Odessa College

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Celebrating 50 years of student success.

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B U L L E T I N

Catalog of Courses

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Volume 50, Number 2 March 1996

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An Equal Opportunity College
Odessa College does not discriminate on the basis of sex, race, color, national origin, disability or age.

Odessa College Bulletin

CATALOG OF COURSES

1996-1997

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1996-97 COLLEGE CALENDAR

MAY SEMESTER 1996

Advance Registration ..... April 23-25 (Tues-Thurs)
Registration ..... May 13 (Mon)
First Class Day ..... May 14 (Tues)
Late Registration 8-9 a.m. ..... May 14 (Tues)
Last Day to Drop With a "W" ..... May 23 (Thurs)
Holiday (Memorial Day) ..... May 27 (Mon)
Final Exams, End of Term ..... May 28 (Tues)

SUMMER 1996

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

Summer I

Advance Registration ..... April 23-25 (Tues-Thurs)
Add/Drop ..... April 23-25 (Tues-Thurs)
Last Day to Pay for Advance Registration ..... May 20 (Mon)
Holiday (Memorial Day) ..... May 27 (Mon)
Registration ..... May 29 (Wed)
Classes Begin ..... May 30 (Thurs)
Late Registration ..... May 30-June 3 (Thurs-Mon)
Last Day for Schedule Changes ..... June 3 (Mon)
Last Day to Drop With a "W" ..... June 26 (Wed)
Holiday ..... July 4 (Thurs)
Last Class Day ..... July 8 (Mon)
Final Exams, End of Term ..... July 9 (Tues)

Summer II

Advance Registration ..... April 23-25 (Tues-Thurs)
Add/Drop ..... April 23-25 (Tues-Thurs)
Last Day to Pay for Advance Registration ..... July 1(Mon)
Registration ..... July 10 (Wed)
Classes Begin ..... July 11 (Thurs)
Late Registraton ..... July 11-15 (Thurs-Mon)
Last Day for Schedule Changes ..... July 11 (Thurs)
Last Day to Drop or Withdraw With a "W" ..... Aug 6 (Tues)
Last Class Day ..... Aug 15 (Thurs)
Final Exam, End of Term ..... Aug 16 (Fri)

FALL 1996

Application Deadline for Advance Registration ..... July 18 (Thurs)
Advance Registration ..... July 29-Aug 1 (Mon-Thurs)
Add/Drop for Advance Registration ..... July 29-Aug 1 (Mon-Thurs)
Payment Deadline for Advance Registration ..... Aug 8 (Thurs)
Nine Month Faculty Return ..... Aug 19 (Mon)
Registration (K-Z) ..... Aug 20 (Tues)
(A-L) ..... Aug 21 (Wed)
(All) 1-7 p.m. only ..... Aug 22 (Thurs)
Classes Begin ..... Aug 26 (Mon)
Late Registration/Schedule Changes ..... Aug 26-30 (Mon-Fri)
Last Day for Schedule Changes by 2 pm ..... Aug 30 (Fri)
Holiday (Labor Day) ..... Sept 2 (Mon)
Twelfth Class Day ..... Sept 11 (Wed)
Deadline for Fall Degree Application ..... Sept 27 (Fri)
Staff Development (No Classes) ..... Oct 18 (Fri)
Last Day to Drop or Withdraw with a "W" ..... Nov 7 (Thurs)
Thanksgiving Holiday ..... Nov 27-30 (Wed-Sat)
Advance Registration for Spring/Midwinter ..... Dec 2-6 (Mon-Fri)
Add/Drop for Spring/Midwinter Advance Registration .... Dec 2-6 (Mon-Fri)
Last Class Day ..... Dec 13 (Fri)
Final Exams ..... Dec 16-19 (Mon-Thurs)
End of Semester ..... Dec 20 (Fri)
College Offices Closed ..... Dec 23-Jan 3 (Mon-Fri)

MIDWINTER SESSION 1996-1997

Advance Registration	Dec 2-6 (Mon-Fri)
Registration 8-10 a.m.	Dec 30 (Mon)
First Class Day	Dec 30 (Mon)
Holiday	Jan 1 (Wed)
Last Day to Drop or Withdraw With a "W"	Jan 7 (Tues)
Final Exams, End of Term	Jan 11 (Sat)

SPRING 1997

Application Deadline for Advance Registration	Nov 22 (Fri)
Advance Registration	Dec 2-6 (Mon-Fri)
Add/Drop for Advance Registration	Dec 2-6
Offices Open/12 Month Faculty Return	Jan 6 (Mon)
Payment Deadline for Advance Registration	Jan 9 (Thurs)
Nine Month Faculty Return	Jan 13 (Mon)
Registration (A-L)	Jan 14 (Tues)
(K-Z)	Jan 15 (Wed)
(All) 1-7 p.m. only	Jan 16 (Thurs)
Holiday (Martin Luther King Day)	Jan 20 (Mon)
Classes Begin	Jan 21 (Tues)
Late Registration/Schedule Changes	Jan 21-27 (Tues-Mon)
Last Day for Schedule Changes by 2 p.m.	Jan 27 (Mon)
Deadline for Spring Degree Application	Feb 21 (Fri)
Spring Break	Mar 10-14 (Mon-Fri)
Holiday (Good Friday)	Mar 28 (Fri)
Last Day to Drop or Withdraw With a "W"	Apr 3 (Thurs)
Advance Registration for Summer I & II	Apr 22-24 (Tues-Thurs)
Add/Drop for Summer I & II Advance Registration	Apr 22-24 (Tues-Thurs)
Last Class Day	May 9 (Fri)
Final Exams	May 12-15 (Mon-Thurs)
Graduation Day	May 16 (Fri)

SUMMER 1997

Summer I

Advance Registration	Apr 22-24 (Tues-Thurs)
Add/Drop	Apr 22-24 (Tues-Thurs)
Last Day to Pay for Advance Registration	May 14 (Wed)
Registration	May 21 (Wed)
Holiday (Memorial Day)	May 26 (Mon)
Classes Begin	May 27 (Tues)
Late Registration	May 27 (Tues)
Last Day for Schedule Changes	May 27-28 (Tues-Wed)
Last Day to Drop With a "W"	June 25 (Wed)
Last Class Day	July 2 (Wed)
Final Exams, End of Term	July 3 (Thurs)

Summer II

Advance Registration	Apr 22-24 (Tues-Thurs)
Add/Drop	Apr 22-24 (Tues-Thurs)
Last Day to Pay for Advance Registration	July 1 (Tues)
Registration	July 7 (Mon)
Classes Begin	July 8 (Tues)
Late Registration	July 8 (Tues)
Last Day for Schedule Changes	July 8-9 (Tues-Wed)
Last Day to Drop or Withdraw With a "W"	Aug 5 (Tues)
Last Class Day	Aug 12 (Tues)
Final Exams, End of Term	Aug 13 (Wed)

1997

January

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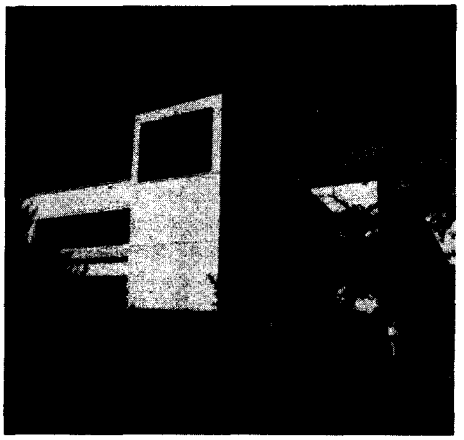
ODESSA COLLEGE STATEMENT OF PURPOSE

The Board of Trustees of the Odessa Junior College District (hereinafter called OC), in compliance with the Criteria for Accreditation of the Southern Association of Colleges and Schools, formalizes the beliefs, philosophy, goals, and objectives of OC with approval and publication of this document. This formal Statement of Purpose provides the core around which all institutional programs are built. Institutional planning and evaluation processes demonstrate a commitment from Board members, administration, faculty, and staff to the tenets expressed in this statement.



HISTORICAL BACKGROUND

The past of Odessa College, which will celebrate its 50th anniversary during the 1996-97 school year, is interwoven with growth and progress. A review of its history 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, OC has grown steadily through the last 50 years. During a long semester, more than 4,700 students are enrolled in university-parallel and occupational/technical credit courses. During a year, more than 7,600 people also enroll in one or more continuing education courses.

Many university-parallel courses are offered for students planning to complete four-year degrees at senior colleges or universities and are freely transferable. Former OC 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 also are offered, and additional ones are planned to meet the needs of citizens who want to learn new or improve existing skills. With an average of forty-five percent of our students enrolled in occupational/technical programs, OC continues to fulfill the workforce demands of our community.

Initially housed in temporary quarters in the old Odessa High School, OC's first classes 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.

The campus grew to 15 buildings on a 35-acre plot by 1960. Today, the $55 million campus spreads over 80 acres and includes some 25 buildings that house more than 150 classrooms, laboratories and other facilities.

OC boasts a $7 million Sports Center with more than 110,000 square feet of floor space that houses athletics, physical education and community recreation activities. The college also is home to public television station KOCV-TV and public radio station KOCV-FM.

Odessa College has not only expanded its facilities, but has also expanded its educational services to much of West Texas. The OC service area now covers over 20,000 square miles, making it the largest service area for any community college in Texas. OC offers extension courses and/or Adult Basic Education courses in thirteen towns as well as offering concurrent classes in six area high schools.

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

VISION

Odessa College will become an institution that is student centered, both in its philosophy and its operation. All components of the institution will focus on how best to serve the needs of the student — traditional, non-traditional, on-campus, or off-campus. The institution will accept a student at whatever level he/she enters and advance him/her as far along the learning spectrum as the student desires.

MISSION AND PURPOSE

Odessa College is a comprehensive community college. Our mission as trustees, administrators, faculty, and staff at Odessa College is to provide the finest educational opportunities possible for all residents of our fourteen-county service area who have the desire and ability to learn.

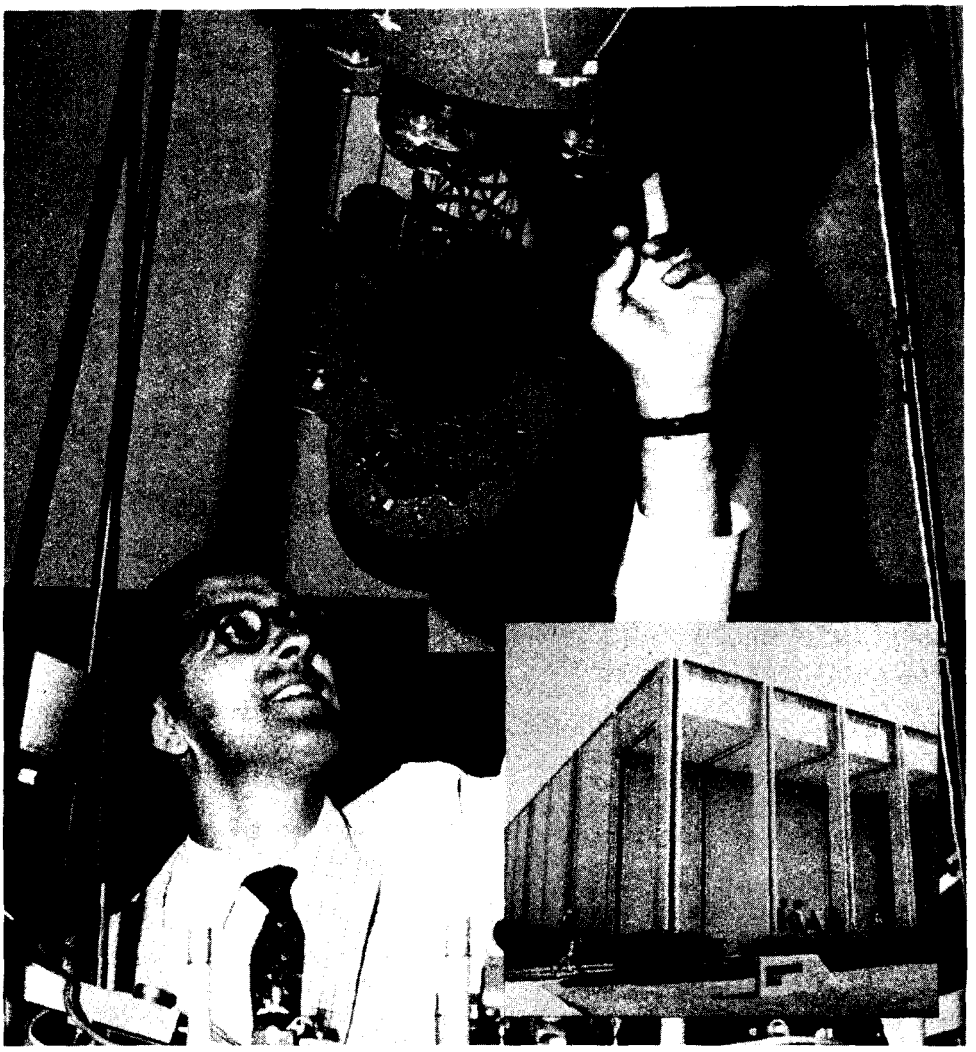
In accordance with our mission, OC's educational programs and services are designed to help people achieve their individual potential, to enrich their lives, and to become responsible and productive members of society. Thus, Odessa College exists for the following purposes:

- to provide the first two years of higher education and pre-professional programs for those students preparing to transfer for further education;
- to provide occupational/ technical training for those students desiring to obtain the comprehensive skills and knowledge required in specialized fields;

- to provide general and developmental education to prepare students for effective involvement in society;
- to provide continuing education that is a response to various community needs and desires; and
- to provide opportunities for personal enrichment.

PHILOSOPHY

Odessa College exists for students. The college, with its faculty and staff, is committed to excellence in its services, programs, and practices. It affirms equal access to all aspects of the institution for the diverse population it serves. The institution approaches all endeavors with the highest standards of ethics and professionalism.



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, 18 radio stations and more than 150 churches. 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.

DEGREES AND CERTIFICATES

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, etc. — as an enhancement to the general education requirements for other disciplines.

Associate in Arts*

The Associate in Arts Degree 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
- Business Administration
  - (leading to a B.B.A. in Accounting, Finance, Personnel, Management and Marketing)
- Education
  - (Elementary/Secondary Options)
- English
- Foreign Language
- Humanities (Art Option)
- Legal Assistant
- Mass Communication
  - (Broadcasting/ Mass Communication Options)
- Music
- Psychology
- Sociology
- Social Science
  - (Economics/Government/ History Options)
- Speech

Please refer to page 39 of this catalog for degree requirements.

Associate in Science*

The Associate in Science Degree 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:

- Agriculture
- Biology
- Chemistry
- Computer Science
- Geology
- Mathematics
- Physical Education
  - (Exercise and Sport Science/ Athletic Training Options)
- Physics
- Psychology
- Sociology

Please refer to page 39 of this catalog for degree requirements.

Associate in Science in General Studies*

The Associate in Science in General Studies Degree, known as the A.S.G.S., is designed to allow the student to select from a wide range of courses that fulfill the requirement of a generalized education.

This degree will have most, if not all, courses that will transfer to senior institutions. The student should check the requirements of the senior institution before planning a course of study. See your counselor or faculty advisor for more information.

Please refer to page 40 of this catalog for degree requirements.

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 comprehensive skills and knowledge in a specialized field, with the goal of employment in that field. While the degree is usually job oriented, all A.A.S. degrees will have at least some, if not most, courses transfer to senior institutions through the general education requirements in the degree and/or inverted baccalaureate degree plans. The student should check the requirements of the senior institution before planning a course of study. See your counselor or faculty advisor for more information. Odessa College awards the A.A.S. degree in the following areas:

Automotive Technology and
- Diesel Mechanics (Automotive/ Diesel Mechanics Options)

Building Trades
Child Development
Clinical Laboratory Sciences (Medical Laboratory Technology)
Computer Information Systems
- (Business Programming/PC Support Specialist Options)

Cosmetology (Operator/Instructor Options)
Culinary Arts
Drafting Technology
Electrical and Electronics Technology
Emergency Medical Technology
Fire Technology
Heating, Ventilation and Air Conditioning
Human Services (Alcohol and Drug Abuse)
Law Enforcement/Criminal Justice (Law Enforcement/Criminal Justice and Law Enforcement/Corrections Options)
Maintenance Technology
Management
Metal Trades Technologies
- (Industrial Machinist/ Industrial Welding Options)

Nursing (RN)
Occupational Safety and Health Technology
Office Systems Technology
- (Office Systems/Medical Emphasis Options)

Petroleum Technology
Photography
Physical Therapist Assistant
Radiologic Technology
Respiratory Therapy
Surgical Technology

Please refer to page 41 of this catalog for degree requirements.

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 specific course and semester hour requirements):

Automotive Technology
- Air Conditioning and Heating
- Chassis
- Drivability
- Automotive Electronics
- Service Technician Manager

- Diesel Technology
  - Caterpillar
  - Cummins
  - Detroit Diesel
  - Diesel Electronics Technician
- Building Maintenance
  - Basic Carpenter Helper
  - Basic Construction Technician
  - Basic Cabinetmaker Technician
  - Advanced Construction Technician
  - Construction Estimator
- Drafting Technology
  - Architectural Detailer
  - Machine Drafting Detailer
  - Structural Drafting Detailer
  - Pipe Drafting Detailer
  - Technical Illustrator
- Electrical/Electronics Technology (Technician/Advanced Technician Options)
- Fire Technology
  - Fire Protection
  - Fire Prevention and Arson Investigation
  - Basic Fire Fighter Academy
- Heating, Ventilation and Air Conditioning
  - HVAC Technician (Basic/Advanced Options)
  - Sheet Metal Technician
  - Commercial Refrigeration Maintenance Technician
  - HVAC Shop Manager
- Management
  - General Management (General Management/Marketing/ Small Business Options)
  - Industrial Supervision
  - Management Advanced Skills
- Metal Trades Technologies
  - Machinist
  - Machine Shop Foreman
  - Computerized Numerical Control Programmer
  - Milling Machine Operator
  - Engine Lathe Operator
  - General Welder
  - Fitter Welder
  - Certified Welder
  - Pipe Welding Foreman
  - Welding Machine Operator
- Occupational Safety and Health Technology
- Office Systems Technology
  - Office Clerk
  - Office Assistant
  - Office Technology Specialist
  - Medical Office Clerk
  - Medical Office Assistant
- Petroleum Technology
  - Safety and Environmental Technician
  - Well Head Pumper
  - Gas Compressor Operator
  - Gas Plant Operator
  - Refinery Panel Operator

Please refer to page 41 of this catalog for certificate requirements.

