector County but also in Andrews, Brewster, Culberson, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Ward and Winkler counties.

Literacy classes, citizenship and English as a second language are available. Classes have open registration, are self-paced and have individualized instruction. Odessa College has computer-assisted instruction for all levels and subjects taught on the Odessa College campus and the Fort Stockton center, and GED level at Pecos.

In addition to GED test preparation classes, Odessa College also sponsors a competency-based program in cooperation with the public schools to allow adults with less than a high school education the opportunity to earn a high school diploma.

High school graduates who have a deficiency in any of the five major areas may apply at the adult basic education office for admission to one of the classes. Standardized tests will be administered, and if interested students function at less than a 12th-grade level, free admission to the classes is allowed for remedial work.

Odessa College provides English language and civics instruction for the Amnesty program to assist adults applying for permanent legal residency to meet federal and state requirements. These classes are available throughout the adult education cooperative district.

Odessa College staff works with business and industry, other agencies and groups or organizations to provide customized classes to meet the needs of the adult population in many ways.

For more information on class locations and times, call the office of adult basic education at Odessa College.

Extension Centers

The Regional Extension Center at Pyote (RECAP) provides night classes leading to an associate degree through part-time study. Registration is held in Pyote prior to registration on the main campus. Announcement of dates and times will be made through the student services office at Odessa College. Area newspapers usually carry notices of registration dates and times, as well as a list of courses to be offered.

Odessa College also offers many of its regular classes at extension centers located in Pecos, Monahans, Andrews, Crane, Kermit and McCamey. Registration is conducted in each city during the week prior to registration on campus. Information about extension centers can be obtained from the director of off-campus programs at 335-6661.

More Information

For more information about Odessa College, its admission procedures, instructional programs and counseling services contact the counseling center in Room 204 of the Student Union Building.

Prospective students interested in enrolling at Odessa College should send their application and transcripts to Director of Admissions, Odessa College, 201 West University, Odessa, Texas 79764.

Accreditation

Odessa College is accredited by the Southern Association of Colleges and Schools. Prospective students and interested parties who wish to view the accreditation document and/or institutional self study programs may inquire at the circulation desk of the Murry H. Fly Learning Resources Center (LRC) where a copy is available for reference.

The number of agencies and associations that have given accreditation and membership privileges to Odessa College acknowledges the quality of education provided. The college is approved or accredited by the following professional organizations and agencies:

- Association of Texas Colleges and Universities
- Commission on Accreditation for Physical Therapy Education
- Committee on Allied Health Education and Accreditation of the American Medical Association
- Council on Medical Education of American Medical Association
- National Association of Schools of Music
- National League for Nursing
- Radiologic Technology Association of America
- Southern Association of Colleges and Schools
- Texas Education Agency
- Texas Commission on Fire Protection Personnel Standards and Education
- Texas Commission on Law Enforcement Standards and Education
- Texas Higher Education Coordinating Board, Community Colleges and Technical Institutes Division

Odessa College is a member of the following organizations:

- American Association of Collegiate Registrars and Admissions Officers
- American Association of Community and Junior Colleges
- American Association of University Administrators
- American Library Association
- American Public Radio (APR)
- Associate Degree Council of Agency Members Associated Press
- Association of College Unions International
- Association of Community College Trustees
- Association of Texas Colleges and Universities
- Association of Texas Junior College Board Members and Administrators
- Board of Nurse Examiners for the State of Texas
- Board of Vocational Nurse Examiners
- College Placement Council
- Council for the Advancement and Support of Education
- National Association for Foreign Student Affairs
- National Association of College and University Business Officers
- National Association of Collegiate Directors of Athletics
- National Association of Student Financial Aid Administrators
- National Association of Vocational-Technical Education Communicators
- National Council for Marketing and Public Relations
- National Entertainment and Campus Activities Association
- National Junior College Athletic Association
- National League for Nursing
- National Public Radio (NPR)
- Permian Basin District Firefighters Association
- Public Broadcasting Service (PBS)
- Regional Education Board of the Council on Collegiate Education for Nursing
- Rocky Mountain College Press Association
- Southern Association of Collegiate Registrars and Admissions Officers
- Southern Association of Junior Colleges
- Southern Educational Communications Association
- Texas Association of Alcoholism and Drug Abuse Counselors
- Texas Association of Collegiate Registrars and Admissions Office
- Texas Association of Community Service and Continuing Education
- Texas Association of Intercollegiate Athletics for Women
- Texas Association of Junior Colleges
- Texas Association of Music Schools
- Texas Association of Public Junior Colleges
- Texas Association of Public Junior College Business Officers
- Texas Association of Schools of Art
- Texas Consortium for Educational Communications
- Texas State Firemen's and Fire Marshals' Association
- Texas Junior College Teachers Association
- Texas Music Educators Association
- Texas Public Broadcasting Association
- Video Tape Network
- Western Junior College Athletic Conference

Degree Planning and Applying for Degree

Students working toward a degree or certificate from Odessa College should consult a counselor or faculty advisor early in their academic career to ensure that all required courses are being completed. Students should complete special degree plans well in advance of anticipated graduation with the assistance of the appropriate department chairman, division dean or with an Odessa College counselor. A written copy of the plan will be filed in the registrar's office.

Catalog Applicability

Students may graduate under the catalog that was in effect at the time they first entered Odessa College so long as no more than seven years have elapsed since their initial registration. If the time limit has passed and students still wish to be certified on the basis of the requirements of the catalog under which they first entered, they must petition for such certification to the appropriate department chairman.

Graduating students also have the option of graduating under the catalog in effect at the time of completion. The decision as to which catalog will apply for graduation should be made only after consultation with the appropriate academic advisor.

Second Degrees

Students who have earned a degree at Odessa College may apply for a second degree after all stated degree requirements for the second degree have been completed, including a minimum of 15 semester hours taken at Odessa College after the initial degree has been awarded.

A certificate of completion may not be granted after students have earned any associate degree.

Deadline for Degree Application

Students must complete a degree application within 12 months after completion of their degree requirements. Applications received after the designated time limit will be reviewed and evaluated by the director of admissions and registrar.