Certificate of Completion*

The Certificate of Completion is given by Odessa College after completion of a designated course of study that concentrates on specific job skills, licensure requirements or subject matter mastery. Odessa College awards a Certificate of Completion in the following vocational fields (refer to individual departmental sections for specific course and semester hour requirements):

- Child Development
  - Child Care Aide
  - Child Care Assistant
  - Child Care Management
- Cosmetology
  - Instructor
  - Operator
- Culinary Arts
  - Food Preparation Cook
  - Food Production Cook
- Emergency Medical Technician
  - Basic/Intermediate/Advanced Options
- Human Services (Drug and Alcohol Abuse)
- Law Enforcement/Criminal Justice
  - County Correctional Officer
  - State Prison Guard
  - Emergency Telecommunications/ Dispatcher
  - Texas Peace Officer
  - Basic Law Enforcement Academy
  - Advanced Peace Officer Skills
- Legal Assistant
  - (Legal Assistant/Advanced Legal Assistant Options)
- Phlebotomy
- Photography
  - Photo Lab Assistant
  - Commercial Studio Assistant
  - Portrait Studio Assistant
- Respiratory Therapy Technician
- Surgical Technology
- Vocational Nursing (LVN)

Please refer to page 41 of this catalog for certificate requirements.

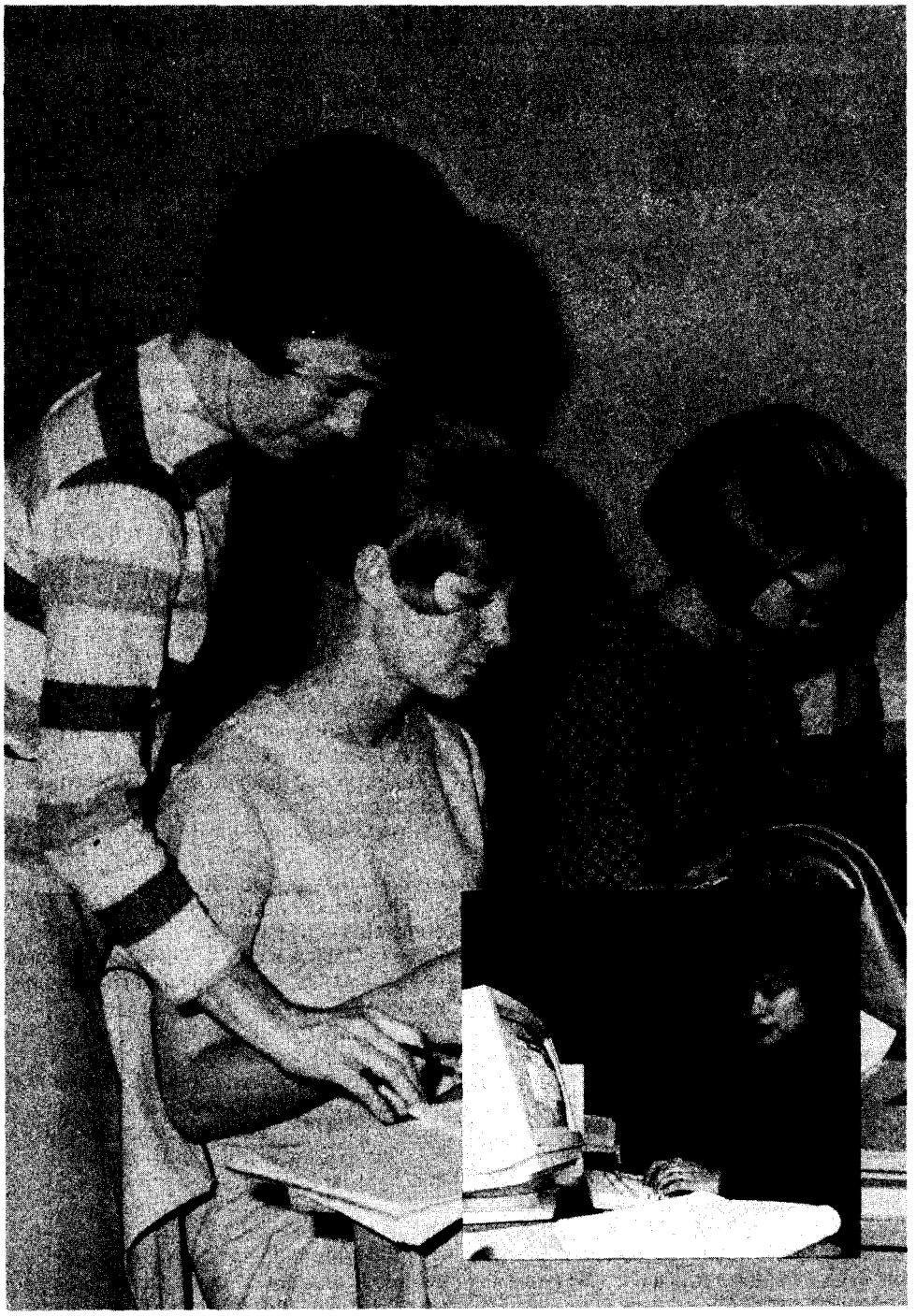
ACCREDITATION

Odessa College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools. (1866 Southern Lane, Decatur, Georgia 30033-4097: Telephone number 404-679-4501) to award associate degrees.

Prospective students and interested parties who wish to view the accreditation documents and/or the institutional self-study 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:

Accrediting Agency	Date of Last Review
American Heart Association	July 1995
American Nurse Credentialing Center	July 1991
American Physical Therapy Association Commission on Accreditation for Physical Therapy Education	January 1991
Board of Vocational Nurse Examiners for the State of Texas	1995
Committee on Accreditation of Allied Health Education Programs with recommendation of the Accreditation Review Committee for Respiratory Therapy Education	June 1995
Council on Medical Education of the American Medical Association through the recommendations of the Joint Review Committee for Respiratory Therapy Education	October 1994
Federal Aviation Administration	February 1992
Joint Review Committee on Education in Radiologic Technology	October 1994
National Accrediting Agency for Clinical Laboratory Sciences with recommendations to the Committee on Allied Health Education and Accreditation	October 1992
National Association of Schools of Music	1991
National Certification Council for Activity Professionals	October 1994
National League for Nursing	November 1994
Southern Association of Colleges and Schools	March 1-4, 1992
Texas Board of Private Investigators and Private Security Officers	1995
Texas Commission on Fire Protection Personnel Standards and Education	1995
Texas Commission on Law Enforcement Officers Standards and Education	January 31, 1995
Texas Department of Health, Division of Food and Drugs	February 1994
Texas Department of Health, Emergency Medical Services Division	1995
Texas Department of Human Services — Long Term Care Division, Medication Aide Program	November 9, 1995
Texas Real Estate Commission	1995
Texas State Board of Examiners of Professional Counselors	August 1991
Texas State Board of Social Worker Examiners	1995



ADMISSIONS AND REGISTRATION

ADMISSION REQUIREMENTS AND PROCEDURES

Odessa College has an "open door" policy which allows admission for most students who wish to take classes. If you fall under one of the following categories, you are eligible for admission to Odessa College.

High School Graduate:
Students who have graduated from high school or students who have successfully passed the GED are eligible for admission. This category includes students who have graduated via an approved home school program.

Early Admission/ Concurrent Enrollment Student:
High school students who qualify may earn college credit while still in high school. With appropriate agreements between OC and individual public school districts, a student may earn both college and high school credit at the same time. *(See detail on qualification in following sections.)*

Transfer Student:
Students who have attended another college or university are eligible for admission.

Non-High School Graduate Students Over 18 Years of Age:
Students with a GED, who can demonstrate by examination, high school equivalency, and who can present a letter of recommendation from the principal or superintendent of the last high school attended are eligible for admission. This includes those who were home schooled or who attended non-accredited public or private high schools.

Non-High School Graduate Students Under 18 Years of Age:
Students who attended non-accredited public or private high schools, or who were schooled in a non-traditional setting may be credited by examination that demonstrates high school equivalency, or upon the recommendation of the principal or superintendent of the last high school attended are eligible for admission. They must present a notarized record of the high school work completed and date of completion and must agree to limitations or conditions of admission established by Odessa College.

Individual Approval Students:
Individuals who may not have completed high school are eligible to attend Odessa College if they are at least 18 years of age, and it is determined that the person can benefit from study at the college.

International Students:
Students from outside the United States may attend Odessa College by meeting regular admissions standards and special qualifications detailed in the section on International Students.

Returning Students:
Students in good standing who have attended Odessa College but have not taken classes within the last calendar year must complete an application update form.

Required Admission Materials

Persons wishing to enroll at Odessa College should complete their admission file a minimum of two weeks prior to the announced date of advanced or regular registration. Individuals may submit applications and other required materials the same day of registration. When this situation occurs, however, the student should expect a significant time delay for processing of information, assessment testing, working with a counselor or advisor, etc.

The following items must be submitted to complete the admission file:

1. A completed and signed application or reapplication for admission form.
2. An official copy of the applicant's transcript. Applicants are responsible for requesting the transcript from the previous school and paying any applicable fees. Please request that all transcripts be mailed to the Registrar's Office, 201 W. University, Odessa, Texas 79764.
   High School Graduates: An official copy of the high school transcript with the date of graduation and class rank included. GED students must submit official verification of completion of the examination.
   Early Admission/Concurrent Enrollment Students: A copy of the high school transcript with the most current semester completed included.
   Transfer and Returning Students: Official copies of the transcript from each college or university attended that are not on file with Odessa College.
   International Students: Official copies of all academic records. Those from non-English language institutions must be translated to English.
   Transcripts: All transcripts must be on file by the end of the first academic term in which the student is enrolled.
3. Verification of residence status for tuition purposes. If information from the application form and official transcript copies is not sufficient to determine residence status, applicants may be required to submit other forms of verification as detailed in the section on residence status.
4. Verification of results of TASP examination or exemption status. See section on TASP requirements for detail.
5. Other special forms. Early admission and concurrent enrollment students must submit the appropriate approval forms signed by authorized high school personnel. In unusual circumstances, other special items may be requested. New students are encouraged to come to the Student Information Center on campus to pick up and complete application materials. Students will have the opportunity to make arrangements to talk with counselors, faculty advisors, and other individuals who can provide assistance in planning for attending Odessa College. When application materials are mailed, they should be addressed to Registrar's Office, 201 W. University, Odessa, TX 79764.

Students who apply in advance of the suggested two weeks before registration will be notified by mail when the application file is complete.

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.

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 summer 1992. Students should be aware that these guidelines are subject to further revision.

Copies of these guidelines are available for inspection in the Registrar's Office. 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.

SPECIAL PROGRAMS AND REQUIREMENTS

Early Admissions and Concurrent Enrollment

Odessa College works closely with high schools in its service area to offer qualified high school students the opportunity to get a head start on college-level classes. Students may earn college credit while still in high school by participating in early admissions and/or concurrent enrollment classes.

Concurrent Enrollment

In the concurrent enrollment program, high school students may earn high school credit and college credit for taking an Odessa College course. For example, a high school student might enroll in an Odessa College history course, attend only the college history course and be granted credit at both the high school and college levels. Many of these courses also are offered on the high school campus during regular school hours.

To participate in the program, high school students must have the approval of their high school principal or agent for an approved course. 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, or they must have permission from their high school principal.

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 dean of admissions to ensure the availability of courses. In addition, the high school counselor will coordinate the student's concurrent enrollment 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 or the principal's designee. 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 high school counselors.

Early Admissions

The early admissions program also enables high school seniors to enroll concurrently in Odessa College while completing their high school requirements. Credits earned through the early admissions program will count only as college credits and not as high school credits. Students in the program can profitably accelerate their progress in college and achieve their educational goals in less time and with less expense.

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 or the principal's designee, and have 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. Students may be enrolled in both early admissions and concurrent enrollment courses at the same time; however, a total of only two college courses may be taken in one 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. Information on the early admissions program can be obtained from the Odessa College dean of admissions or from counselors at participating high schools.

Equal Opportunity at Odessa College

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 these actions will benefit 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.

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) one dose of tetanus/diphtheria within the past 10 years; b) rubella immunity; c) hepatitis B/ bloodborne pathogen requirements as specified by each department.

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 Students

International students (F-1 visa) must meet all regular admissions criteria. In addition, each must demonstrate proficiency in English by a score of 500 or greater on the Test of English as a Foreign Language (TOEFL).

An international student should expect to pay a minimum of $8,000 for educational and living expenses each calendar year. This sum does not include transportation costs. In order to verify a student's ability to meet these financial obligations, Odessa College requires a financial statement from the student and/or his family. International students must also present evidence of adequate medical insurance as a condition of admission. Basic medical insurance information is available through the college.

Academic records for international students must be official and must be translated into English. Copies will not be accepted. All required documents and information must be received in accordance with the following deadlines. When the deadline date falls on a non-working day, the deadline is interpreted as the next regular working day. International students are not permitted to enroll for the first time for a mid-winter session.

Summer Session ..... March 1
Fall Semester ..... June 1
Spring Semester ..... October 1

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 international student advisor from the school previously attended.

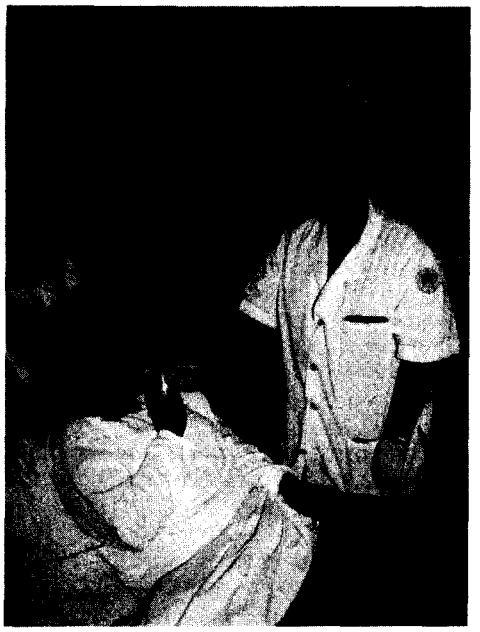
All applications from international students must be accompanied by a $20 application fee. Persons wanting additional information on international student admissions should address a written request to International Student Admissions, Odessa College, 201 W. University, Odessa, Texas 79764.

Non-Credit Classes

Through the Continuing Education Division and the Community Recreation Program, Odessa College offers a variety of options for course work on a non-credit basis. Often these options are cross-listed with credit courses, but students enrolling for non-credit are not required to meet the regular admissions criteria. Please refer to these items in the "Instructional Support and Special Programs" section of this catalog. Individuals who register as audit students do not receive credit.

Orientation Requirement

ORIE 1100, Orientation to Odessa College, is designed to assist those new to college in gaining the knowledge necessary to function effectively in a college environment. The course covers policies, rules and regulations and services provided to students as well as the state-mandated TASP requirement. The student will become acquainted with the college catalog, the Orientation Handbook and the campus. At the initial meetings, students will meet the course instructor for two two-hour periods and then will complete the course by choosing from several self-paced activities. Course grades will be determined by completion of these activities and an examination over the materials covered in the course. Students receive one hour of credit which counts toward total enrollment hours for the semester but does not transfer, count toward graduation requirements or add to TASP liability. First-time students who enroll in nine or more semester hours are required to enroll in Orientation during their first semester of attendance at Odessa College.



Special Admissions Requirements for Selected Programs

Admission to Odessa College does not automatically include admission to all programs at the college. The following programs have selective admissions criteria. If a student anticipates enrolling in one of these programs, he or she should check with a counselor or department representative about program admissions requirements:

Clinical laboratory sciences
Emergency medical technology
(second year)
Law Enforcement Academy
Nursing
Physical therapist assistant
Radiologic technology
Respiratory care
Surgical technology

TASP — Texas Academic Skills Program Requirements

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 TASP liable 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 less than a bachelor's degree 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 Student Financial Services 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.

Certain exemptions based on SAT, ACT or TAAS scores do exist. Score exemptions must be documented by scores recorded on an official transcript on file in the Registrar's Office. For more information regarding exemptions to the TASP test on the basis of standardized test scores, please see a counselor in the OC Counseling Center.

If a student has failed one or more portions of the TASP test, Texas state law requires a 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.

Tech-Prep Programs

Students who come to Odessa College from recognized tech-prep programs should make a counselor aware of that status to insure proper credit and placement.

REGISTRATION

Odessa College offers a variety of opportunities for students to register for classes and activities. Individuals registering for credit classes have the following options:

Academic Advising and Scholastic Planning

An important part of the registration process takes place well in advance of actual registration. Each student has a reason for attending Odessa College and should plan his or her course of study accordingly. Counselors and faculty advisors are available to assist students in academic planning. Specifically, these professionals can help with meeting pre-requisites for courses, testing requirements, credit by examination, transferring courses, etc. Each student should meet with an appropriate advisor to work out a course of study or degree plan as early as possible. This meeting should be initiated by the student and should occur before the first registration at Odessa College.

Students who have a TASP liability are required to have their schedule of classes approved by an OC counselor each semester. All students must have a final sign off by a counselor or faculty advisor before proceeding to the final data entry point in the registration process.

Advance Registration

The college designates specific dates and times for advance registration for upcoming semesters. For a fall semester, these times occur during the summer months. Advance registration for spring semesters are set for the last of November or the first part of December. For summer sessions, advance registration is in late April or early May. Exact dates and times are published in the schedule of classes for each semester.

New students (first time in college or transfer students) and returning students who have not enrolled for classes at OC within the last calendar year should complete the application or reapplication process at least two weeks prior to the beginning of designated advance registration times.