Degree Requirements

Associate in Arts Degree

To qualify for the associate in arts degree (A.A.), students must complete the following requirements:

- English Engl 1311 and 1312 and six hours of Sophomore English
- Foreign Language or Mathematics
or Science One year (six to eight semester hours in same discipline)
- Government Govt 2301 and 2302
- History Hist 2301 and 2302 (Hist 2303 may be substituted for either course)
- *Physical Education Two one-hour activity classes

A minimum of 63 semester hours.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average of "C" (2.0) in all work taken at Odessa College.

A minimum of 18 semester hours of sophomore courses, eight semester hours of which must be in the same discipline.

A minimum of 15 semester hours to be taken at Odessa College, 12 of which must be completed at Odessa College immediately prior to granting of the degree. Exceptions must be approved by the respective dean and the vice president for instruction.

Students who are not exempt from the provisions of TASP must pass all three sections and have scores reported to Odessa College.

Discharge of all financial obligations to Odessa College prior to graduation.

*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of Form DD-214 to the registrar's office.

Associate in Science Degree

To qualify for the associate in science degree (A.S.), students must complete the following requirements:

- English Engl 1311 and 1312 and six hours of sophomore English
- Government Govt 2301 and 2302
- History Hist 2301 and 2302 (Hist 2303 may be substituted for either course)
- Mathematics One year (six semester hours)
- *Physical Education Two one-hour activity classes
- Science A minimum of 12 semester hours

A minimum of 63 semester hours.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average of "C" (2.0) in all work taken at Odessa College.

A minimum of 18 semester hours of sophomore courses, eight semester hours of which must be in the same discipline.

A minimum of 15 semester hours to be taken at Odessa College, 12 of which must be completed at Odessa College immediately prior to granting of the degree. Exceptions must be approved by the respective dean and the vice president for instruction.

Students who are not exempt from the provisions of TASP must pass all three sections and have scores reported to Odessa College.

Discharge of all financial obligations to Odessa College prior to graduation.

*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of Form DD-214 to the registrar's office.

Associate in Applied Science Degree

To qualify for the associate in applied science degree (A.A.S.), students must complete the following requirements:

- English and Speech Six semester hours as specified in each program
- Government Three semester hours as specified in each program
- Mathematics Three semester hours as specified in each program (except nursing)
- Physical Education* Two one-hour activity classes
- Science As specified in each program
- Sophomore hours 18 or more semester hours, 15 of which must be taken at Odessa College
- Major concentration and electives As specified in each program

A minimum of 63 semester hours.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average of "C" (2.0) in all work taken at Odessa College.

A minimum of 18 semester hours of sophomore courses, eight semester hours of which must be in the same discipline.

A minimum of 15 semester hours to be taken at Odessa College, 12 of which must be completed at Odessa College immediately prior to granting of the degree. Exceptions must be approved by the respective dean and the vice president for instruction.

Students who are not exempt from the provisions of TASP must pass all three sections and have scores reported to Odessa College.

Discharge of all financial obligations to Odessa College prior to graduation.

*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of Form DD-214 to the registrar's office.

Certificates of Technology

Certificates of technology are awarded for completion of program requirements with a minimum average of "C" (2.0) in all work in certain occupational and technical curricula as prescribed in the Odessa College catalog or as approved by the respective division dean.

Certificates of Completion

The certificate of completion is given by Odessa College after completion of a designated course of study that concentrates on a specific job skill, licensure requirement or subject matter mastery. Certificates of completion are offered in many occupational programs, but they are also available in certain academic areas of study as well. Check with the respective program or department chairman for information on these certificates.

A minimum of 63 semester hours.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average of "C" (2.0) in all work taken at Odessa College.

A minimum of 18 semester hours of sophomore courses, eight semester hours of which must be in the same discipline.

A minimum of 15 semester hours to be taken at Odessa College, 12 of which must be completed at Odessa College immediately prior to granting of the degree. Exceptions must be approved by the respective dean and the vice president for instruction.

Students who are not exempt from the provisions of TASP must pass all three sections and have scores reported to Odessa College.

Discharge of all financial obligations to Odessa College prior to graduation.

*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of Form DD-214 to the registrar's office.

Regional Extension Center at Pyote

Courses offered at the Regional Extension Center at Pyote are designed to meet associate degree requirements at Odessa College. One of the options for the Pyote center is an associate of arts degree for students completing the following courses:

Course and Number	Semester Hours
English 1311, 1312 and two sophomore-level courses	12
Government 2301, 2302	6
History 2301, 2302	6
*Physical Education (any two one-hour activity courses)	2
Biology/Geology (any two sequential laboratory courses)	8
Math 1335 & 1341 or 1341 & 1343 or more advanced	6
Psychology 1301	3
Sociology 1301	3
Major Concentration and/or Electives	17
Business Administration 1301, 2301, 2302, 2311	
Speech 1310, 2340	
Sociology 2301, 2302, 2303	
Economics 2301, 2302	
Total Hours	63

*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of Form DD-214 to the registrar's office.

Honors Program

To be awarded an honors degree from Odessa College, a student must:

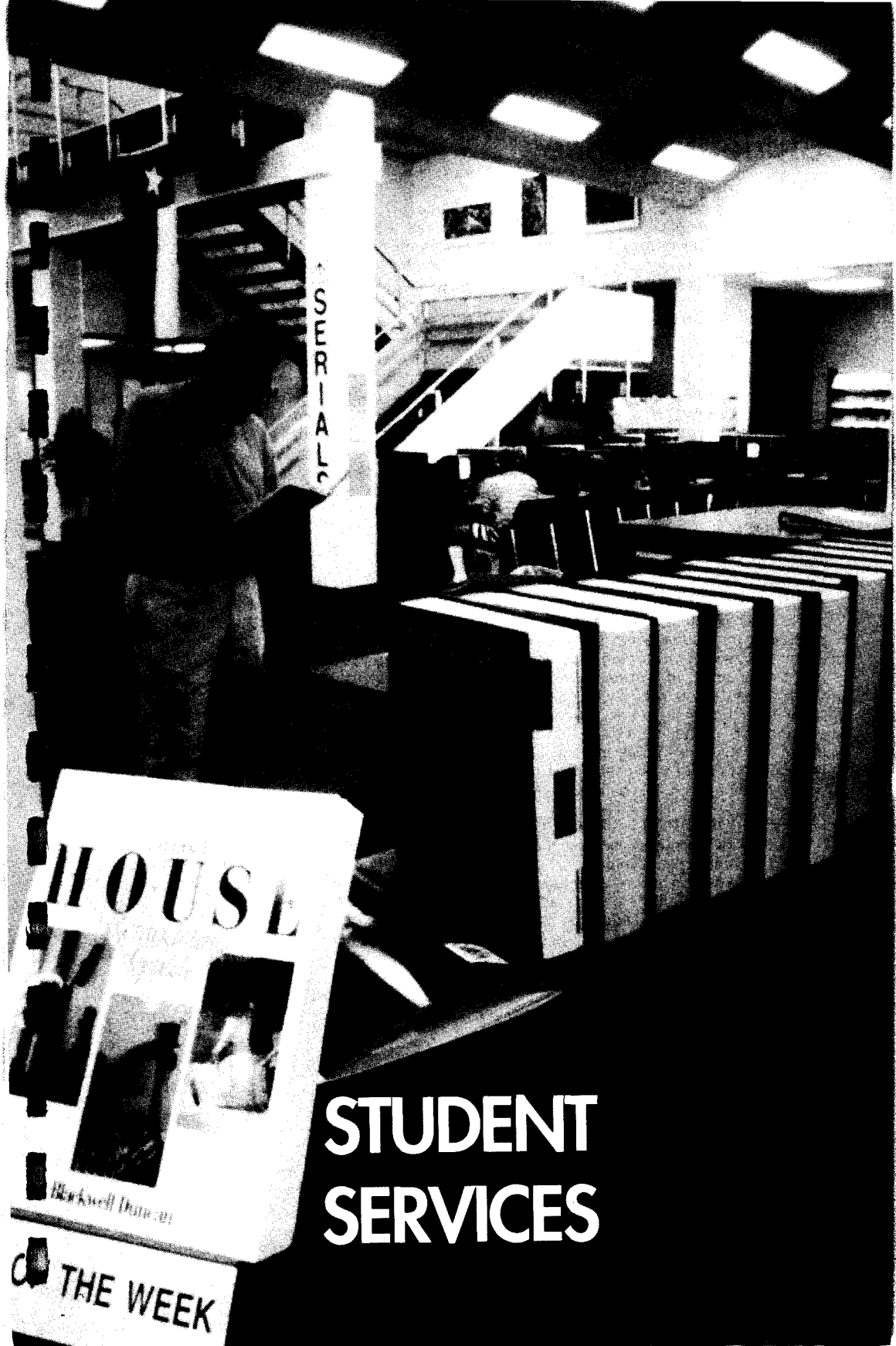
1. Follow the basic degree plan for either the associate of arts, associate of science or associate of applied science as specified in the Odessa College catalog.

2. Complete a minimum of 12 semester hours of honors courses. At least six of these hours must be university parallel courses. If the degree is the A. S., at least six semester hours must be in math/science honors.

3. Earn at least six semester hours of honors credit at Odessa College, if the student is a transfer from an honors program at another institution.

4. Have a minimum GPA average, all classes counted, of 3.25 and a minimum GPA of a 3.0 average for all honors classes.

5. Have a minimum of six semester hours of honors credit in the declared major, if a major is declared. This excludes, of course, a major in a subject area where no honors classes are offered.



STUDENT SERVICES

Student Services

Student Development

Odessa College encourages the growth and awareness of self and others through a comprehensive student development program. The college tries to create a climate which will allow all its students an opportunity to enhance their perception of worth, while increasing their ability to cope within a changing society. The college hopes to provide all students an opportunity to examine thoroughly their potential and to offer opportunities for realizing that potential through the learning experiences offered by the college.

Counseling Center

The counseling center exists to help students make decisions and solve problems. Some of the services available to students are academic advisement, admissions/transfer information, crisis intervention, individual or group counseling and vocational guidance.

Assistance is free and confidential. Any problem or concern that interferes with the attainment of academic, vocational or personal goals can be discussed with a counselor of the student's choice. Students who have visited the counseling center have received help in clarifying educational and personal goals, selecting careers and college courses, reducing stress and worry, improving family and other relationships and improving communications and decision-making skills.

Counseling at Odessa College includes many programs designed to promote the success and well-being of students. The staff also welcomes requests for help or information from community members.

The center is located in Room 204 of the Student Union Building. Students may drop by or schedule an appointment to see a counselor. Periodically, special activities, programs and structured group experiences will be offered as well.

Testing Center

The testing center is in Room 220 of the Student Union Building. Ability, career interest, intelligence, personality and interpersonal tests are offered to students who wish to achieve greater self awareness or identify strengths for the purpose of decision-making. The GED (General Education Development) test is administered on a regular basis to individuals who want to demonstrate mastery of high school subjects. Other national group tests, such as the Medical College Admission Test, are offered as a service to the community. Entrance examinations for special programs, including nursing and law enforcement academy, are scheduled. The ASSET placement test is administered during registration periods and monthly for students enrolling in math or English. Testing and assessment services can be organized for individuals or groups who need specific guidance data. Contact the director of testing at 335-6620 for additional information, test dates or an individual appointment.

Career Information and Job Placement Center

The Odessa College job placement office is located in Room 205 of the Student Union Building. A number of career-related services are available for any student enrolled in credit-hour courses of the college. Instruction in and assistance with interview skill development, resume writing and off-campus employment is available. Referral is made to other student development offices for assistance in obtaining occupational information, career counseling and degree planning.

Students with marketable skills are encouraged to register with the skills bank in the job placement office. The skills bank can provide local and area employers with information concerning skills and talents possessed by Odessa College students.

Another service available through the job placement office is a current listing of jobs available from the local office of the Texas Employment Commission. This list is updated several times each week.

Student Housing

Odessa College currently provides housing only for athletes on scholarship. Such housing is assigned by the athletic department. Information regarding the availability of housing can be obtained by calling or writing the office of the dean of student services.

Student Food Service

The Student Union cafeteria at Odessa College serves short orders as well as balanced meals. Meal tickets are available at discounted rates. A wide variety of restaurants is also available within walking distance of the college.

Campus Parking

Parking permits are available in the business office from 8 a.m. to 7:30 p.m., Monday through Thursday, and from 8 a.m. to 12 noon and 1 to 5 p.m. Friday, during the fall and spring terms. Summer hours, limited to Monday through Thursday, will be announced. A permit is required for each vehicle (including motorcycles and mopeds) parked on campus. Extra permits are available for 50 cents each. Additional parking information can be obtained in the business office or in the campus police office, located in Parker-Downs Hall.