Students who are enrolled at Odessa College or who have been enrolled within the past calendar year are automatically eligible to participate in advance registration activities. All fees due for advance registration must be paid in full at the time designated for each semester in the class schedule to be maintained.

Regular Registration

Two or three days are designated at the beginning of each semester for student registration for credit classes. Students who have not participated in advance registration or who may not have paid their advance registration bill register alphabetically at the time designated. New students may also register at this time. Faculty advisors, counselors and other OC staff members are available to work with students during these regular registration times.

Late Registration

After the first day of classes, students may still register for credit classes for a specified period of time. Students who register late have the responsibility to make up any work missed prior to their first time attending. The college reserves the right to limit the class load for students who register late. No late registration is permitted after the 12th class day for fall and spring semesters or after the fourth class day for a summer session. A late registration fee of $10 is charged.

Extension and Other Off-Campus Registration

Students who attend classes at extension centers or concurrent enrollment classes at area high schools will have an opportunity to register at those sites. Dates and times are designated in the schedule of classes for each semester. Students who miss these times may come to campus to register at other designated registration times.

Non-Credit Registration

Students registering for continuing education classes may do so on an ongoing basis. This process takes place at the Continuing Education Office on the second floor of the Student Union Building from 8 a.m. until 6 p.m. Monday through Thursday, and from 8 a.m. until 5 p.m. on Friday. Mail-in registration and telephone registration

with a credit card also are available. During the summer months, college offices are closed on Friday.

Odessa College also offers drive-up registration for non-credit continuing education classes. Please stop at the Drive-thru Booth located at the end of the main drive entrance off West University Boulevard. Hours are 8:30 a.m. to 7 p.m. Monday through Thursday, and 8:30 a.m.-4 p.m. on Friday. The booth is closed on Friday during summer months.

Sports activity and recreation classes are offered through the Community Recreation Program at the OC Sports Center. Students may sign up at that facility during regular hours of operation. These opportunities are available both to students and community members.

Audit of Credit Classes

Students who want to register for a regular credit class on an audit basis must adhere to the following regulations:

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 chair and the Registrar's Office.
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. Requests for status change must be made in the Registrar's Office.
7. Charges for auditing a course are the same as for regular registration.

STUDENT RECORDS

Accuracy of Student Records

Each student is responsible for keeping his or her record accurate and up to date. Changes in name, social security number, address, telephone number, etc., must be submitted in writing and signed by the student. Changes are processed in the Registrar's Office.

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.

COSTS AND STUDENT FINANCIAL SERVICES

TUITION AND FEES

***Please note that** the following tables reflect the 1995-96 tuition and fee rates adopted 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 course fees may be applicable.

See: **LAB FEES**
PRIVATE INSTRUCTION FEES
TRAVEL FEES
TESTING FEES
MISCELLANEOUS FEES

on pages 24-25 for additional charges.

IN-DISTRICT TEXAS RESIDENT:

Semester Hours	Tuition	Building Use Fee	Activity Fee	ID Fee Non-Refundable	Computer Fee	TOTAL BEFORE PARKING & OTHER FEES
1	42.00	12.00	1.00	1.00	1.00	57.00
2	42.00	24.00	2.00	1.00	2.00	71.00
3	42.00	36.00	3.00	1.00	3.00	85.00
4	56.00	48.00	4.00	1.00	4.00	113.00
5	70.00	60.00	5.00	1.00	5.00	141.00
6	84.00	72.00	6.00	1.00	6.00	169.00
7	98.00	84.00	7.00	1.00	7.00	197.00
8	112.00	96.00	8.00	1.00	8.00	225.00
9	126.00	108.00	9.00	1.00	9.00	253.00
10	140.00	120.00	10.00	1.00	10.00	281.00
11	154.00	132.00	11.00	1.00	11.00	309.00
12	168.00	144.00	12.00	1.00	12.00	337.00
13	182.00	156.00	13.00	1.00	13.00	365.00
14	182.00	162.00	14.00	1.00	14.00	373.00
15	182.00	168.00	15.00	1.00	15.00	381.00
16	182.00	174.00	16.00	1.00	16.00	389.00
17	182.00	180.00	17.00	1.00	17.00	397.00
18	182.00	186.00	18.00	1.00	18.00	405.00
19	182.00	192.00	19.00	1.00	19.00	413.00
20	182.00	198.00	20.00	1.00	20.00	421.00
21	182.00	204.00	21.00	1.00	21.00	429.00
22	182.00	210.00	22.00	1.00	22.00	437.00
23	182.00	216.00	23.00	1.00	23.00	445.00
24	182.00	222.00	24.00	1.00	24.00	453.00
25	182.00	228.00	25.00	1.00	25.00	461.00

OUT-OF-DISTRICT TEXAS RESIDENT:

Semester Hours	Tuition	Building Use Fee	Activity Fee	ID Fee Non-Refundable	Computer Fee	TOTAL BEFORE PARKING & OTHER FEES
1	57.00	12.00	1.00	1.00	1.00	72.00
2	57.00	24.00	2.00	1.00	2.00	86.00
3	57.00	36.00	3.00	1.00	3.00	100.00
4	76.00	48.00	4.00	1.00	4.00	133.00
5	95.00	60.00	5.00	1.00	5.00	166.00
6	114.00	72.00	6.00	1.00	6.00	199.00
7	133.00	84.00	7.00	1.00	7.00	232.00
8	152.00	96.00	8.00	1.00	8.00	265.00
9	171.00	108.00	9.00	1.00	9.00	298.00
10	190.00	120.00	10.00	1.00	10.00	331.00
11	209.00	132.00	11.00	1.00	11.00	364.00
12	228.00	144.00	12.00	1.00	12.00	397.00
13	247.00	156.00	13.00	1.00	13.00	430.00
14	247.00	162.00	14.00	1.00	14.00	438.00
15	247.00	168.00	15.00	1.00	15.00	446.00
16	247.00	174.00	16.00	1.00	16.00	454.00
17	247.00	180.00	17.00	1.00	17.00	462.00
18	247.00	186.00	18.00	1.00	18.00	470.00
19	247.00	192.00	19.00	1.00	19.00	478.00
20	247.00	198.00	20.00	1.00	20.00	486.00
21	247.00	204.00	21.00	1.00	21.00	494.00
22	247.00	210.00	22.00	1.00	22.00	502.00
23	247.00	216.00	23.00	1.00	23.00	510.00
24	247.00	222.00	24.00	1.00	24.00	518.00
25	247.00	228.00	25.00	1.00	25.00	526.00

OUT-OF-STATE OR FOREIGN:

Semester Hours	Tuition	Building Use Fee	Activity Fee	ID Fee Non-Refundable	Computer Fee	TOTAL BEFORE PARKING & OTHER FEES
1	310.00	12.00	1.00	1.00	1.00	325.00
2	310.00	24.00	2.00	1.00	2.00	339.00
3	310.00	36.00	3.00	1.00	3.00	353.00
4	310.00	48.00	4.00	1.00	4.00	367.00
5	310.00	60.00	5.00	1.00	5.00	381.00
6	310.00	72.00	6.00	1.00	6.00	395.00
7	310.00	84.00	7.00	1.00	7.00	409.00
8	310.00	96.00	8.00	1.00	8.00	423.00
9	310.00	108.00	9.00	1.00	9.00	437.00
10	310.00	120.00	10.00	1.00	10.00	451.00
11	310.00	132.00	11.00	1.00	11.00	465.00
12	310.00	144.00	12.00	1.00	12.00	479.00
13	310.00	156.00	13.00	1.00	13.00	493.00
14	310.00	162.00	14.00	1.00	14.00	501.00
15	310.00	168.00	15.00	1.00	15.00	509.00
16	310.00	174.00	16.00	1.00	16.00	517.00
17	310.00	180.00	17.00	1.00	17.00	525.00
18	310.00	186.00	18.00	1.00	18.00	533.00
19	310.00	192.00	19.00	1.00	19.00	541.00
20	310.00	198.00	20.00	1.00	20.00	549.00
21	310.00	204.00	21.00	1.00	21.00	557.00
22	310.00	210.00	22.00	1.00	22.00	565.00
23	310.00	216.00	23.00	1.00	23.00	573.00
24	310.00	222.00	24.00	1.00	24.00	581.00
25	310.00	228.00	25.00	1.00	25.00	589.00

LAB FEES

Art - Jewelry (ARTS 2341, 2342)	10.00
Art - Basic Photography (ARTS 2356, 2357)	10.00
Art - Pottery (ARTS 2346, 2347)	24.00
Art - Sculpture (ARTS 2326, 2327)	15.00
Automotive Technology (Except AUTO 1301, 2377)	24.00
Biology (Except BIOL 1170)	15.00
Building Trades (Except BLDG 2377)	24.00
Business Computer Info Systems (Except 1200, 2112, 2188, 2288, 2377)	15.00
Chemistry (1105,1111,1112, 2101, 2123, 2125)	15.00
Child Development (CHLD 1302, 1305, 1307, 1308, 1311, 2304, 2305, 2306, 2403)	10.00
Clinical Laboratory Science (CLSC 1211, 1212, 1500, 2211, 2212)	15.00
Computer Science (All Courses)	15.00
Culinary Arts (CULI 1201, 1202, 1203, 1206, 1207, 1208, 1221, 2210, 2211, 2212)	20.00
Culinary Arts (CULI 2215,2216,2217))	24.00
Diesel Mechanics (Except DESL 2377)	24.00
Drafting (Except DRAF 1401, 2377, 2408, 2418)	5.00
Drafting (DRAF 2408,2418)	24.00
Elect. & Electronics (Except ELEC 2201, 2203, 2205, 2302, 2305, 2377)	24.00
Elect. & Electronics (ELEC 2414)	15.00
Emergency Medical Technology (EMED 1501, 2801, 2802)	15.00
Engineering (ENGR 1370)	5.00
English (ENGL 0171, 0172, 0173, 0174 Word Processing)	5.00
English (ENGL 0370,1301, 1312, 2311 Word Processing)	10.00
Foreign Language (All 1411 and 1412 courses)	10.00
Geology (GEOL 1403, 1404)	15.00
Health Education (PHED 1171, 2171)	5.00
Heating, Vent, Air Conditioning (Except HVAC 2204, 2205, 2302, 2305, 2377)	24.00
Law Enforcement/Criminal Justice (CRIJ 2370)	20.00
Law Enforcement/Criminal Justice (CRIJ 2471)	24.00
Law Enforcement Academy (CRIJ 2475)	10.00
Law Enforcement Academy (CRIJ 2476)	24.00
Legal Assistant (LEGL All courses)	15.00
Machine Technology (Except MACH 2377)	24.00
Maintenance Technology (Except MAIN 2302, 2356, 2357, 2377)	24.00
Mass Communication (COMM 1316, 1318, 1319, 2120, 2220, 2325)	10.00
Music, Class Instruction (MUSI 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177)	20.00
Nursing (Except NURS 1201, 2374)	15.00
Office Systems Technology (OFST 1217, 1321, 1322, 1404, 2304, 2401)	10.00
Office Systems Technology (OFST 2402, 2404)	10.00
Office Systems Technology (OFST 1100, 2202, 2203, 2301)	5.00
Petroleum Technology (PETR 1380)	15.00
Petroleum Technology (PETR 2303)	10.00
Photography (Except PHOT 2370, 2377)	10.00
Physical Education (PHED 1100, 1306)	10.00
Physical Education (1108, 1109, 1117, 1119, 1152)	24.00
Physical Education (Except PHED 1100, 1108, 1109, 1117, 1119, 1306, 2278)	5.00
Physics (All Courses)	5.00
Radiologic Technology (XRAY 1111, 1112, 1314, 1402)	15.00
Reading (All courses per semester hour)	2.00
Respiratory Care (RESP 1101, 1112, 2164)	15.00
Surgical Technology (SURG 1411)	15.00
Welding (Except WELD 2377)	24.00

Private Instruction 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 1370, Intensive Spanish Practicum or BIOL 2470, Marine Ecology, will have additional fees for travel expense. Check with the course instructor or department chair for details.

Testing Fees

Course	No. Test	Cost per Test	Total
NURS 1503	1	8.00	8.00
NURS 1612 (Kermit Only)	2	8.00	16.00
NURS 1613 (Kermit Only)	1	8.00	8.00
NURS 1615 (Kermit Only)	3	8.00	24.00
NURS 1630	4	8.00	32.00
NURS 1805	1	8.00	8.00
NURS 1821	3	8.00	24.00
NURS 2534 (spring)	4	8.00	32.00
NURS 2535 (fall)	1	8.00	8.00
NURS 2535 (spring)	5	8.00	40.00
NURS 2807	2	8.00	16.00
NURS 2808	3	8.00	24.00
RESP 1333	1	25.00	25.00
RESP 2262	1	60.00	60.00

Miscellaneous Fees

Advanced Standing Examination	20.00
Fire Academy (Equipment & Books, Estimated)	75.00
General Property Deposit (Refundable)	10.00
Late Registration Fee	10.00
Law Enforcement Academy (Equipment and Books, Estimated)	206.00
Law Enforcement/Criminal Justice -Correction Officer Skills (CRIJ 1373)	40.00
LVN Nursing (Andrews Equipment Fee-NURS 1611)	129.00
LVN Nursing (Andrews State License Fee/Review Course Fee-NURS 1615)	255.00
LVN Nursing (Kermit Equipment Fee-NURS 1611)	110.00
Off-Campus Registration Fee (Per Registration)	5.00
Red Cross Certification Fee (PHED 1306)	5.00
Respiratory Care (Equipment Fee RESP 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 Requested from OC, Official Copy	3.00
Transcript From Another Institution	5.00
**Vehicle Registration, Fall and Spring Semester (Per Semester)	4.00
**Vehicle Registration, Summer I and II (Per Semester)	1.00
**Vehicle Registration, Cosmetology (Per Quarter)	2.00

**Student liability insurance or proof of comparable coverage is required for students enrolled in child development, clinical laboratory sciences, emergency medical technology, nursing, physical therapist assistant, radiologic technology, respiratory care, student trainer and surgical technology.*

***Vehicle registration fees are refundable only upon complete withdrawal during the scheduled withdrawal period and only upon return of the parking sticker.*

PAYMENT POLICIES

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.

Canceled classes: If a class is canceled 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. 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 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 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 (driver 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 Collectrite. A returned check fee of $25 plus tax is charged per check by Collectrite. 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 a college-canceled class, change in class time, departmental request, etc.

All exceptions to the assessed schedule change fee will be made in the Registrar's Office. No schedule change will be processed until all fees associated with the change are paid.

STUDENT FINANCIAL SERVICES

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 Student Financial Services Office administers four broad program areas: grants, employment, scholarships and loans. An institutional application and a Free Application for Federal Student Aid (FAFSA) are required for all need-based financial aid programs; only an institutional application is required for scholarships. Both the institutional application and the FAFSA are available from the Odessa College Student Financial Services Office. Most high school counselors also have the FAFSA.

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 four 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; (3) enrollment in six to eight semester hours for one-half of a full-time award; and (4) enrollment in less than six hours.

Application for a Pell Grant is made by completing a FAFSA. 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 Student Financial Services Office as soon as they are received to expedite processing of the award.

The **Federal Supplemental Educational Opportunity Grant (SEOG)** is for students with high financial need who are enrolled in at least six semester hours. It is usually combined with other forms of assistance to help students meet their cost of education. Application is made by completing a FAFSA.

The **Texas Public Education Grant (TPEG)** is also for students with financial need who should be enrolled in at least six credit hours. It is designed to assist students in enrolling and remaining in college. The FAFSA serves as the application.

The **State Student Incentive Grant (SSIG)** is a combination Texas-federal grant for students with financial need. The FAFSA serves as the application.

Loans

The **Federal Family Education Loan Program (FFELP)** (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. Because not all financial institutions participate in the program, students may not be able to use their regular banking institution. The Student Financial Services Office will assist in trying to locate a lender if the student is unable to find one.

Application requirements now include a FAFSA and an institutional aid application because the FFELP is now completely need-based. This program is fully described in the Financial Aid Bulletin.

Federal Stafford Loans are available to dependent, independent and graduate students. Recipients should be enrolled in at least six credit hours and demonstrate financial need as indicated by the FAFSA. Interest rates and payment schedules are available in the Student Financial Services Office.

The **Unsubsidized Federal Stafford Loan Program** is intended to provide loans to students who do not qualify for a subsidized Federal Stafford Loan or who qualify for a subsidized Federal Stafford Loan in an amount less than the annual Federal Stafford limit. The application procedure is the same as for the Federal Stafford Loan Program.

Dependent students who cannot qualify for a 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 usually begin 60 days after disbursement. Parents do not have to fill out the FAFSA.

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 has at least a 2.00 GPA and 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. Book loans are not available.

Campus Employment

The **Federal College Work-Study Program (FCWS)** 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 more than 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 FAFSA.

The **Texas College Work Study Program** provides employment opportunities to students who have established financial need. Funds are limited and athletes are not eligible for the program. Application for the program is made by completing the FAFSA.

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. A large number of scholarships have been designated for individuals from Ector County and 14 other counties in Odessa College's service area. These counties are Andrews, Brewster, Crane, Culberson, Gaines, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Upton, Winkler and Ward. These scholarships will be awarded to students based on varying levels of academic achievement.

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 Student Financial Services Office.

Departmental scholarships are offered each year through the art, music and speech (forensics) departments and are based upon performance, merit, skill and ability. Specific information and application requirements may be obtained by contacting the particular department chair of the scholarship area in which the student is interested.

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.