Security

The Odessa College campus police office, located in Parker-Downs Hall, serves the student body of the college by helping to maintain the safety and security of all students and their possessions while they are on campus. Campus police personnel are available to assist students and visitors with problems, such as vehicles with dead batteries and cars with keys locked inside. Police officers are available on a 24-hour basis for emergencies on campus.

Handicapped Students

In accordance with federal laws and regulations, Odessa College does not discriminate on the basis of handicap in the recruitment and admission of students, the employment of faculty and staff and the operation of any of its programs and activities. The dean of student services is designated coordinator for college compliance with Section 504 of Rehabilitation Act of 1973 and with the Americans with Disabilities Act of 1990.

Handicapped students should contact the Odessa College counseling center or the dean of student services for information regarding services available. The college strives to provide a complete range of services for students with special needs such as class arrangement, tutoring, personal counseling, health services and reserved parking.

Health Services

Health services, a student-oriented program of preventive medicine and health education, is located in Room 107 of the Student Union Building. The director, a registered nurse, is on campus full time to provide emergency medical care, preventive health education and a referral system for community agencies. Throughout the year, specialized programs are offered at a minimal or no cost to students, faculty or staff. TB skin tests, diphtheria-tetanus and rubella immunizations and other tests are available. Student insurance also is available.

Health services seeks to establish sound health practices that will enhance students' growth and development not only while they are at Odessa College but also after they leave the institution.

Children's Center

The Odessa College Children's Center opened in the fall of 1976, with 14 children enrolled. The center now provides daytime care for some 50 to 60 children of community residents. The center accepts children from birth to six years. It is open year round from 7:30 a.m. to 5:30 p.m. Monday through Friday, except on regular college holidays. While providing a child care service for the community, the Children's Center also serves as a learning laboratory for students in the Odessa College child development program and in child psychology classes.

Student Activities

The college maintains the philosophy that classroom learning is only one part of its students' education. Almost all students feel some need to learn more about themselves. The opportunity for them to grow as individuals is made possible through social and personal experiences, as well as through academic pursuits. Student activities contribute to personal development through educational and social programming and through student organizations. The interactions of students with each other and with the faculty on an informal basis can provide insights and understanding for students about their society and can enrich the quality of their lives. Information about a wide range of student extracurricular opportunities may be obtained from the student activities office.

Student activities provides a full schedule of campus-based events designed to be both educational and entertaining. These events are available to the student at no charge through the student activity fee. Information regarding specific events is available from the student activities office.

Opportunities for students to participate in student activities include the following groups:

Clubs and organizations—More than nine student organizations are active on campus. Many of these groups are service organizations that relate to academic pursuits, such as nursing or chemistry, while others are honorary societies or special interest groups. A list of currently active student organizations may be found in the student activities office.

Student Congress—The Student Congress at Odessa College is the voice of the students. It plays an important role in influencing the directions of the college on many issues, in addition to sponsoring projects for the welfare of the student body. Students may use the Student Congress to express opinions about the operation of the college based on their individual needs. Students enrolled at Odessa College are encouraged to run for office as well as to vote for the 13 positions. Requirements for congressional positions and campaigning are outlined in the student handbook.

Student intramurals and game room—A well-planned program of intramural activities is offered each semester at Odessa College. Information regarding the intramural schedule can be obtained from the intramural office, located in Room 204 of the Sports Center. A game room is located on the second floor of the Student Union Building, where numerous games are available. Ping-pong, cards, backgammon, checkers and chess are popular choices.

Forensics—Odessa College forensics teams enjoy a national reputation. During the past 15 years, the forensics teams have placed among the top 10 in national tournaments. In four of those years, the college debate teams have won the National Junior College Forensics tournament. The forensics team travels nationally and competes successfully with teams on the senior college and university level.

Choir and Band—Odessa College's A Cappella Choir and Madrigal Singers have gained international recognition for their musical abilities. The college also has an active jazz band that performs regularly on campus and in the community. Annually, the jazz band participates in international festivals that are usually held in major Mexican cities such as Mexico City, Acapulco and Guadalajara. The department of music also sponsors a community band as well as a community choir for area citizens who maintain an interest in performing.

Campus radio station—KOCV-FM, the college-owned and operated radio station, is an educational, non-commercial station. Radio programs are designed and hosted by students, and the station is operated by students, under the supervision of a professionally trained and experienced instructor. KOCV-FM began broadcasting National Public Radio programs in February 1989.

Campus television station—KOCV-TV, like KOCV-FM, is college-owned and operated. Student-produced programs are supervised by a professionally experienced and academically-trained instructor. Student programming also is carried on Channel 10 of the local cable television company.

Art Shows—A function of the department of art is to provide students with the opportunity to exhibit their own work and to see work of professional artists each year through student and traveling art exhibits.

Athletics

Odessa College athletic teams hold 42 national titles. The institution has earned a national reputation for its outstanding athletic programs. More than 500 athletes from Odessa College have won National Junior College All-American honors. Currently, the athletic program includes teams in women's basketball, track, rodeo and tennis. Men's teams compete in baseball, basketball, cross country, golf, rodeo, tennis and track.

The Wranglers are members of the National Junior College Athletic Association and the Western Junior College Athletic Conference. Each sport has a full schedule, and the athletic teams compete in national tournaments (NJCAA) every year.

Some of the honors and titles won by Odessa College athletic teams include:

Men's Basketball—The Wranglers have had an active basketball program since 1952. The cagers were runners-up in the Region V Tournament in 1958, and co-champions in the Western Junior College Athletic Conference in 1979, WJCAC champions in 1989 and Region V champions in 1988, 1989, and 1990. The 1989-1990 team finished eighth at the national junior college tournament. Three players have been designated All-American.

Women's Basketball—The Lady Wranglers have won the conference championship six times—1979-80, 1983-84, 1984-85, 1985-86, 1988-89 and 1990-91; the regional championship five times—1979-80, 1984-85, 1985-86, 1988-89 and 1990-91. They finished second in the 1985 national tournament and won the NJCAA National Championship in 1986 and 1991. They have produced 14 All-Americans, 42 All-Conference players and 38 All-Region players. For 14 consecutive years, they have been nationally ranked. Three times they were ranked No. 1 in the nation. From 1984-86, the Lady Wranglers recorded 79 regular season games without a loss. The Lady Wranglers' coach has received numerous honors, including being named the Converse Coach of the Year for 1984-1985 and the NJCAA Coach of the Year in 1986 and 1991.