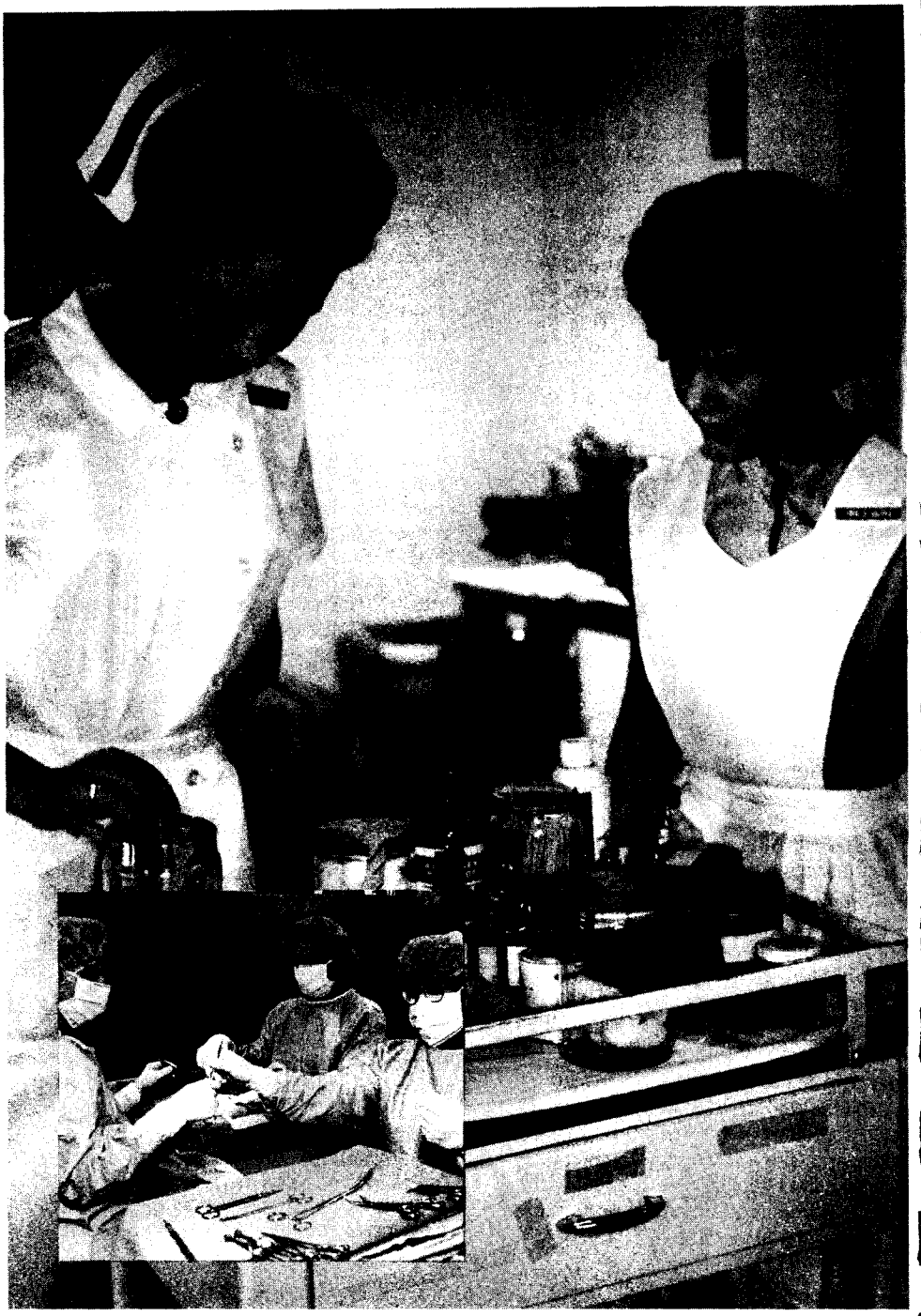
Other scholarships: In addition to the scholarships described above, others are also available to students attending Odessa College. Many individuals and organizations cooperate with Odessa College in their search for scholarship recipients. These awards are not controlled by, nor are selections made 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.

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.

Veterans

Veterans interested in taking advantage of their benefits to pursue or further their education are encouraged to contact the veteran's officer at Odessa College. As with the other programs described above, students are strongly encouraged to inquire into the possible benefits of the Department of Veterans Affairs 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 Veteran's Office is a component of the Student Financial Services Office located in Room 203 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 Veteran's Office of any change in enrollment that may affect their educational benefits.



ACADEMIC AND CLASS INFORMATION

ACADEMIC INFORMATION AND STANDARDS

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.

Class Attendance

Students are expected regularly to 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 and either personally give it to the instructor of each class or mail it to each instructor. 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.

Class Load

The normal class 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 classes of three or more semester hours in one semester without written approval from the Registrar's Office unless a particular course of study for an associate degree, a certificate of technology, or a 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 or faculty advisor to determine the best program possible.

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.

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 records.

Grades of "W" will be assigned to all students who withdraw or drop semester-length classes during the official withdrawal period of any semester. 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 official withdrawal period for any semester.

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.

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. Advanced standing and/or credit may be awarded in some areas by Advanced Placement (AP) exams taken at the high school level. 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 chairs should be contacted regarding applications for advanced standing examinations, credit by departmental exam, or advanced standing and/or credit through AP exams.

Odessa College will accept a total of 15 semester hours of advanced standing credit awarded either by the College Level Examination Program subject examinations, through credit awarded through Advanced Placement (AP) exams, or by approved Odessa College departmental examinations. (Exceptions for additional hours may be granted in some specialized programs such as law enforcement, nursing, and cosmetology or special circumstances which have been approved by the appropriate division dean.) Students must complete in-residence credits equal to the number received by examination before credit by CLEP, AP, or departmental examination will be noted on the student's permanent record card. (Exceptions may be granted in law enforcement or special circumstances which have been approved by the appropriate division dean.)

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 chair 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 prerequisite courses or courses otherwise considered lower in level than the one for which they currently have credit or are currently enrolled. Exceptions would be approved by the respective division dean.

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 Affairs benefits.

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 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 3.90 to 4.0 will be graduated summa cum laude.

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 (will be calculated as an F for GPA)	0
P	In progress/ grade not reported	0
Z	No grade assessed; requires re-enrollment (restricted to developmental courses)	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 if the student requests this option in the Registrar's Office. Some schools to which the student might transfer may not exclude the first grade when calculating the student's 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 in the GPA calculation.

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 some students may 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 long 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 education program.

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 long semester of enrollment at Odessa College or who do not earn a cumulative GPA of 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 when requested by the student in the Registrar's Office. 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 long semester immediately following the one in which the grade was assigned.

Grade Changes

All grade changes must be made by the end of the long semester following the one in which 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 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. All grade changes are at the discretion of the instructor or, if the instructor is no longer available, the department chair.

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.

Transferring Credit

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 be posted to the Odessa College transcript at graduation when the student has satisfied all degree requirements. Only those transfer courses accepted and listed on the student's degree plan will be posted to the Odessa College transcript.

If Odessa College does not accept lower division, academic course credit earned by a student at another Texas public institution of higher education, Odessa College shall give written notice to the student and the other institution that the transfer of the academic course credit is denied. The two institutions and the student shall attempt to resolve the transfer of the academic course credit in accordance with Texas High Education Coordinating Board rules and/or guidelines. If the transfer dispute is not resolved to the satisfaction of the student or the institution at which the credit was earned within 45 days after the date the student received written notice of the denial, the party who is not satisfied shall notify the Commissioner of Higher Education or the commissioner's designee, who shall make the final determination about a dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions. Students shall be aware that this provision was intended to apply to general academic courses such as English, biology, history, government, math and other such courses intended for transfer among Texas public institutions of higher education and may not apply to occupational or technical courses which often vary greatly in content.

Transfer of Odessa College Credit to Another Institution

With the adoption of the Common Course Numbering System, transferring among Texas colleges and universities has become easier. This system allows students to take courses at Odessa College that are numbered the same at many Texas public colleges and universities.

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 practices 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.

If another Texas public institution of higher education does not accept lower division academic course credit earned by a student at Odessa College, that institution is obligated by the Texas Higher Education Coordinating Board to give written notice to the student and Odessa College that the transfer of the academic course credit is denied. The two institutions and the student shall attempt to resolve the transfer of the academic course credit in accordance with Texas Higher Education Coordinating Board rules and/or guidelines. If the transfer dispute is not resolved to the satisfaction of the student or Odessa College within 45 days after the date the student received written notice of the denial, the party or parties who is/are not satisfied shall notify the Commissioner of Higher Education or the commissioner's designee who shall make the final determination about a dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions. Students should be aware that this provision was intended to apply to general academic courses such as English, biology, history, government, math and other such courses intended for transfer among Texas public institutions of high education and may not apply to occupational or technical courses which often vary greatly in content.

Military Experience and College Credit

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.

Articulation with Area High Schools

Articulation agreements between Odessa College and area school districts provide the opportunity for advanced placement in Odessa College for students enrolled in technical programs offered at Odessa College.

These agreements permit students to move directly into advanced courses upon presentation of evidence of skill mastery determined by appropriate documentation.

Information regarding these articulation agreements can be obtained from the Odessa College Admissions Office, Odessa College counselors or high school counselors.

Tech-Prep Programs

Odessa College is an active participant in tech-prep activities at the national, state and local levels. Designed primarily to insure that high school students are prepared to meet the challenges of today's technology in the work environment, tech-prep programs offer students the work place skills and technical training to place them into good jobs in their selected field or to go on to additional education.

Local public schools and Odessa College work closely together in tech-prep programs to be sure that students are prepared for high level classes and to be certain that students do not have to repeat work they have mastered in high school when they enter college. OC awards college credit to tech-prep students for courses (approved in each program) they have taken in high school.

Approved tech-prep programs are available in the following areas: child development, law enforcement, nursing and office systems technology. Other programs are being developed. Students who are interested in tech-prep programs should contact their high school counselor or a counselor at Odessa College for more information.

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. A charge of $3 will be made for all copies. Transcripts become the property of Odessa College and cannot be returned to the student. Transcripts will be kept on file for one year and will be destroyed if the student has not enrolled.

A transcript of continuing education units earned in a non-credit course is available through the Continuing Education Office.

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.

PLANNING AND APPLYING FOR DEGREES AND CERTIFICATES

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 written degree/ certificate plans well in advance of anticipated graduation with the assistance of the appropriate department chair, division dean or with an Odessa College counselor. The student will file a written, signed copy of the plan with the Registrar's Office.

Preparation for Degree Study

The Texas Higher Education Coordinating Board recommends that high school students who plan to seek a four-year college degree should follow the advanced or the advanced honors diploma option. Students who plan on earning a technical degree (A.A.S.) should follow a tech-prep plan when possible. If a tech-prep program does not exist in the desired field, a student should follow the advanced or advanced honors diploma option and take electives in the field of interest. Students who graduate with the regular high school diploma are still admitted to Odessa College but may find themselves needing to take courses that are not in the degree plan in order to prepare them for the higher-level courses or degree study.

Adults who have been out of the educational system for a period of time or who may not have earned a high school diploma or GED are encouraged to pursue degree options. Career exploration opportunities are available for students and placement tests may be given to help determine what preparation, if any, a student may need in order to succeed in degree courses.

Graduate Guarantee

In April of 1992, the Odessa College Board of Trustees adopted a resolution which guarantees, with certain limitations, the associate degrees and certificates awarded by Odessa College. The guarantee refers to the transferability of academic credits and technical job skills. Specific details concerning this guarantee may be obtained through the Office of the Executive Vice President for Instruction.

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 chair.

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.

Applying for Graduation

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 Registrar's Office by the deadline specified in the official college calendar. Summer graduates should observe the deadline for fall graduates.

Odessa College charges a $15 graduation fee. Fees for caps and gowns and invitations also are paid by students.

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 in residence at Odessa College after the initial degree has been awarded.

Deadline for Degree and Certificate Applications

Students must complete a degree or certificate application within 12 months after completion of their degree or certificate requirements. Applications received after the designated time limit will be reviewed and evaluated by the director of admissions and registrar.

Degree Requirements

Residency Requirements: Associate Degree

To receive an associate degree, a student must meet one of the following residency options:

Option 1: Complete a minimum of 48 semester credit hours at Odessa College; and, if the degree is in a technical or vocational program, complete at least 12 semester hours in the major field at Odessa College.

Option 2: Complete a minimum of 15 semester credit hours at Odessa College, at least 12 of which must be the last hours taken before the degree is granted; and, if the degree is in a technical or vocational program, complete at least 12 semester hours in the major field at Odessa College.

Residency Requirements: Certificates of Technology or Certificates of Completion

To receive a certificate of technology or a certificate of completion, a student must meet the following residency requirements:

A minimum of 60 percent of the total certificate requirements must have been completed in residence at Odessa College; also, a minimum of 60 percent of the technical and/or vocational program courses required for the certificate must have been completed in residence at Odessa College.

Residency Requirements: Award of Institutional Recognition

An award of institutional recognition that consists of less than 15 semester credit hours may be given in certain technical or vocational programs. To be eligible to receive an award of institutional recognition, the student must complete all courses required for that award of recognition in residence at Odessa College.

Associate in Arts Degree

To qualify for the associate in arts degree (A.A.), students must complete the following requirements:

- English: ENGL 1301 and ENGL 1302 and six hours of sophomore English.
- Speech: Three semester hours.
- Foreign Language or Mathematics or Science: One year (six to eight semester hours in same discipline).
- Government: GOVT 2301 and 2302
- History: HIST 1301 and 1302 (HIST 2301 may be substituted for either course).
- Physical Education: Two one-hour activity classes. Veterans who have one year active service credit may satisfy the PHED requirement by submitting a copy of Form DD-214 to the Registrar's Office.
- Elective outside the major area: A three-semester-hour minimum.
- 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 15 semester hours of sophomore courses, six semester hours of which must be in the same discipline.
- Either (1) a minimum of 48 semester hours completed at Odessa College or (2) a minimum of 15 semester hours with at least 12 semester hours completed immediately prior to the granting of the degree.
- 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.

Associate in Science Degree

To qualify for the associate in science degree (A.S.), students must complete the following requirements:

- English: ENGL 1301 and 1302 and three hours of sophomore English.
- Speech: Three semester hours.
- Government: GOVT 2301 and 2302
- History: 1301 and 1302 (HIST 2301 may be substituted for either course).
- Mathematics: One year (six semester hours).
- Physical Education: Two one-hour activity classes. Veterans who have one year active service credit may satisfy the PHED requirement by submitting a copy of Form DD-214 to the registrar's office.
- Science: A minimum of 12 semester hours.

- Elective outside the major area: A three-semester-hour minimum.
- 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 15 semester hours of sophomore courses, six semester hours of which must be in the same discipline.
- Either (1) a minimum of 48 semester hours completed at Odessa College or (2) a minimum of 15 semester hours with at least 12 semester hours completed immediately prior to the granting of the degree.
- 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.

Associate in Science in General Studies Degree

To qualify for the associate of science in general studies degree (A.S.G.S.), students must complete the following requirements:

- A minimum of 63 semester hours and meet residency requirements.
- A minimum average of "C" (2.0) in all work taken at Odessa College.
- A minimum of 15 semester hours of sophomore courses.
- Students who are not TASP exempt must pass all three sections and have scores reported to Odessa College.
- Discharge of all financial obligations to Odessa College prior to graduation.
- Complete the following requirements:

	Semester Hrs
- Math and Science* *(See Course Selection List that follows.)*	9
- Social and Behavioral Science* *(See Course Selection List that follows.)*	9
- Communication Science* *(See Course Selection List that follows.)*	12
- Life Enrichment Electives* *(See Course Selection List that follows.)*	9
- Other electives* *(See Course Selection List that follows.)*	24
Total Semester Hours Required	**63**

*** Course Selection List for Associate in Science in General Studies Degree**

- Math and Science (nine semester hours required)
  - Mathematics (three semester hours required): 1314, 1316, 1332, 1333, 1342, 1348, 2313, 2314, 2315, 2318, 2320
  - Chemistry: 1311, 1312, 2301, 2323, 2325
  - Biology: 1406, 1407, 1408, 2306
  - Geology: 1403, 1404
  - Physics: 1401, 1402
  - Agriculture: 1407, 1413, 1415, 1419, 2317
- Social and Behavioral Science (nine semester hours required)
  - History (three semester hours required): 1301, 1302
  - Government (three semester hours required): 2301, 2302
  - History: 2301, 2311, 2312, 2381
  - Psychology: 2301, 2302, 2308, 2315, 2319
  - Sociology: 1301, 1306, 2301, 2306, 2319, 2326, 2339, 2371*
  - Anthropology: 2301, 2351
  - Geography: 1301, 1302
- Communication Science (12 semester hours required)
  - English (six semester hours required): 1301, 1302, 1312, 2307, 2311, 2322, 2323, 2327, 2328, 2332, 2333
  - Speech (three semester hours required): 1315, 1321, 1342, 2341, 1311
  - Spanish: 1300, 1310, 1411, 1412, 2311, 2312, 2321, 2322
  - French: 1411, 1412, 2311, 2312
  - German: 1411, 1412, 2311, 2312
  - Mass Communication: 1307, 1335, 1336, 2303, 2331, 2339
- Life Enrichment Electives (nine semester hours required)
  - Computer Science (three semester hours required): COSC 1301 or COSC 1415, BCIS 1200*, BCIS 1401*, COSC 1418, COSC 2418
  - Arts 1301, 1303, 1304
  - Business Administration: 2301
  - Child Development: 1302*, 1308*, 1310*, 1311*
  - Culinary Arts: 1201*, 1202*, 1203*, 1206*
  - Engineering: 1304
  - Humanities: 1315
  - Management: 1301*, 1321*, 2322*, 2330*
  - Music: 1306, 1308, 1370*
  - Philosophy: 1301, 2306
  - Office Systems Technology: 1100*, 1402*, 1404*, 1406*, 1424*, 1321*, 1322*, 2304*, 2430*
  - Physical Education: (all courses)
  - Mass Communication: 1316, 1318, 1319, and Photography: 2370*

- Other Electives (24 semester hours required) Any 24 semester hours from the preceding options with no more than 12 semester hours permitted from each option.