Golf—In 1959, Odessa College hosted the first National Junior College Golf Championship. Odessa College won the national title in 1959, 1960, 1961, 1962, 1963 and 1965. The Wranglers have captured the Western Junior College Athletic Conference title 17 times and have had 33 All-Americans in golf. Again in 1979 and 1987, Odessa College hosted the NJCAA National Championship tournament. In 1991 the team finished eighth in the national tournament. OC won regional championships in 1988 and 1990 and the conference championship in 1989.

Rodeo—For the first two years, OC had only a men's team; in 1986, a women's team was added. Members of the men's teams qualified for the college national finals in 1985, 1986, 1987, 1989, 1990 and 1991. The men's teams have won 11 regional event titles, two regional team championships, eight national event titles and the national team championship in 1989. Members of the men's team brought home a first place in national competition in bullriding in 1986 and first place in calf roping in 1989 and 1990. Odessa College is recognized as a power rodeo school in the Southwest Region of the National Intercollegiate Rodeo Association, a region which has 22 competing universities and colleges.

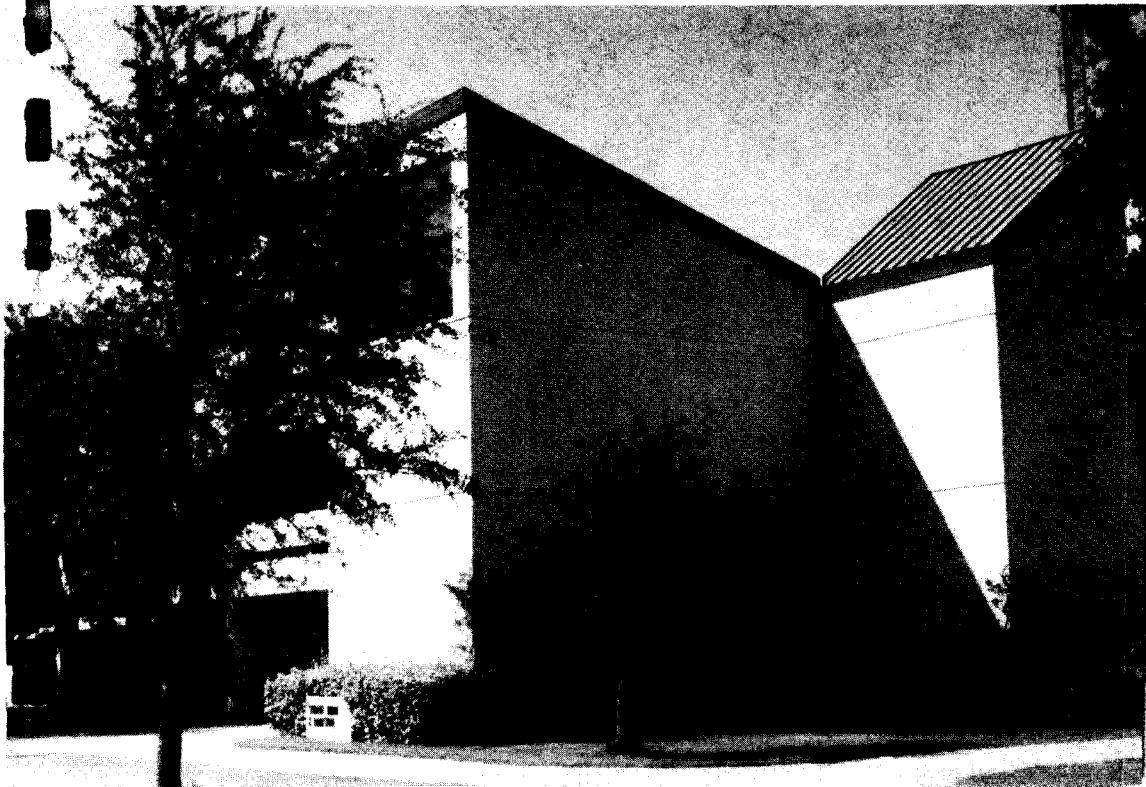
Tennis—Odessa College tennis teams consistently have won titles in both junior and senior college competition. In the spring of 1978 and 1979, both the men's and women's teams won the NJCAA national championships, a feat never before accomplished by a junior college. Forty-seven members of OC tennis teams have been named All-Americans. OC women's teams won the national singles and team championships in 1967, 1977 and 1978 and the national doubles and team championship in 1970, 1977 and 1979. Both the 1988 and 1989 women's teams finished as runners-up at the NJCAA national tournament. The Lady Wranglers consistently have been ranked in the top eight nationally.

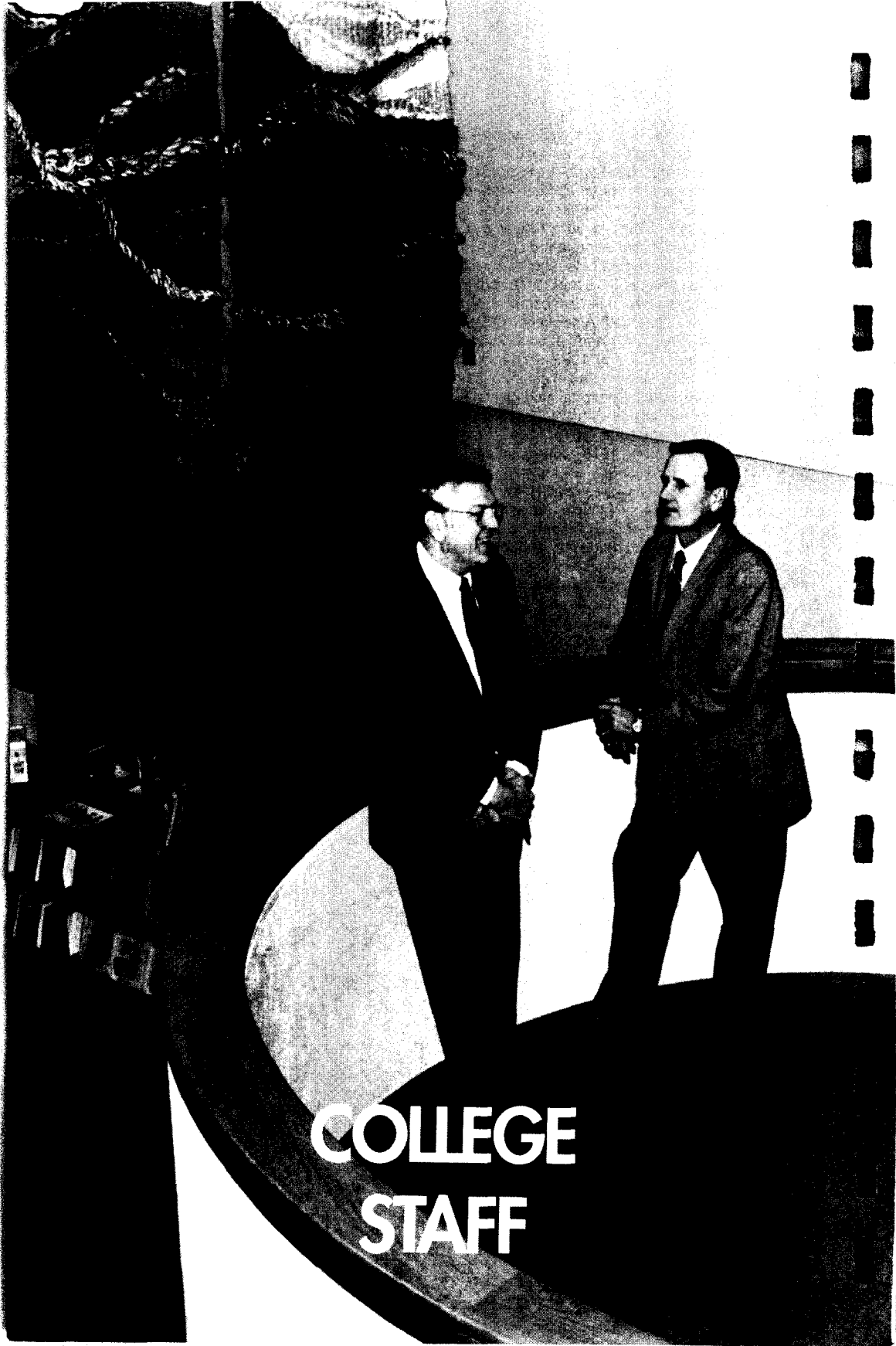
The men's team won the national singles title and the national team title in 1978. The men also won the national doubles and team championships in 1968 and 1979, as well as the national doubles and team runner-up honors in 1969 and 1974. Men's teams also won the national team, singles and doubles championships in 1975 and 1976. During the past two years, the Wranglers have risen back up to being ranked in the top five nationally.

Men's Track—Odessa College track teams have won more than 60 championships. In 1971, the track team placed second at the National Junior College Championship and won third in 1975. In 1979, the tracksters won the conference, regional and state track championships. In 1980, they placed third at both the National Junior College outdoor and indoor meets. In 1981, 1982, 1983, 1984 and 1985, the Odessa College track team won back-to-back National Junior College outdoor and indoor championships. Since 1965, more than 300 members of the Odessa College track teams have been named All-American by the National Junior College Athletic Association.

Women's Track--In 1989, a women's track team was added to the OC athletic program and the team won the NJCAA national championship its first year out. The 1990-91 team finished third at the NJCAA national indoor meet and fourth at the NJCAA national outdoor meet.

Men's Baseball--Odessa College began competing in baseball in 1990-91 for the first time since 1969. The team advanced to the state tournament its first year.





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College Services

Athletics

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James C. Carlson, B.S., M.Ed.	Athletic Trainer
Ken Hefner, B.A.	Women's Basketball Coach
Dennis Helms, A.A., B.S., M.Ed.	Men's Basketball Coach
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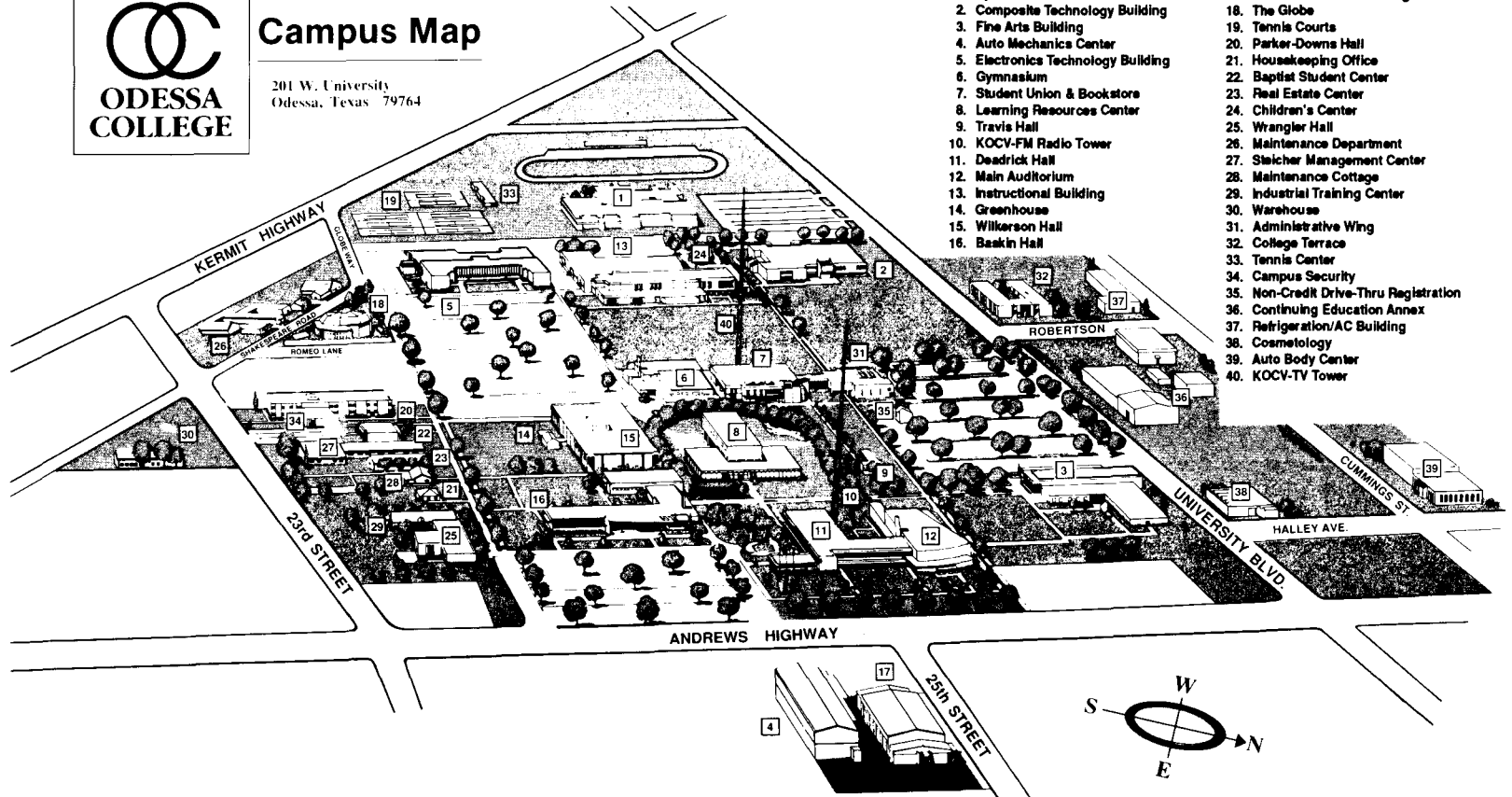
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Campus Map