**Students should consult the catalog of the college or university they wish to transfer to prior to selecting courses from the preceding categories.*

Associate in Applied Science Degree

To qualify for the associate in applied science degree (A.A.S.), students must complete the following requirements:

- English: ENGL 1301
- Speech: SPCH 1315 or SPCH 1321 as specified in each program.
- Government: GOVT 2301 or GOVT 2302 as specified in each program.
- Computer Science: COSC 1301 or BCIS 1401 as specified in each program.*
- Mathematics: Three semester hours of college-level math as specified in each program.
- Physical Education: Two one-hour activity classes.
  Veterans who have one year active service credit may satisfy the PHED requirement by submitting a copy of Form DD-214 to the Registrar's Office.
- Humanities/Philosophy/Fine Arts: Three hours as specified in each program. The Texas Higher Education Coordinating Board has determined that ENGL 1302 or courses with the course prefixes ARTS, COMM, FREN, GERM, HUMA, LATI, MUAP, MUSI, PHIL, SPAN, or SPCH will satisfy this requirement
- Science: As specified in each program.
- 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 15 semester hours of sophomore courses, six semester hours of which must be in the same discipline.
- Either (1) a minimum of 48 semester hours completed at Odessa College or (2) a minimum of 15 semester hours with at least 12 semester hours completed immediately prior to the granting of the degree.
- A minimum of 12 semester hours in the major field must be completed at Odessa College.
- 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.

**Completion of the clinical laboratory sciences program or a passing score on the COSC 1301 competency-skills test, given by the computer science department, will satisfy this requirement.*

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.

- A minimum of 60 percent of the technical and vocational program course requirements and 60 percent of the total certificate requirements must be completed at Odessa College.
- Students who are not exempt from the provisions of TASP or not in a TASP-waived certificate program 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 one year active service credit may satisfy PHED requirement, if any, by submitting a copy of Form DD-214 to the Registrar's Office.

Certificates of Completion

Certificates of completion are awarded for completion of program requirements with a minimum average of "C" (2.0) in all work in certain occupational and technical curricula that concentrate on a specific job skill, licensure requirement or subject matter mastery as prescribed in the Odessa College catalog or as approved by the respective division dean. Check with the respective program or department chair for information on these certificates. *(See requirements under "Certificates of Technology.")*

Institutional Recognition

Awards of institutional recognition that consist of 15 or fewer semester credit hours may be given in certain technical or vocational programs. To be eligible for an institutional award of recognition, the student must complete all courses required for that award at Odessa College.

THE COLLEGE YEAR AND SCHEDULE

Fall Semester

Classes for the fall semester begin the middle to latter part of August and conclude before Christmas. Grade and scholastic standing reports are made available to students late in December.

Spring Semester

Classes for the spring semester begin the middle part of January and conclude in early May. Formal graduation ceremonies are held at the end of the spring semester.

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.

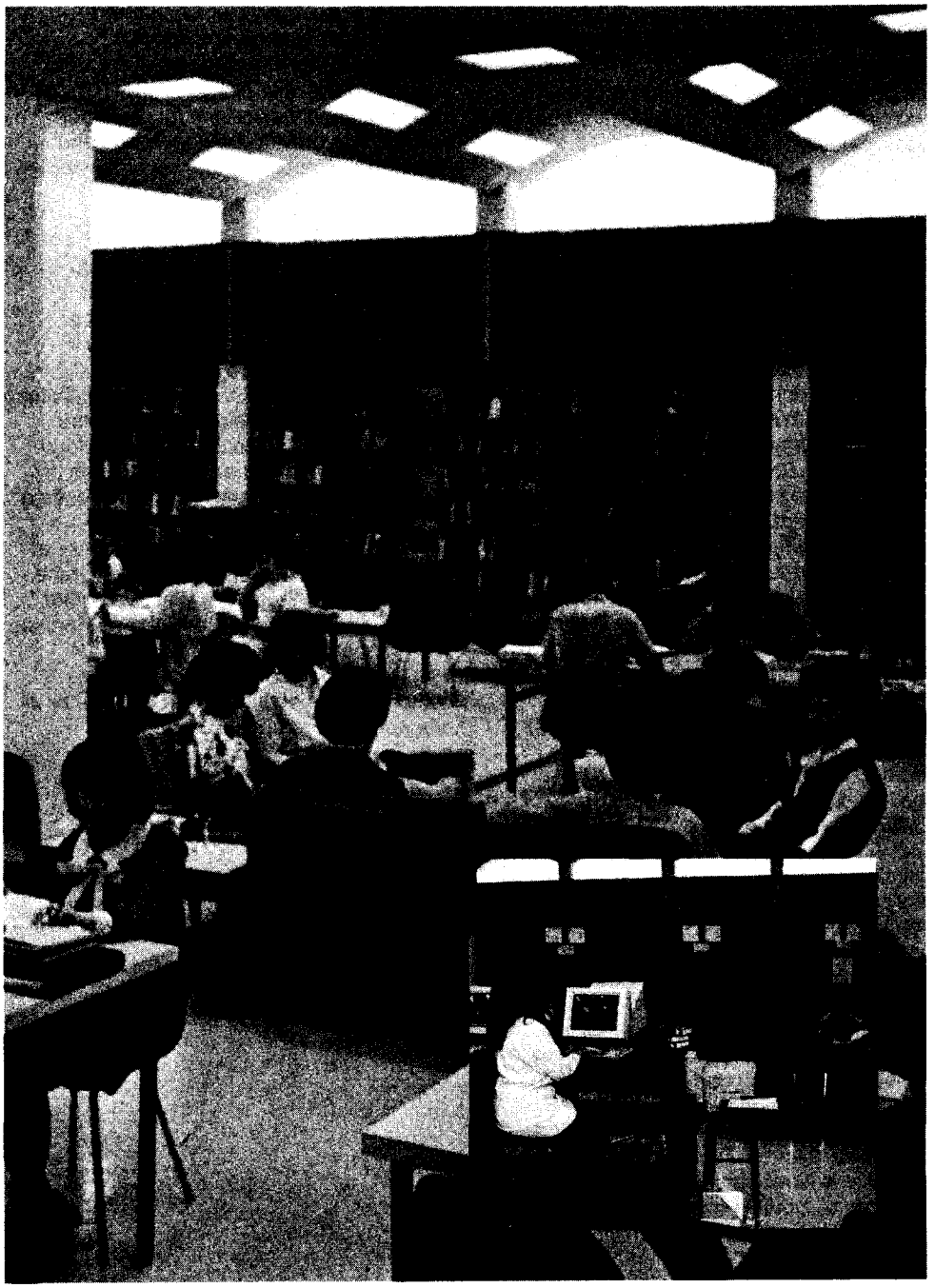
May Semester

Odessa College is offering a mini-semester in May 1996 between graduation and the beginning of summer school. This mini-semester is similar to Odessa College's midwinter semester and will allow students to enroll in a three-hour course, which, together with both summer sessions will provide the opportunity to do the normal course work for a long semester. This schedule opportunity is unique to the 1996 schedule and open to all college students who would like to maximize their number of semester hours in the summer.

Evening Classes

Evening classes represent an extension of curricula offered during the day 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.



INSTRUCTIONAL SUPPORT AND SPECIAL PROGRAMS

Odessa College makes available to students and community members a variety of programs and services. These offerings support the instructional mission of the college and offer enrichment opportunities to participants.

Learning Resources and Distance Education

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 by providing a wide assortment of services and resources of more than 70,000 books, 490 current periodicals, eight 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 pamphlets, articles, reprints, etc. of information not otherwise accessible. The Technical Services and Public Services departments work closely with the faculty and staff in selecting and acquiring books, journals and audiovisual materials to serve the instructional and support programs of the college.

Access to information on the LRC's circulating collection is available via an on-line catalog along with other information sources. The campus also uses the on-line catalog for access to the Internet, the nation's information highway. Use of the system is available both on campus and at extension sites. Additionally, computer technology is used for several reference tools such as Expanded Academic Index, Health Reference Center on CD-ROM, MLA, StatBank and World Book, Grolier's and Britannica electronic encyclopedias. Also available is Newsbank, a specialized resource of monthly compilations from more than 500 U.S. newspapers, which can be searched by subject. A comprehensive collection of U.S. college catalogs also is maintained. Computer labs are located in the LRC as well as an extensive software collection containing the most popular word processing, database management and spreadsheet systems.

The Public Services Department provides both general and specific instruction in the effective use of the LRC. Scheduled delivery, pickup and maintenance of equipment for classroom instruction is provided. Suggestions and comments regarding materials or services are continually and seriously invited.

Extension Centers

The Regional Extension Center at Pyote (RECAP) provides many of the college courses offered on the Odessa College campus. Registration for any extension class can be completed at extension sites or at Odessa College. Dates and times will be developed through the student services office at Odessa College. Area newspapers usually carry notices of registration dates, times and a list of course offerings.

Odessa College also offers classes at extension sites located in Andrews, Crane, Kermit, Pecos, Seminole, Wink and other sites as well as at Odessa High and Permian High schools.

Information concerning extension centers can be obtained from the director of off-campus programs at 335-6652.

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.

Radio and Television Stations

Odessa College owns and operates both a public 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 National Public Radio network. KOCV-TV, Channel 36, is the public television station for the Permian Basin and has been on the air since March 1986.

Developmental Education

Many students enter Odessa College lacking some of the basic skills necessary for college level reading, writing and mathematics. The Developmental Education 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 Education courses and activities are available in basic English, basic mathematics, reading and study skills improvement. 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 who needs help with coursework or study skills should come to the center and request assistance at any time it is open. The Tutoring Center is located in the Electronics Technology Building, Room 120.

Technical Programs

Odessa College offers a wide variety of technical 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 the program. The community's manpower requirements are matched with the ambitions and goals of the student. This realistic approach to technical education is made possible by the excellent cooperation of local industry, businesses and public agencies that look to the community colleges for skilled personnel.

Odessa College maintains continuous liaison with prospective employers to assist in placement of graduates and to keep programs up-to-date with current job requirements. Essential occupational skills are taught in these classes by faculty who have years of working experience, as well as appropriate academic credentials.

Based on community studies that identify additional occupational needs that can be met by Odessa College, recommendations for adding new programs to the college offerings will be made periodically.

Technical courses carry college credit leading to an associate in applied science degree, a certificate of technology or a certificate of completion.

Upward Bound

Upward Bound is a federally-funded project for high school students who have the potential to succeed in education beyond high school and need a broad base of support — academics, enrichment, motivation, career counseling and pre-college skills development — to accomplish their goals.

Students served by Upward Bound must meet low income guidelines, potential first generation college criteria and attend a targeted high school in OC's service area.

During the school year, the Upward Bound participants receive academic and career services and come to the OC campus on Saturdays for enrichment classes and field trips.

During the summer, students participate in a six-week residential program. Students live on the OC campus in supervised residence halls and take classes in math, science, foreign language, English composition and literature. They also participate in cultural and other educational activities during the summer session.

For more information, contact: Upward Bound, Odessa College, 201 W. University, Odessa, Texas 79764, or call 335-6311.

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 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. Students who desire credit for a non-credit course may apply for credit by examination where applicable.

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 Continuing Education courses may be obtained from the Continuing Education Office or the Drive-thru Registration Booth or by calling the Continuing Education Office.

Training for Business and Industry

Continuing Education works with business and industry to provide education and training for employees. Contracts can range from billing for tuition for an individual enrolling in any course to providing a course for a company's employees on campus or at the business site.

Customized training also is available if a company needs a course designed for a specific educational need.

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 three 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 essential skills 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.

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 high school equivalency General Education Development (GED) test. Classes are free, and textbooks are provided. During a typical school year, enrollment in Adult Basic Education classes averages 2,500 students.

The five major subject areas are math, English, social studies, natural science and writing (literature and the arts). Life skills and functional skills relating to careers and personal development also are available. Morning, afternoon and evening classes are available at the Noel Adult Learning Center, 619 N. Grant Ave.; and afternoon and evening classes are available at numerous sites in Odessa. Adult Basic Education classes are sponsored not only in Ector County but also in Andrews, Brewster, Culberson, Jeff Davis, Pecos, Presidio, Reeves, Terrell, Ward and Winkler counties.

Classes for literacy, preparation for the U.S. citizenship exam and English as a Second Language are available. Classes are self-paced, and instruction is directed toward individual needs. Odessa College has computer-assisted instruction for all levels and subjects taught at Noel Center and at the Fort Stockton and Andrews learning centers.

In addition to GED test preparation classes, Odessa College also sponsors a competency-based program in cooperation with the Ector County Independent School District to allow adults with less than a high school education the opportunity to earn a high school diploma. These students must be at least 19 years of age, officially withdrawn from public school and need no more than four credits for graduation.

Assessment, counseling and orientation sessions are scheduled to begin at three-week intervals. The official GED pretest is administered Tuesday through Thursday at no charge to adults to determine if they are prepared to successfully complete the GED test or if they would benefit from classes.

For more information on class locations and times, call Adult Basic Education at Noel Center, 619 N. Grant Ave., 332-9477. Adult Basic Education class schedules also are included in the Continuing Education Schedule.

Children's Center

The Odessa College Children's Center provides daytime care for some 50 to 60 children of community residents and students and operates a Head Start satellite center for 36 children. The Children's Center accepts children from birth to 6 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.

Athletics

Odessa College athletic teams hold 43 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. The athletic program includes teams in women's basketball, track and rodeo. Men's teams compete in baseball, basketball, golf and rodeo.

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 Junior College Athletic Association tournaments every year. Some of the honors and titles won by Odessa College athletic teams include:

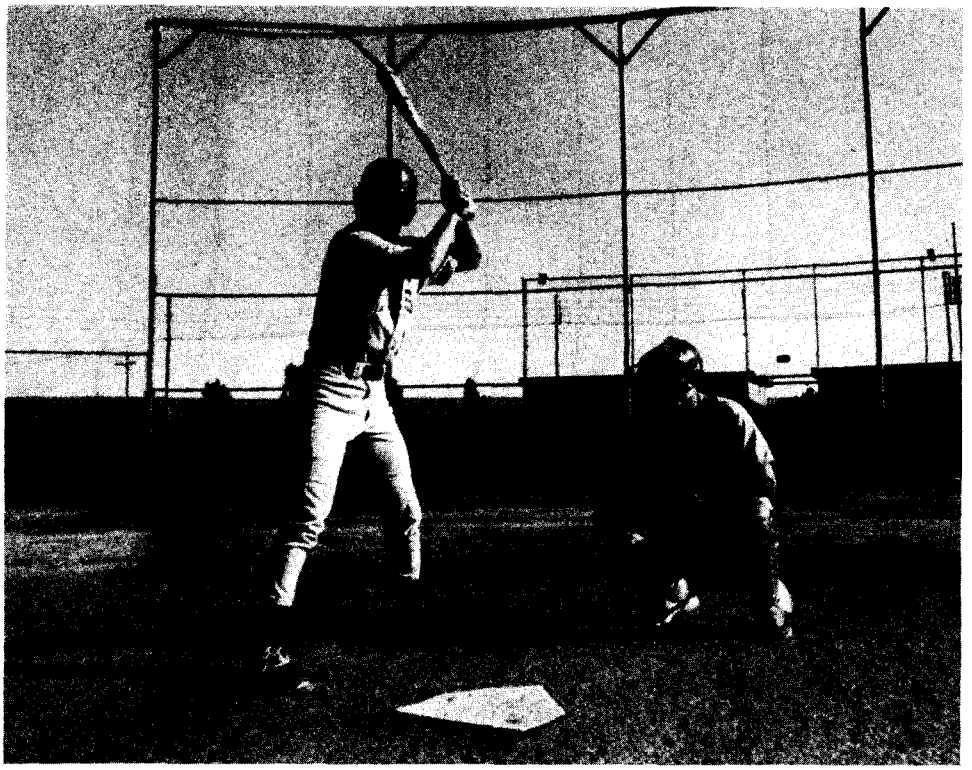
Men's Basketball: The Wranglers have had an active basketball program since 1952. The cagers were runners-up in the Region V Tournament in 1958, and conference co-champions in 1979, conference champions in 1989, 1993 and 1994, and regional champions in 1988, 1989, 1990 and 1993. The 1993 team also won the state championship. Since 1992 four players have been designated All-American.

Women's Basketball: The Lady Wranglers have won the conference championship six times, in 1980, 1984, 1985, 1986, 1989 and 1991; and the regional championship five times, in 1980, 1985, 1986, 1989 and 1991. They finished second in the 1985 national tournament and won the NJCAA national championship in 1986 and 1991. They have produced 17 All-Americans, more than 50 All-Conference players and more than 40 All-Region players. For 16 consecutive years, they were nationally ranked. Four times they were ranked No. 1 in the nation. From 1984-86, the Lady Wranglers recorded 79 regular season games without a loss.

Golf: In 1959, OC hosted the first National Junior College Golf Championship. OC won the national title in 1959, 1960, 1961, 1962, 1963 and 1965. The Wranglers have captured the conference title 17 times and have had 37 All-Americans in golf. OC won regional championships in 1988 and 1990 and finished eighth in the national tournament in 1991. The 1995 team finished seventh at nationals.

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, 1991 and 1994. Members of the women's team also qualified for the national finals in 1993 and 1994. The men's teams have won 11 regional event titles, two regional team championships, nine national event titles and the National Intercollegiate Rodeo Association national team championship in 1989. Members of the men's team brought home a first place in national competition in bull riding in 1986 and first place in calf roping in 1989 and 1990. Odessa College is recognized as a power rodeo school in the NIRA's Southwest Region.

Women's Track: In 1989, a women's track team was added to the OC athletic program and the team won the NJCAA national outdoor championship its first year out. The 1991 team finished third at the NJCAA national indoor meet and fourth at the NJCAA national outdoor meet. The 1994 team captured the NJCAA indoor national championship. The 1995 team finished fourth at both the indoor and outdoor meets.



Men's Baseball: OC began competing in baseball in 1990 for the first time since 1969. The team advanced to the state tournament its first year and was both conference and regional champion in 1992. It had 12 players either drafted or signed to professional contracts in its first two years. The team's two-year record was 86-42, the best two-year start for a new program for the NJCAA. The baseball team had the school's first All-American in baseball in 1992 and another All-American in 1994. A team member also was named an Academic All-American in 1994. The Wranglers were the conference champions in 1993 and the conference and regional runner-ups in 1994. In 1995 the Wranglers finished third in the nation in the JUCO World Series, with several team members winning national honors.