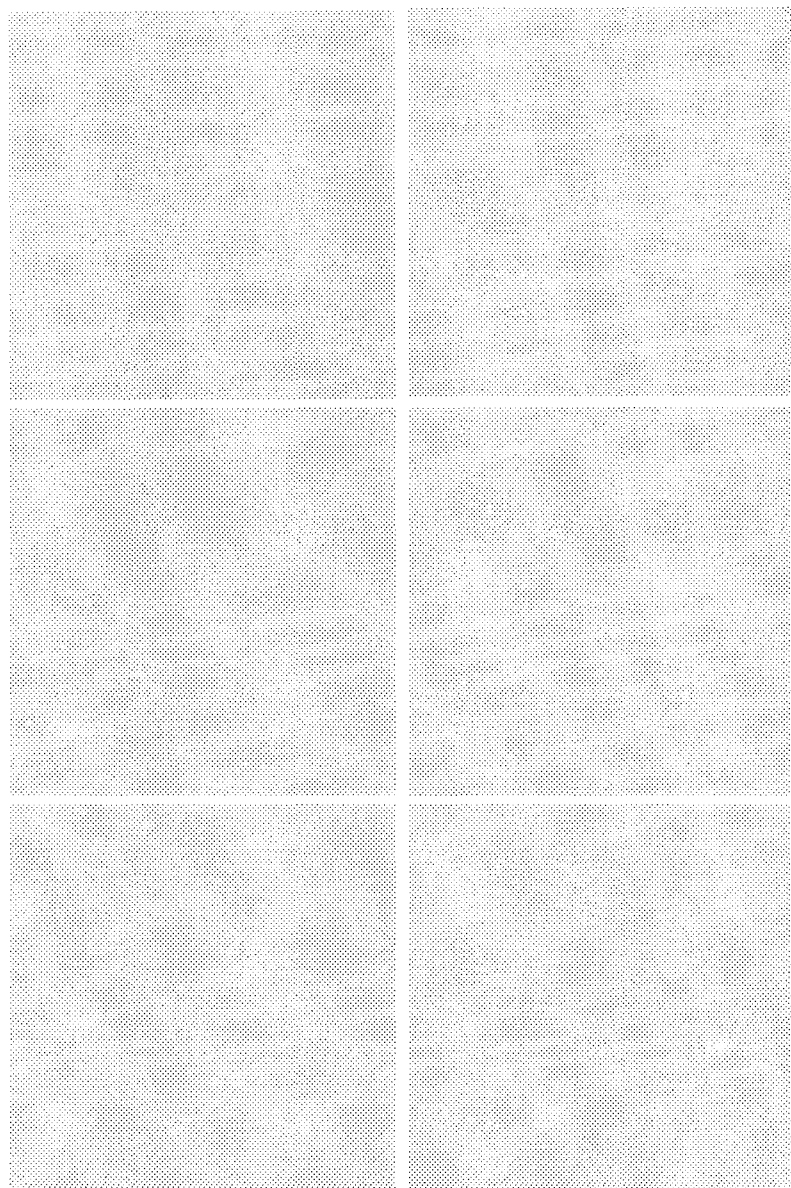
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| 1. Sports Center | 17. Diesel Mechanics Training Center |
| 2. Composite Technology Building | 18. The Globe |
| 3. Fine Arts Building | 19. Tennis Courts |
| 4. Auto Mechanics Center | 20. Parker-Downs Hall |
| 5. Electronics Technology Building | 21. Housekeeping Office |
| 6. Gymnasium | 22. Baptist Student Center |
| 7. Student Union & Bookstore | 23. Real Estate Center |
| 8. Learning Resources Center | 24. Children's Center |
| 9. Travis Hall | 25. Wrangler Hall |
| 10. KOCV-FM Radio Tower | 26. Maintenance Department |
| 11. Deadrick Hall | 27. Steicher Management Center |
| 12. Main Auditorium | 28. Maintenance Cottage |
| 13. Instructional Building | 29. Industrial Training Center |
| 14. Greenhouse | 30. Warehouse |
| 15. Wilkerson Hall | 31. Administrative Wing |
| 16. Baikin Hall | 32. College Terrace |
| | 33. Tennis Center |
| | 34. Campus Security |
| | 35. Non-Credit Drive-Thru Registration |
| | 36. Continuing Education Annex |
| | 37. Refrigeration/AC Building |
| | 38. Cosmetology |
| | 39. Auto Body Center |
| | 40. KOCV-TV Tower |