Sports Center

This 110,000 square-foot recreational complex located on the Odessa College campus is home to the OC Wrangler and Lady Wrangler basketball teams. In addition there are racquetball courts, two gymnasiums (one for competition and one for community activities), indoor and outdoor tracks, weight training facilities, a Fitness Center/Super Circuit training room, a dance room and an indoor pool.

Students and community members all benefit from the classes and activities centralized at the Sports Center. Students who present a valid identification card have access to the facility and recreational equipment. Use of the Super Circuit is limited to individuals who are enrolled for use of that area.

The public is invited to be a part of the Sports Center. Activity cards may be purchased by non-students, and a variety of activity membership options are available. Individuals or groups also may rent the facility for special events or parties. Please come by or call 335-6348 for more information.

STUDENT LIFE AND SERVICE ACTIVITIES

The Student Life area of Odessa College is dedicated to enhancing opportunities for student success. From the time a person makes initial contact by telephone or in person at the Student Information Center, Student Life personnel are available to make each person's association with Odessa College a positive experience. In addition to supporting students in instructional endeavors, student life also provides enrichment in a variety of special activities, programs and services.

Student Information Center

Every new student who attends Odessa College begins the admission process in the Student Information Center, which is the hub of the Enrollment Management division. The Student Information Center provides information about getting started in college. The center also sponsors lectures, workshops, facilitates the admission process, provides general OC information and offers campus tours. The Student Information Center staff is available to help potential, current and existing students with college forms, questions and information about college in general.

Counseling and Academic Advising

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.

Career Services

The Career Services Center is located in Room 205 of the Student Union Building. Career-related services are available to credit and non-credit students and graduates. Occupational information, career counseling and degree planning are available as well as computerized career assessments and referral for traditional career testing. Seminars on interviewing skills, resume writing, career and college choices and job hunting skills are offered throughout the year. The center maintains a career resource library for student use.

The center also maintains a job bank of both part-time and full-time employment. Information on local, state and national job openings is available. Odessa College sponsors a career/job fair each year during the spring semester.

Students who have not yet decided on a major, need career information, referral to other services, college transfer information or job placement assistance should contact the Career Services Center.

Testing Center

The Testing Center is in Room 200 of the Student Union Building, (formerly Gymnasium). Ability, career interest 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 ACT and SAT, 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.

Student Activities and Leadership Development

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.

The Student Activities Office is located in the Student Activity Center —Travis Hall. In addition to providing a gathering place for students, the facility is available for organization meetings and special events.

Opportunities for students to participate in student activities include the following groups:

Clubs and Organizations

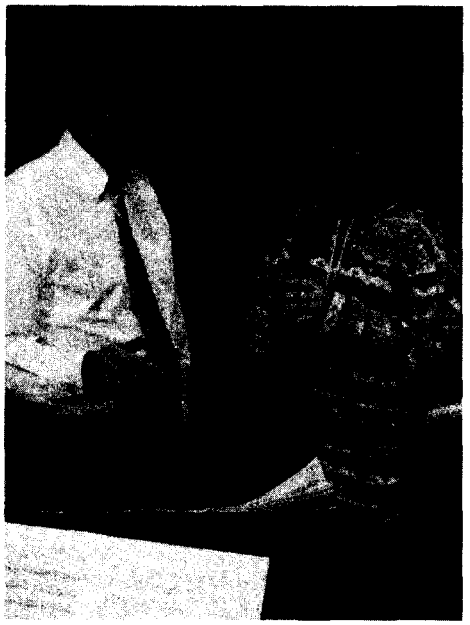
More than nine student organizations are active on campus. Many of these groups are service organizations that relate to academic pursuits, such as nursing or chemistry, while others are honorary societies or special interest groups. A list of currently active student organizations may be found in the Student Activities Office.

OC Student Forum

The Forum is designed to provide student input for information and decision making. It is a diverse body composed of current students selected from all components of the college. Student input groups provide a variety of perspectives to the administration as it makes decisions related to the welfare and interests of the student body. In addition, students are involved in the public relations and recruitment functions of the college. The composition, selection and direction of the Forum will be determined by the Student Life administration of the college.

Intramurals

A program of intramural activities is offered each semester at Odessa College. The program is a function of Student Activities and operates out of the OC Sports Center, Room 204. Coin operated game tables for student use are provided in the Sports Center and the Student Activities Center. Students may check out other game equipment in the Student Activities Center.



Choir and band

Odessa College's A Cappella Choir and Vocal Ensemble have gained international recognition for their musical abilities. Recent performances for the OC Choir have included ones for the Texas Music Educators Association in 1995 and tours to New York City, Austria and Switzerland. The college also has an active jazz band that performs regularly on campus and in the community. The jazz band has traveled to various locations in the United States and Mexico. The Music Department also sponsors a community band as well as a community choir for area citizens who maintain an interest in performing.

Art shows

A function of the Art Department 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.

ON-CAMPUS SERVICES AND FACILITIES

Student Housing

Students who compete for Odessa College in intercollegiate athletics are required to live in on-campus housing facilities if they are unmarried and are not living with their parent or legal guardian. Priority also is given to other students on competitive scholarships for on-campus housing. If space is available after all student athletes and other competitive scholarship students are accommodated, the spaces may be reserved by other students. A deposit of $100 is required before a student is placed on a priority list for a room in an OC resident hall. Contact the Office of the Vice President for Student Life for information.

Campus Food Service

The college cafeteria is located on the first floor of the Student Union Building. Students who live in campus residence halls participate in a meal plan, and food service is also available to all students, faculty and staff on a cash basis. Non-resident students may purchase a meal plan or a cash card for meals. Contact the food service director or the OC Business Office for more information.

Campus Police

The Odessa College Campus Police Office 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. The office is located in Room 107 of the Student Union Building.

Parking on Campus

A permit is required for each vehicle (including motorcycles and mopeds) parked on campus. Students may purchase a parking permit during the registration process or at other times during the year. Payments are made at the OC Business Office during regular hours of operation. A copy of parking regulations is available at the Business Office or from the Campus Police Office.

Continuing Education students will be provided a courtesy parking sticker when they register for non-credit classes.

Vehicles without a permit displayed and which are parked on campus will be ticketed. Failure to pay fines assessed by tickets will result in holds placed on registration and transcripts.

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.

Disabled Students

In accordance with federal laws and regulations, Odessa College does not discriminate on the basis of disability in the recruitment and admission of students, the employment of faculty and staff and the operation of any of its programs and activities. The vice president for Student Life is designated coordinator for college compliance with Section 504 of Rehabilitation Act of 1973 and with the Americans with Disabilities Act of 1990.

Disabled students should contact the Odessa College Counseling Center or the vice president for Student Life 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.

Special Projects

The Special Projects Office provides services to technical-vocational students who meet project guidelines. Assistance may include textbook loans, child care, transportation, financial aid referrals, advisement and workshops for eligible single parents, displaced homemakers or participants in designated non-traditional programs. Services are contingent on available federal funds. Call 335-6578 for more information.

Emergency Messages

Students should notify their parents, spouses and friends that the college staff will not interrupt classes to deliver a message unless there is a medical emergency (as deemed by college officials) or a death in the family.

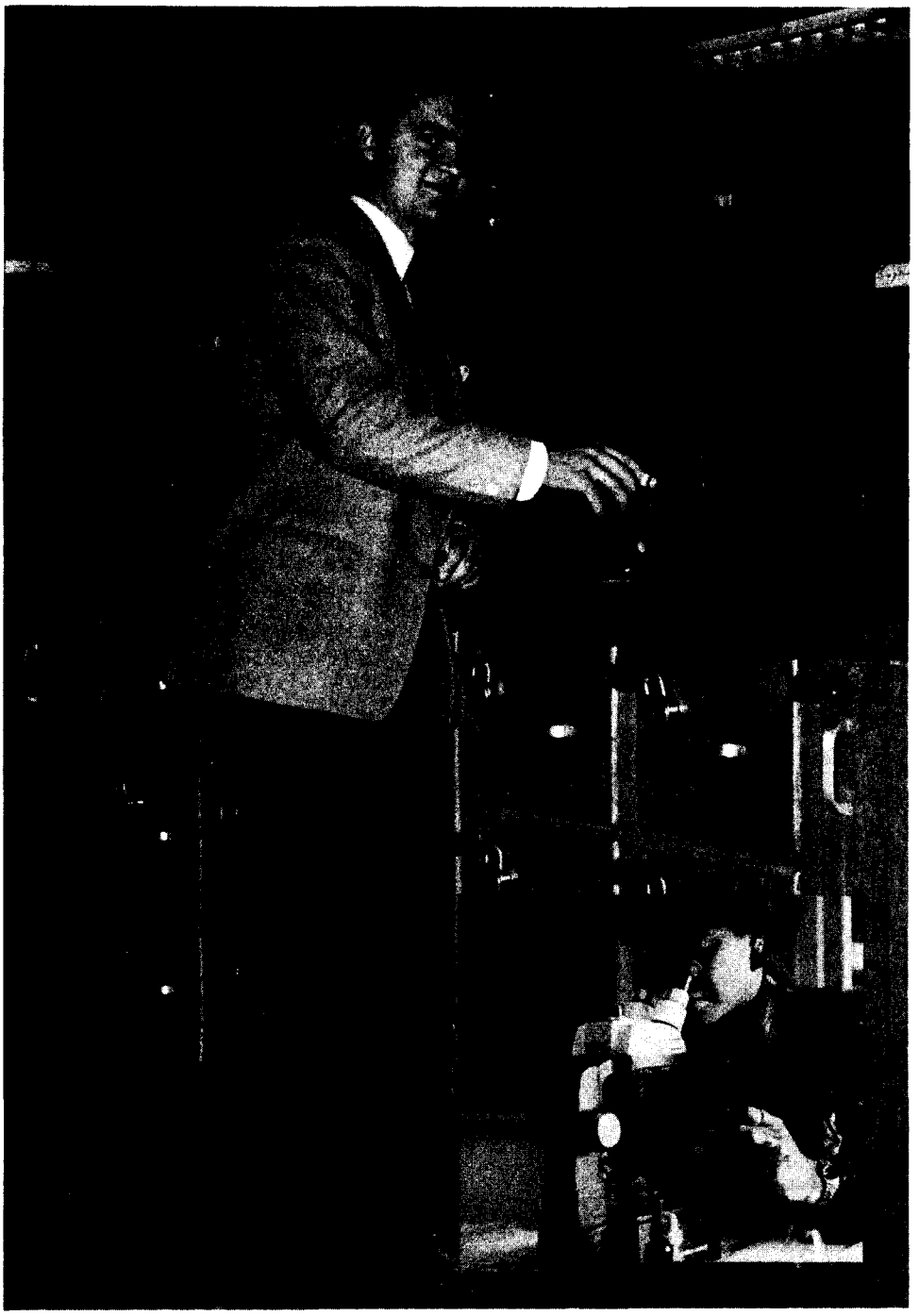
Under federal law students' schedules cannot be given to a third party in either verbal or written form without the students' written permission.

More Information

For more information about Odessa College or becoming a student at OC, contact the Student Information Center, Room 107 of the Student Union Building.

For information about instructional programs and counseling and advising services, contact the Counseling Center, 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.



INSTRUCTIONAL PROGRAMS

Key To Course Description

SCANS Numbers

The word "SCANS" comes from the U.S. Department of Labor's "Secretary's Commission on Achieving Necessary Skills." The numbers found in the Odessa College course descriptions refer to the list of 11 skill areas below. Three of the 11 skill areas refer to the foundation skills of reading, writing and mathematics. The other eight areas refer to workplace skills, such as working with clients and co-workers, that courses develop as a part of the teaching-learning process. The OC faculty have evaluated all of their courses and written the following course descriptions, keyed to SCANS, to help communicate to students and other members of the public the educational and work place foundation that courses will help students attain as they successfully complete their course of study at Odessa College.

(SCANS 1, 2, 3 = FOUNDATION SKILLS)

1. READING
2. WRITING
3. MATHEMATICS

(SCANS 4 - 11 = WORKPLACE SKILLS)

4. RESOURCE USE AND DEVELOPMENT (such as time, materials, money, and facilities)
5. INTERPERSONAL DEVELOPMENT (such as working as member of a team, serving clients and customers, negotiation, leadership, and working with diversity)
6. INFORMATION SKILLS (such as acquiring, evaluating, organizing, maintaining, interpreting, communicating, and using computers to process information)
7. SYSTEMS AND OTHER COMPLEX INTERRELATIONSHIPS (such as understanding organizational systems, working within social and technological groups, distinguishing and improving the systems design)
8. SELECTING, APPLYING, AND MAINTAINING A VARIETY OF TECHNOLOGIES
9. CREATIVE THINKING, PROBLEM SOLVING, AND DECISION MAKING
10. DEVELOPING PERSONAL QUALITIES (such as responsibility, self-esteem, sociability, self-management, integrity and honesty)
11. LISTENING AND SPEAKING

Accounting *(see Business Administration)*

Agriculture

Faculty: Rebecca Hennig.
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

Agriculture

	Semesters Hrs
General Education Requirements	**48**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
CHEM 1311/1111 Gen. Inorganic Chemistry/Fundamentals of Chem Lab I	4
CHEM 1312/1112 Gen. Inorganic Chemistry/Fundamentals of Chem Lab II	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore Level)	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra or More Advanced	3
MATH 1316 Plane Trigonometry or More Advanced	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3
Major Requirements	**15-17**
AGRI 1131 The Agricultural Industry	1
AGRI 1419 Animal Science	4
AGRI 1407 Agronomy	4
**AGRI Elective	3 or 4
**AGRI Elective	3 or 4
Total Semester Hours	**63-65**

**PHED 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: AGRI 1413, AGRI 1415, and AGRI 2317. 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.*

Agriculture Courses

AGRI 1131 The Agriculture Industry (01.0103.5121)
(1-0) ..... 1 hour
An introductory course to the field of agriculture to aid in the understanding of the relationship of sciences and other fields of agriculture. Students will be required to read and comprehend extensive agricultural terminology. (SCANS 1) Prerequisite: None.

AGRI 1407 Agronomy (02.0402.5121)
(3-3) ..... 4 hours
A basic study of the classification and distribution of farm crops. Students will be required to evaluate and interpret information as it pertains to the 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. Decision-making and reasoning skills will be used in the proper application of agronomy principles. (SCANS 6,9) Prerequisite: None.

AGRI 1413 Economic Entomology (02.0408.5121)
(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. Students will be required to evaluate and interpret information as it pertains to integrated pest management, and biological controls. Collection and mounting of insects is required. Decision-making and reasoning skills will be used in the proper application of agronomy principles. (SCANS 1,6,9) Prerequisite: None.

AGRI 1415 Horticulture (01.0601.5121)
(3-3) ..... 4 hours
This course familiarizes the student with the fields of horticulture and the place of horticulture in American agriculture. Students will be required to evaluate and interpret information as it pertains to the study of the structure, growth and development of horticulture plants. Reasoning skills will be used in decisions concerning control of environment and plant growth with considerations of biological competition and progressive improvement of crops. Principles of propagation, greenhouse production of horticultural crops, pruning, pest control and landscaping are included. (SCANS 6,9) Prerequisite: None.

AGRI 1419 Animal Science (02.0201.5121)
(3-3) ..... 4 hours
An introduction to the importance of the livestock industry in the United States, with emphasis in the state of Texas. Students will be required to read and comprehend extensive terminology including the 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. Decision-making and reasoning skills will be used in determining principles involving heredity and breeding for improvement, judging, care and management. (SCANS 1,6,9) Prerequisite: None.

AGRI 2317 Agriculture Economics (01.0103.5121)
(3-3) ..... 3 hours
A study of the basic concepts and theory of the present economic system through a process of interpretation of written information. Includes an analysis and mathematical calculations of profit margin of farm and ranch enterprises 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. (SCANS 1,3,6,7) Prerequisite: None.

Anthropology *(see Geology, Anthropology, and Geography)*

Art and Humanities

Faculty: Barry Phillips, III, chair; Barry Phillips; Delmos Hickmott, (ret.).

The Odessa College art department exists to provide quality art education for all members of the community. A professionally active faculty maintains labs for design, drawing, painting, printmaking, photography, sculpture, and pottery. Art students learn to create and evaluate visual images in order to develop a critical awareness of the visual environment. The department welcomes all students who are interested in learning about visual art and sponsors scholarships for students considering art as a major.

The following curriculum has been designed as a guide for those students wishing to prepare for a bachelor's degree in art education, studio art, or commercial art.

Course of Study for Associate in Arts Degree

Art

General Education Requirements **38-40**
- COSC 1301 Introduction to Computer Systems 3
- ENGL 1301 Composition and Rhetoric 3
- ENGL 1302 Composition and Literature 3
- ENGL (sophomore level) 6
- **Foreign Language, Math, or Science 6-8
- GOVT 2301 U.S. and Texas Government 3
- GOVT 2302 American National Government 3
- HIST 1301 U.S. History to 1877 3
- HIST 1302 U.S. History from 1877 3
- *PHED (any two one-hour activity courses) 2
- SPCH 1315 Public Speaking OR
  - SPCH 1321 Business and Professional Speech 3

Major Requirements **27**
- ARTS 1301 Art Appreciation 3
- ARTS 1303 Art History I 3
- ARTS 1304 Art History II 3
- ARTS 1311 Design I 3
- ARTS 1312 Design II 3
- ARTS 1316 Drawing I 3
- ARTS 1317 Drawing II 3
- Approved electives *** 6

Total Semester Hours **65-67**

**PHED 1100 should be the first course taken in physical education.*
***Six to eight semester hours in same discipline.*
****Any two sophomore level ARTS courses.*

Humanities students have the opportunity to pursue an interdisciplinary program which culminates in an associate in arts degree. This program is designed to prepare individuals for paraprofessional arts occupations, leadership, and involvement in the development of community arts activities. The required course of study encourages a broad understanding of the humanities including literature, visual art, music, and philosophy.

Course of Study for Associate in Arts Degree
Humanities

General Education Requirement **38-40**
- COSC 1301 Introduction to Computer Systems 3
- ENGL 1301 Composition and Rhetoric 3
- ENGL 1302 Composition and Literature 3
- ENGL (sophomore level) 6
- **Foreign Language, Math, or Science 6-8
- GOVT 2301 U.S. and Texas Government 3
- GOVT 2302 American National Government 3
- HIST 1301 U.S. History to 1877 3
- HIST 1302 U.S. History from 1877 3
- *PHED (any two one-hour activity courses) 2
- SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

Major Requirements **27**
- ARTS 1301 Art Appreciation 3
- ARTS 1311 Design I 3
- ARTS 1316 Drawing I 3
- Elective (sophomore level art or music course) 3
- HUMA 1315 Introduction to the Humanities 3
- MUSI 1306 Music Appreciation 3
- MUSI 1370 Music Fundamentals 3
- PHIL 1301 Introduction to Philosophy I 3
- PHIL 2306 Introduction to Philosophy II 3

Total Semester Hours **65-67**

**PHED 1100 should be the first course taken in physical education.*
***Six to eight semester hours in same discipline.*

Art Courses

ARTS 1301 Art Appreciation (50.0703.5130)
(3-0) ..... 3 hours
Develops the ability to enjoy visual art and understand its importance. Introduces basic art theory, forms, and history. (SCANS 6, 9) Prerequisites: None.

ARTS 1303 Art History I (50.0703.5230)
(3-0) ..... 3 hours
Builds knowledge of the world's great civilizations, their art and artists, and the relationship of art to culture from prehistoric times through the 1400s. Develops the ability to identify, describe, and interpret major works in the history of visual art. (SCANS 6, 9) Prerequisites: None.

ARTS 1304 Art History II (50.0703.5230)
(3-0) ..... 3 hours
Builds knowledge of the world's great civilizations, their art and artists, and the relationship of art to culture from the 1300s to the present. Develops the ability to identify, describe and interpret major works in the history of visual art. (SCANS 6, 9) Prerequisites: None.

ARTS 1311 Design I (50.0401.5330)
(2-4) ..... 3 hours
Develops the skill to create two-dimensional designs using drawing, painting, collage, and photographic media. Introduces the principles/elements of two-dimensional design, plus basic art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: None.

ARTS 1312 Design II (50.0401.5330)
(2-4) ..... 3 hours
Develops the skill to create three-dimensional designs using wood, clay, and metals, including lost-wax plaster investment bronze casting. Introduces the principles/elements of three-dimensional design, plus basic art concepts, techniques, and media essential to the understanding and organization of visual information. (SCANS 6, 9) Prerequisites: None.

ARTS 1316 Drawing I (50.0704.5230)
(2-4) ..... 3 hours
Develops the skill to create drawings from careful observation of the visual environment. Emphasizes line and value drawings in pencil, charcoal, and ink. Introduces basic art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: None.

ARTS 1317 Drawing II (50.0705.5230)
(2-4) ..... 3 hours
Develops the skill to create expressive drawings. Emphasizes the use of color pencil and pastels. Requires creative thinking in order to develop original images. Presents basic art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 1316.

ARTS 2316 Painting I (50.0708.5330)
(2-4) ..... 3 hours
Develops the skill to create expressive paintings. Emphasizes use of acrylic paint and proper preparation of canvas and wooden supports. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 1316 and ARTS 1311 or instructor approval.

ARTS 2317 Painting II (50.0708.5230)
(2-4) ..... 3 hours
Develops the skill to create a series of paintings emphasizing individual expression. Requires creative thinking in order to develop original images. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 2316.

ARTS 2323 Figure Drawing I (50.0705.5330)
(2-4) ..... 3 hours
Develops skill in drawing the human figure. Emphasizes handling of gesture, volume, anatomy and proportion using a variety of media. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 1316 or instructor approval.

ARTS 2324 Figure Drawing II (50.0705.5330)
(2-4) ..... 3 hours
Develops the skill to create a series of figure drawings emphasizing individual expression. Requires creative thinking in order to develop original images. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 2323.

ARTS 2326 Sculpture I (50.0709.5130)
(2-4) ..... 3 hours
Develops the skill to create expressive sculpture using clay, wood, and metals, including lost-wax plaster investment bronze casting. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. Lab fee required. (SCANS 6, 9) Prerequisites: ARTS 1312 or instructor approval.

ARTS 2327 Sculpture II (50.0709.5130)
(2-4) .....3 hours
Develops the skill to create a sculpture series emphasizing individual expression in a particular sculpture medium and technique. Requires creative thinking in order to develop original images. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. Lab fee required. (SCANS 6, 9) Prerequisites: ARTS 2326.

ARTS 2333 Printmaking I (50.0710.5130)
(2-4) .....3 hours
Develops the skill to create original prints using relief, intaglio, and screen techniques. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 1316 or instructor approval.

ARTS 2334 Printmaking II (50.0710.5130)
(2-4) .....3 hours
Develops the skill to create a series of prints emphasizing individual expression in a particular printmaking medium and technique. Requires creative thinking in order to develop original images. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6, 9) Prerequisites: ARTS 2333.

ARTS 2346 Pottery I (50.0711.5130)
(2-4) .....3 hours
Develops the skill to create original pottery using coil, slab, and wheel techniques. Includes bisque, glaze, sawdust, and raku firings. Presents advanced art concepts, technique, and media essential to the organization and understanding of visual information. Lab fee required. (SCANS 6, 9) Prerequisites: None.

ARTS 2347 Pottery II (50.0711.5130)
(2-4) .....3 hours
Develops the skill to create pottery emphasizing individual expression. Requires creative thinking in order to develop original images. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. Lab fee required. (SCANS 6,9) Prerequisites: ARTS 2346.

ARTS 2356 Photography I (50.0605.5130)
(2-4) .....3 hours
Introduces basic applied and aesthetic aspects of photography. The student will assess and select equipment, supplies and techniques to incorporate basic theories of film, exposure, development, filters and printing. Lab fee required. (Scans 4,8,9) Prerequisites: TASP competency in reading, writing and math or consent of the instructor.

ARTS 2357 Photography II (50.0605.5230)
(2-4) .....3 hours
A continuation of ARTS 2356. Designed for additional experience in the photographic medium. Lab fee required. (SCANS 4,8,9) Prerequisites: ARTS 2356.

ARTS 2366 Watercolor I (50.0708.5330)
(2-4) .....3 hours
Develops the skill to create expressive watercolor paintings. Includes transparent wash and opaque painting techniques. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6,9) Prerequisites: ARTS 1316 or instructor approval.

ARTS 2367 Watercolor II (50.0708.5330)
(2-4) ..... 3 hours
Develops the skill to create a series of watercolor paintings emphasizing individual expression. Requires creative thinking in order to develop original images. Presents advanced art concepts, techniques, and media essential to the organization and understanding of visual information. (SCANS 6,9) Prerequisites: ARTS 2366.

HUMA 1315 Introduction to the Humanities (50.0101.5130)
(3-0) ..... 3 hours
Introduces the humanities through the study of the arts including music, dance, theater and visual art. Develops the ability to understand the expressive purposes and significance of the arts. (SCANS 6,10) Prerequisites: None.

Automotive Technology and Diesel Mechanics/Tech-Prep

Faculty: Juri Davis, chair.

Maintaining and servicing automobiles and diesel-powered vehicles and equipment is a thriving business and a very important activity in the American economy. The automotive/diesel service field is so widespread and fast growing that many excellent career opportunities are open to the person with proper qualifications. While a certificate of technology with an emphasis in either automotive or diesel technology will prepare the student to be an effective employee, 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

Automotive and Diesel Technology

	Semester Hrs
General Education Requirements	**17**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra or MATH 1371 College Algebra for Business or MATH 1372 Technical College Algebra	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3

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

In addition to the 17 semester hours listed, a student must select one of the following options:

Automotive Option

	Semester Hrs
Major Requirements	**46**
AUTO 1502 Introduction to Automotive Engine Maintenance and Rebuilding	5
AUTO 1503 Transmissions and Power Trains	5
AUTO 1504 The Automotive Chassis	5
AUTO 2377 Cooperative Work Experience	3
AUTO 2501 Automotive Electrical Systems	5
AUTO 2502 Heating and Air Conditioning	5
AUTO 2503 Automotive Fuel and Emissions	5
AUTO 2504 Automotive/Diesel Electronics I	5
AUTO 2505 Automotive/Diesel Electronics II	5
*AUTO elective (minimum 3 semester hours)	3
Total Semester Hours	**63**

**AUTO 1301 Specialized Electronics Mathematics or AUTO 1505 Automotive Diesel*

Diesel Mechanics Option

	Semester Hrs
Major Requirements	**33**
DESL 1501 Principles of Diesel Engines	5
DESL 1503 Electrical Systems and Control Circuits	5
DESL 1504 Fuel and Emissions Systems	5
DESL 1507 The Diesel Chassis	5
DESL 2377 Cooperative Work Experience	3
DESL 2501 Transmissions, Power Trains and Accessories	5
DESL 2503 Caterpillar Diesel Engines OR DESL 2506 Cummins Diesel	5
Related Requirement	**13**
AUTO 2504 Automotive/Diesel Electronics I	5
AUTO 2505 Automotive/Diesel Electronics II	5
*AUTO elective (minimum 3 semester hours)	3
Total Semester Hours	**63**

**AUTO 1301 Specialized Electronics Mathematics or AUTO 1505 Automotive Diesel*

Certificates of technology are available in the following job-specific fields.
See the program chair for course requirements and Permian Basin job opportunities.
Level I certificates are TASP-waived.

Automotive Technology Certificates of Technology

Level I - Air Conditioning and Heating

	Semester Hrs
AUTO 2501 Automotive Electrical Systems	5
AUTO 2502 Heating and Air Conditioning	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing	3
Total Semester Hours	**16**

Level I - Chassis

	Semester Hrs
AUTO 1502 Introduction to Automotive Engine	5
AUTO 1504 The Automotive Chassis	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing	3
Total Semester Hours	**16**

Level I - Drivability

	Semester Hrs
AUTO 2503 Automotive Fuel and Emissions	5
AUTO 2504 Automotive/Diesel Electronics I	5
AUTO 2505 Automotive/Diesel Electronics II	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing	3
Total Semester Hours	**21**

Level I - Automotive Electronics Technician

	Semester Hrs
AUTO 1301 Specialized Electronics Math	3
AUTO 2501 Automotive Electrical Systems	5
AUTO 2504 Automotive/Diesel Electronics I	5
AUTO 2505 Automotive/Diesel Electronics II	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing	3
Total Semester Hours	**24**

Course of Study for Advanced Skills Certificate (Level III)

Level III - Service Manager Certificate

	Semester Hrs
General Education Requirements	**9**
BCIS 1302 PC Operating Systems	3
MGMT 1301 Introduction to Management	3
MGMT 2304 Personnel and Human Relations	3

Diesel Mechanics Certificates of Technology (Level I)

Level I - Caterpillar

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
DESL 1504 Fuel Emissions Systems	5
DESL 2503 Caterpillar Engines	5
ENGL 1312 Report Writing	3
Total Semester Hours	**16**

Level I - Cummins

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
DESL 1504 Fuel Emissions Systems	5
DESL 2506 Cummins Diesel Engines	5
ENGL 1312 Report Writing	3
Total Semester Hours	**16**

Level I - Detroit Diesel

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
DESL 1501 Principles of Diesel Engines	5
DESL 1504 Fuel Emissions Systems	5
ENGL 1312 Report Writing	3
Total Semester Hours	**16**

Level I - Diesel Electronics Technician

	Semester Hrs
AUTO 1301 Specialized Electronics Math OR TMTH 1370 College Mathematics	3
AUTO 2504 Automotive/Diesel Electronics I	5
AUTO 2505 Automotive/Diesel Electronics II	5
COSC 1301 Introduction to Computer Systems	3
DESL 1501 Principles of Diesel Engines	5
DESL 1503 Electrical Systems and Control Circuits	5
DESL 1504 Fuel Emissions Systems	5
ENGL 1312 Report Writing	3
Total Semester Hours	**34**

Automotive Courses

AUTO 1301 Specialized Electronics Mathematics
(3-0) ..... 3 hours
Designed to provide an understanding of mathematics principles, formulate electronic theories and solve problems encountered by automotive technicians. The student will learn to recognize electronic symbols used in schematic drawings and perform electronic calculations with Ohms Law. Lab exercises are designed for students to use their reasoning ability to solve problems and make decisions. (SCANS 3,6,7,9) Prerequisite: Fundamental knowledge of mathematics or consent of department chair.

AUTO 1502 Introduction to Automotive Engine Maintenance and Rebuilding
(4-4) ..... 5 hours
Presents theory and practice in basic principles of repair and maintenance of internal combustion engines. Includes study of engine designs and materials and proper use of hand and special tools used in the repair and maintenance of the automotive engine and its supporting systems. Students will use service manuals to organize technical information used to rebuild engines and maintain support systems. Students will use reasoning ability to recognize component failures. Students will learn to read and use precision measuring equipment and calculate clearances. The reading of technical material is required. (SCANS 1,3,4,6,7,8,9) Lab fee required. Prerequisite: None.

AUTO 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. Students will use service manuals to organize and diagnose transmission symptoms. Decision making and reasoning ability will be developed in lab exercises. The reading of technical materials is required. (SCANS 1,2,3,5,6,7,8,9,10) Lab fee required. Prerequisite: None.

AUTO 1504 The Automotive Chassis
(4-4) ..... 5 hours
Students working as a team, yet each displaying individual responsibility, will learn repair procedures related to brakes, front-end alignment and suspension systems. The student will use brake lathes, computer aligning equipment and non-computer aligners. The student will calculate alignment measures in degrees, fractions, and metrics. Lab exercises are designed to develop reasoning and decision-making abilities and improve self-esteem regarding alignment problems. The reading of technical materials is required. (SCANS 3,5,6,7,9,10,11) Lab fee required. Prerequisite: None.

AUTO 1505 Automotive Diesel
(4-4) ..... 5 hours
Includes theory and practice in principles for repair and maintenance of the automotive diesel engine. Students will use manuals to assist in diagnosis of component failures and engine rebuilding. Precision measuring equipment will be used to restore engines to specifications. Group work in the lab will develop reasoning abilities, team qualities, and communication skills. The reading of technical materials is required. (SCANS 3,5,6,8,9,11) Lab fee required. Prerequisite: None.

AUTO 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. The reading of technical materials is required. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

AUTO 2501 Automotive Electrical Systems
(4-4) ..... 5 hours
Presents elementary to most advanced electrical systems. Emphasizes testing and diagnostic procedures. The students will use manuals and computer test equipment to test and diagnose electrical problems and will comprehend the relation of Ohms Law as it applies to the automotive electrical system. Students will work in teams on lab projects and develop communication skills for customer relations. The reading of technical materials is required. (SCANS 3,5,6,7,8,9) Lab fee required. Prerequisite: None.

AUTO 2502 Heating and Air Conditioning
(4-4) ..... 5 hours
The student will study the basic principles of climate control as related to the automobile. Topics such as heat, pressure, refrigerants, compressors, electrical control circuits, and other topics will be covered. Interpreting manifold gauges and calculating correct additions of oil and refrigerant gases will give the student a good foundation in the air conditioning service business. The students' self-esteem will be improved as they communicate with coworkers to acquire new technical skills and diagnose problems and malfunctions of the A/C systems. The reading of technical materials is required. (SCANS 1,3,4,5,6,7,9,10,11) Lab fee required. Prerequisite: None.

AUTO 2503 Automotive Fuel and Emissions
(4-4) ..... 5 hours
Emphasizes fuels and emissions related to tune-up procedures. The student will use computerized test equipment to evaluate emissions from exhaust systems. The student will recognize problems and devise plans for correction. Working in teams and communicating with each other on lab exercises, students will allocate time to the reading and studying of technical manuals which will enable them to acquire new knowledge and skills. (SCANS 1,4,5,6,7,8,11) Lab fee required. Prerequisite: None.

AUTO 2504 Automotive/Diesel Electronics I
(4-4) ..... 5 hours
Students will study Ohms Law, power law, principles of direct current, principles of alternating current, induction, capacitance, impedance, and other related electrical principles. The lab exercises will improve reasoning and decision-making abilities. A scientific calculator is required. The reading of technical materials is required. (SCANS 1,3,4,5,6,7,8,9,10) Lab fee required. Prerequisite: Fundamental knowledge of mathematics required. College Algebra or more advanced preferred or consent of the department chair.

AUTO 2505 Automotive/Diesel Electronics II
(4-4) ..... 5 hours
Introduces fundamentals of solid state devices such as FET, bipolar and unijunction transistors. The student will better understand LED's solid state regulators, electronic spark control timing, amplifiers, buffers, SCRs, RAMS, PROMS, and EPROMS. The automotive computer technologies will also be introduced. Students in lab exercises, working in teams, will develop thinking and reasoning abilities useful in diagnosing automotive electronic problems. The reading of technical materials is required. (SCANS 5,6,7,8,9) Lab fee required. Prerequisite: AUTO 2504 or consent of the department chair.

Diesel Courses

DESL 1501 Principles of Diesel Engines
(4-4) ..... 5 hours
Students will learn principles and nomenclatures of gasoline and diesel engines. Reading and interpretation of service manuals and decisions regarding service and repair will be required. Students will use current technologies to diagnose and repair various gasoline and diesel engines. The reading of technical materials is required. (SCANS 6,8,9,11) Lab fee required. Prerequisite: None.

DESL 1503 Electrical Systems and Control Circuits
(4-4) ..... 5 hours
Students will learn the basic principles of electricity. Reading and interpretation of schematic diagrams, multimeters, and correct terminology will be taught. Current technology will be applied in the diagnoses and repair of various components in the automotive electrical system. (SCANS 1,3,6,8,9,11) Lab fee required. Prerequisite: None.

DESL 1504 Fuel Emissions Systems
(4-4) ..... 5 hours
Students will learn the purpose, theory, and terminology of modern emission control systems. Reading and interpretation of service manuals and schematic diagrams will be required. Current technologies will be utilized to diagnose, troubleshoot and repair these systems. (SCANS 6,8,9,11) Lab fee required. Prerequisite: None.