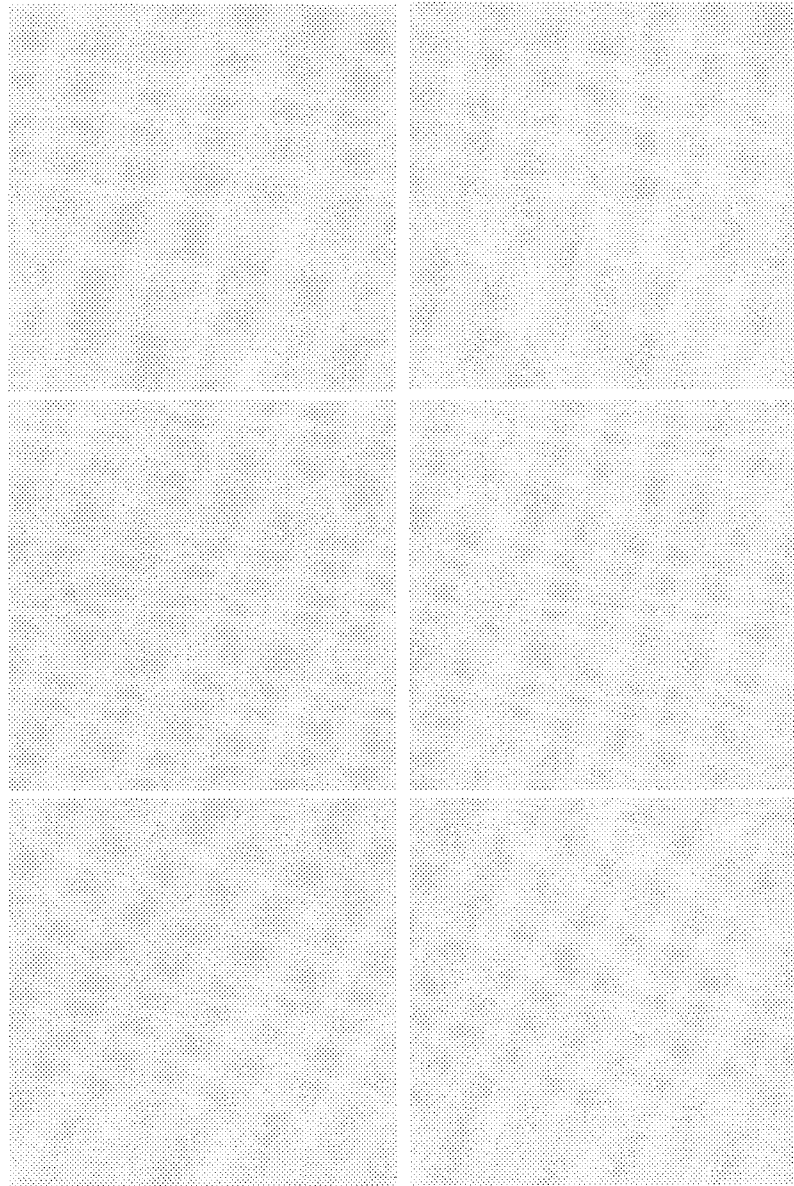


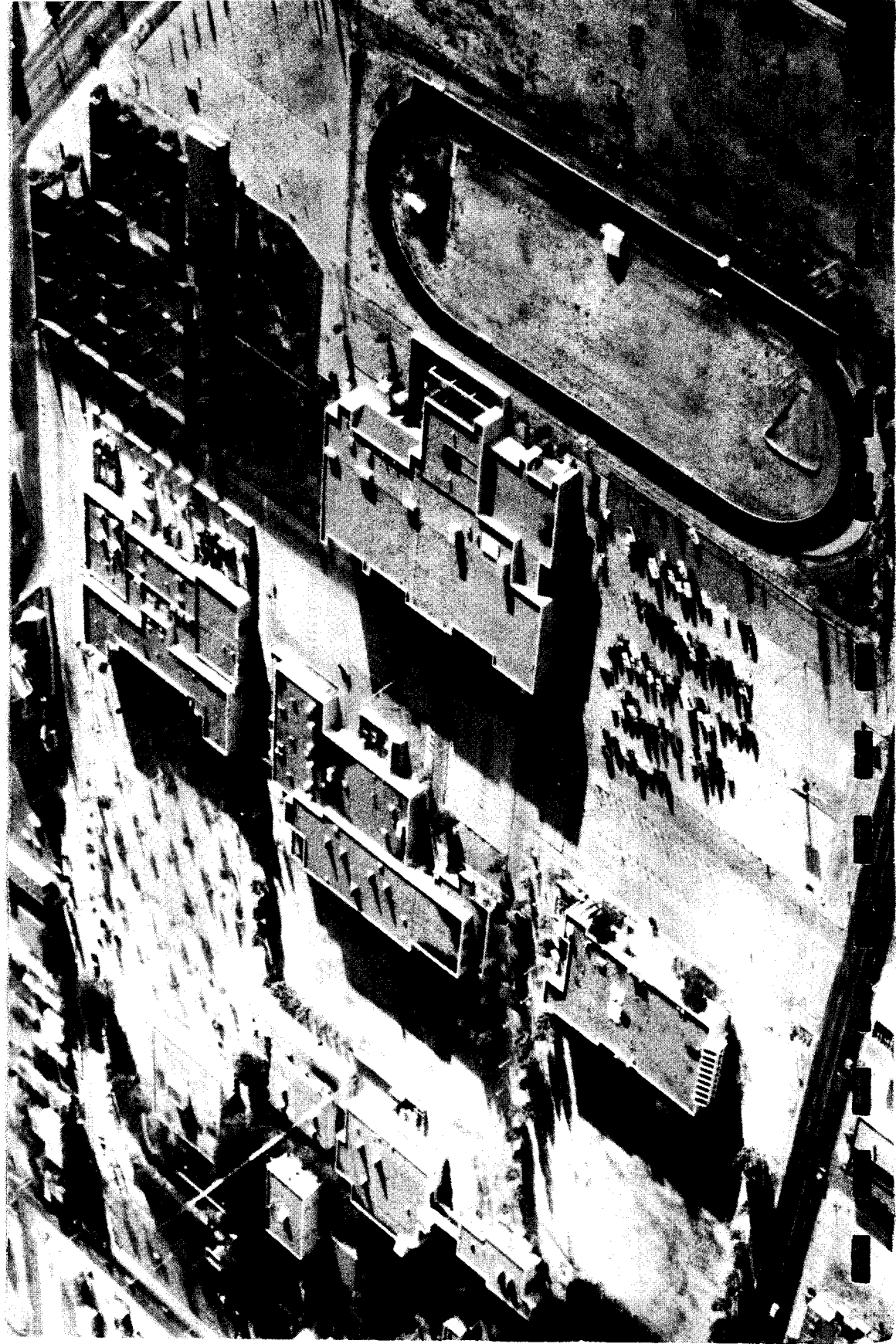
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