DESL 1507 The Diesel Chassis
(4-4) ..... 5 hours
Students will learn the theory and terminology of modern heavy truck chassis. Reading and interpretation of service manuals and bulletins will be necessary to facilitate the understanding and repair of the chassis and its various components. (SCANS 1,6,8,9) Lab fee required. Prerequisite: None.

DESL 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

DESL 2501 Transmissions, Power Trains and Accessories
(4-4) ..... 5 hours
Students will learn the purpose, theory, and terminology of modern automotive heavy truck power train components. Reading and interpretation of service manuals and bulletins will be necessary to facilitate the understanding, diagnoses, and repair of transmissions, differentials, and accessories. (SCANS 1,6,8,9) Lab fee required. Prerequisite: None.

DESL 2503 Caterpillar Diesel Engines
(4-4) ..... 5 hours
Students will learn the theory of operation, terminology and proper repair procedures through extensive lab and classroom instruction. Reading and interpretation of service manuals and bulletins will be necessary to facilitate understanding, diagnoses, and repair of the Caterpillar diesel engine. (SCANS 1,6,8) Lab fee required. Prerequisite: None.

DESL 2506 Cummins Diesel Engines
(4-4) ..... 5 hours
Students will learn the theory of operation, terminology and proper repair procedures through extensive lab and classroom instruction. Reading and interpretation of service manuals and bulletins will be necessary to facilitate understanding, diagnoses, and repair of the Cummins diesel engine. (SCANS 1,6,8) Lab fee required. Prerequisite: None.

Bible *(see Social Sciences)*

Biology

Faculty: Dr. Clyde E. Smith, chair; Rebecca Hennig, James O. Johnson, Dr. Sudhir Kudesia, Steve Sofge.

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	**60**
CHEM 1311/1111 General Inorganic Chemistry I/ Fundamentals of Chemistry Laboratory I	4
CHEM 1312/1112 General Inorganic Chemistry II/ Fundamentals of Chemistry Laboratory II	4
CHEM 2323/2123 Organic Chemistry I/ Organic Chemistry Lab I	4
CHEM 2325/2125 Organic Chemistry II/ Organic Chemistry Lab II	4
COSC 1415 Introduction to Computer Science	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (Sophomore Level)	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra or More Advanced	3
MATH 1316 Plane Trigonometry or More Advanced	3
*PHED (any two one-hour activity courses)	2
PHYS 1401 College Physics I	4
PHYS 1402 College Physics II	4
SPCH 1315 Public Speaking	3
Major Requirements	**11-13**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
**Biology Electives	3-5
Total Semester Hours	**71-73**

**PHED 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 2306 General Ecology; BIOL 2470 Marine Ecology; BIOL 2420 Microbiology or BIOL 2428 Comparative Anatomy. Choice of an elective may depend upon students' plans for future study. Students should consult with the biology faculty for information regarding these courses.*

Biology Courses

BIOL 0371 Developmental Science (32.0101.5139)
(3-3) ..... 3 hours
This is a compensatory, non-transferable science course designed to improve basic knowledge of the biological sciences, develop critical thinking skills and teach students how to interpret data related to biological concepts. Students learn and use biological terminology and mathematical calculations involved in converting between the English and metric systems of measurement and basic chemical calculations. Students also learn specific information about the basic chemistry of life processes, cells, tissue, organs and systems with emphasis on human biology. Lab fee is required. (SCANS 1,3,6,9) Prerequisite: None.

BIOL 1170 Medical Terminology
(1-0) ..... 1 hour
Students planning health science careers learn to understand and interpret medical terminology. Consists of Latin and Greek roots, prefixes and suffixes, as well as proper pronunciation and correct spelling. (SCANS 1) Prerequisite: None.

BIOL 1406 General Biology I (26.0101.5124)
(3-3) ..... 4 hours
This course is a study of the organizational aspects of cells from molecular to organismic levels. Students learn to understand and interpret terms and discover principles covering cell anatomy, cell biochemistry, cellular respiration, photosynthesis, cell reproduction and genetics. A taxonomic survey of the five kingdoms is also covered. In laboratory activities students learn to perform basic mathematical calculations of converting between the metric and English systems of measurement and acquire experimental data and reason to the interpretation of principles underlying the observations including cause and effect relationships. Lab fee is required. (SCANS 1,3,6,9) Prerequisite: None.

BIOL 1407 General Biology II (26.0101.5124)
(3-3) ..... 4 hours
Students continue their understanding and interpretation of biological terms with respect to plant and animal growth, plant and animal tissues and systems, ecology, evolution and behavior. Laboratory investigations include basic mathematical calculations of ecological parameters, acquiring practical experience in the dissection of a mammal with reasoning to the relationships between form and function and make decisions relative to cause and effect relationships. Lab fee required. (SCANS 1,3,6,9) Prerequisite: None.

BIOL 1408 Principles of Biology (26.0101.5124)
(3-3) ..... 4 hours
Students with majors requiring only one semester of biology learn to understand and interpret biological terms, especially as they apply their own bodies and the environment in which they live. Through laboratory activities that include experimentation and microscopic examination, students acquire and evaluate information and formulate relationships between form and function and make decisions relative to cause and effect. (SCANS 3,6,9) Prerequisite: None.

BIOL 2306 General Ecology (03.0102.5124)
(3-0) ..... 3 hours
Students learn and interpret the concepts of plant and animal communities and population. From environmental sampling students acquire, evaluate and interpret the effects of chemicals on the biome. Field trips, group discussions and a written theme are required. (SCANS 1,6,9) Prerequisite: One semester of either biology or geology or consent of the instructor.

BIOL 2401 Anatomy & Physiology I (26.0706.5124)
(3-3) ..... 4 hours
This is the first semester of a two-semester course in which anatomy and physiology are integrally presented. Students learn anatomic and physiologic terminology, the principles of the relationships between form and function and basic mathematical calculations converting between the metric and English systems of measurement. Students also learn specific information about and concepts of basic chemistry, cell structure and chemistry, cell reproduction and tissue structure. The anatomy and physiology of four of the body's 11 systems are also presented. In laboratory investigations students acquire knowledge about bones, muscular function and microscopic examination of tissues. Lab fee is required. (SCANS 1,3,6,9) Prerequisite: CHEM 1111 and CHEM 1311 or demonstration of basic competence in biology either by passing a placement exam or credit with a grade of "C" or better in one semester of college-level biology or consent of the instructor. Credit in Biology 1170 and/or 2470 does not fulfill the prerequisite.

BIOL 2402 Anatomy & Physiology II (26.0706.5124)
(3-3) ..... 4 hours
This course is a continuation of BIOL 2401 and assumes foundation knowledge and skills acquired therein. Students learn specific and conceptual information about the remaining seven systems of the body, cellular metabolism and fluid and electrolytes. Practical knowledge of the information and concepts about the 11 systems is further gained and reinforced through the hands-on use of anatomical specimens. Lab fee required. (SCANS 1,6,9) Prerequisite: BIOL 2401, CHEM 1111 and CHEM 1311 or consent of the instructor.

BIOL 2404 Human Anatomy & Physiology (26.0706.5124)
(3-3) ..... 4 hours
In this one semester course students learn scientific terminology, specific information and concepts about the anatomy and physiology of the 11 body systems. In laboratory exercises students learn mathematical calculations for conversions between the metric and English systems of measurement, the anatomy of muscles, bones, nervous organs, blood vessels and endocrine glands, plus various organs of other systems. Lab fee is required. (SCANS 1,3,6,9) Prerequisite: Demonstration of basic competency in biology either by passing an exam or credit with a grade of "C" or better in one-semester college biology or consent of the instructor.

BIOL 2420 Microbiology (26.0501.5124)
(3-3) ..... 4 hours
Students learn specific information and concepts in the classification, structure, cultivation and ecology of microorganisms. Students learn mathematical calculations of growth parameters and the effectiveness of chemotherapeutic agents. Students learn terminology, specific information and concepts of the relationships between microorganisms and human life. Cause and effect relationships between microbial growth and human disease, interpretation of symptomatic and laboratory information in diagnosis of disease, prevention of disease and treatment of disease are stressed. Lab fee is required. (SCANS 1,3,6,9) Prerequisite: BIOL 2401 and BIOL 2402 or CHEM 1311 and CHEM 1111 or consent of the instructor.

BIOL 2428 Comparative Anatomy (26.0706.5124)
(3-4) ..... 4 hours
In this course students learn the terminology, specific information relating to and concepts of comparative anatomies of type chordates. Students learn to interpret the progressive developments of organ and organ systems from information gained in the dissection of representative animals from the Vertebrata. Lab fee required. (SCANS 1,6,9) Prerequisite: BIOL 1406 and BIOL 1407 or consent of the instructor.

BIOL 2470 Marine Ecology (03.0102.7139)
(12-12) [4 weeks] ..... 4 hours
A 13-day course extended over a 4-week period that includes a pre-trip orientation, an 11-day field trip to Puerto Penasco, Sonora, Mexico, and a post-trip student research presentation and summary discussions. This course is offered during the Midwinter and May sessions. The course involves a comprehensive and systematic study of intertidal (littoral) marine organisms, including; field observations, collecting, preservation technuques, classification, life histories, organism associations and communities, and ecological adaptations. Students desiring transferability of credit for this course to a senior institution should check with the senior institution. A special lab fee is required. (SCANS 1, 6, 9) Prerequisite: Consent of the instructor.

Building Trades

Faculty: Jim Bates.

The building trades program at Odessa College is designed to train students for entry-level jobs in the building and construction industry. Specific areas of training include on-site experience in carpentry, concrete forming, plumbing, roofing, and exterior and interior finishing. A home is constructed from start to finish. Further instruction includes blueprint reading, study of building codes and specifications, and cabinet making.

Course of Study for Associate in Applied Science Degree

Building Trades

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or	
ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1372 Technical College Algebra	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking or	
SPCH 1321 Business and Professional Speech	3
Elective	**3**
Technical Core	**16**
MAIN 2404 Structural Repair	4
ELEC 2410 National Electrical Code	4
HVAC 1401 Refrigeration Theory	4
MAIN 1402 Plumbing Fundamentals	4
Building Maintenance Specialist Option	**27**
BLDG 1601 Construction Principles I	6
BLDG 1602 Carpentry I	6
BLDG 1603 Construction Principles II	6
BLDG 1604 Carpentry II	6
BLDG 2377 Cooperative Work Experience	3
Total Semester Hours	**66**

Building Maintenance Certificates of Technology

Certificates of technology are available in the following job-specific fields.
See the program chair for course requirements and Permian Basin job opportunities.
Level I certificates are TASP -waived.

Level I Basic Carpenter Helper

	Semester Hrs
BLDG 1601 Construction Principles I	6
BLDG 1602 Carpentry I	6
BLDG 1604 Carpentry II	6
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**24**

Level I Basic Construction Technician

	Semester Hrs
BLDG 1601 Construction Principles I	6
BLDG 1602 Carpentry I	6
BLDG 1604 Carpentry II	6
ELEC 2410 National Electrical Code	4
MAIN 1402 Plumbing Fundamentals	4
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**32**

Level I Basic Cabinetmaker Technician

	Semester Hrs
BLDG 2603 Cabinet Making I	6
BLDG 2607 Cabinet Making II	6
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**18**

Level I Advanced Construction Technician

	Semester Hrs
BLDG 1601 Construction Principles I	6
BLDG 1602 Carpentry I	6
BLDG 1603 Construction Principles II	6
BLDG 1604 Carpentry II	6
ELEC 2410 National Electrical Code	4
MAIN 1402 Plumbing Fundamentals	4
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**38**

Level II Construction Estimator

	Semester Hrs
BLDG 1601 Construction Principles I	6
BLDG 1602 Carpentry I	6
BLDG 1603 Construction Principles II	6
BLDG 1604 Carpentry II	6
BLDG 2601 Construction Principles III	6
BLDG 2603 Cabinet Making I	6
COSC 1301 Introduction to Computer Systems	3
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**45**

Building Trades Courses

BLDG 1601 Construction Principles I
(2-8) ..... 6 hours
Presents terminology, concepts, and techniques to begin a study in residential construction. Competencies to be addressed include interpreting basic blueprints and specifications, estimating materials, acquiring materials, working as a team member, selecting proper tools for tasks, and applying new knowledge and skills to actual construction projects. Lab fee required. (SCANS 1,3,4,8,9) Prerequisite: None.

BLDG 1602 Carpentry I
(2-8) ..... 6 hours
A skills learning class. Competencies include learning basic use of hand tools, applying mathematical calculations, proper job and tool safety, reading of blueprints, construction of forms, walls, and ceiling joists, and learning communications skills with coworkers. Lab fee required. (SCANS 1,3,5,8,9,11) Prerequisite: None. Corequisite: BLDG 1601.

BLDG 1603 Construction Principles II
(2-8) ..... 6 hours
A continuation of BLDG 1601. Competencies emphasize roof framing, sheathing, roofing, exterior trim, and interior trim. Continues blueprint and specification understanding, material and time estimation, including a basic study of light commercial construction. Lab fee required. (SCANS 1,3,4,6,8) Prerequisite: BLDG 1601. Corequisite: BLDG 1604.

BLDG 1604 Carpentry II
(2-8) ..... 6 hours
A continuation of BLDG 1602. Competencies include study and use of a framing square, calculating and cutting rafters, installation of roof sheathing, exterior and interior trim. Working as a team member on a project house, adaptability, and politeness are emphasized. Lab fee required. (SCANS 3,5,8,10) Prerequisite: BLDG 1602 or consent of the department chair.

BLDG 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

BLDG 2601 Construction Principles III
(2-8) ..... 6 hours
Designed for the advanced student. The class will offer a brief review of the first year study in blueprint reading, proposal writing and a comprehensive study of time and material estimation. Second year students are required to work with first year students, monitoring, correcting performance, teaching new skills, exercising leadership skills and demonstrating self-management skills. Lab fee required. (SCANS 1,2,3,5,6,) Prerequisites: BLDG 1603, BLDG 1604 or consent of department chair.

BLDG 2603 Cabinet Making I
(2-8) ..... 6 hours
Includes principles of cabinet construction. Competencies include plan making, estimating, layout, wood selection, joints, machine practices, techniques and safety, door and drawer construction, sanding and finishing. Lab fee required. (SCANS 1,2,4,8,9) Prerequisite: None.

BLDG 2607 Cabinet Making II
(2-8) ..... 6 hours
A continuation of BLDG 2603. Competencies include kitchen design and planning, material estimation, advanced machine operation and door and drawer construction. Emphasizes basic skills learning, laminate laying and customer and coworkers' relations. Lab fee required. (SCANS 4,5,8,10) Prerequisite: BLDG 2603.

Broadcasting *(See Mass Communication)*

Business Administration

Faculty: Robert Munoz, chair; Jack Felts, Dan Neagle.

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**
ECON 2301 Principles of Economics I (Macro)	3
ECON 2302 Principles of Economics II (Micro)	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore Level)	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S History to 1877	3
HIST 1302 U.S. History from 1877	3
*PHED (any two one-hour activity courses)	2
Science (two sequential semesters of a lab science in Biology, Chemistry, Geology or Physics)	8
SPCH 1321 Business and Professional Speech	3
Major Requirements	**12**
ACCT 2301 Principles of Accounting I	3
ACCT 2302 Principles of Accounting II	3
BUSI 1301 Introduction to Business	3
+BUSI 2301 Business Law I	3

Related Requirements 13
BCIS 1401 Introduction to Computer Information Systems OR
A more advanced BCIS course OR
COSC 1301 Introduction to Computer Systems 3
MATH 1324 Mathematical Analysis for Business I 3
MATH 1325 Mathematical Analysis for Business II 3
MATH 1442 Business Statistics 4

Total Semester Hours 65

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

+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, Management, Marketing, etc.

Core courses leading to the degrees listed above from four-year institutions are the same as those listed for the associate in arts degree (business administration) at Odessa College. The courses listed for the associate in arts degree from Odessa College are transferable between Texas institutions of higher education, except as noted for BUSI 2301, Business Law I; SOCI 1301, Principles of Sociology; and PSYC 2301, Introduction to Psychology are also core courses for business administration and may be selected electives in the associate in arts degree plan.

Business Administration Courses

BUSI 1301 Introduction to Business (52.0101.5125)
(3-0) ..... 3 hours
Presents an overview of various components of business and industry. Emphasizes integration of text material with current and local business operations and decision-making processes. Learning activities include background reading and applications from text materials, current events, class discussions, written reports, guest speakers and occasional work-site visits. Also aids students in career planning by emphasizing aptitudes and skills expected in various fields of business specializations. (SCANS 6,7,10,11) Prerequisite: None.

BUSI 2301 Business Law I (22.0101.5125)
(3-0) ..... 3 hours
Provides information about the legal system and its impact on business operations and decisions. Learning activities provide students opportunities to acquire factual information about designated topics as well as to apply and relate that knowledge to simulated and current business situations. Topics covered include the legal environment of business; the nature and source of legal systems; law of contracts; agency; government regulation of business; and property. Ethical perspectives are integrated throughout the course. (SCANS 6,7,9,11) Prerequisite: Passed TASP English, reading.

BUSI 2302 Business Law II (22.0101.5125)
(3-0) ..... 3 hours
A continuation of BUSI 2301. Learning activities provide opportunities for students to acquire factual information about specific areas of law as well as opportunities for students to apply and relate that knowledge to simulated and current business situations. Topics covered include legal principles of sales; commercial paper; secured transactions; bankruptcy; and business organization. Ethical perspectives are integrated throughout the course. (SCANS 6,7,9,11) Prerequisite: TASP English, reading.

BUSI 2379 Spreadsheet Applications for Decision Making
(2-3) .....3 hours
Use of microcomputer spreadsheet software as a tool for analysis and decision making is introduced. Learning activities and materials provide opportunities for students to apply principles of accounting using both spreadsheets and related graphics. Applications include both pre-programmed problem-solving and model-building problems for more complex cases. Lotus 1-2-3 is the primary spreadsheet utilized, but similarities to other spreadsheet programs (Quattro Pro, Microsoft Excel, etc.) are included. Specific applications incorporate budgeting, financial planning, preparation of financial statements, reports, graphs, depreciation schedules, inventory control, statistical analysis, tax planning and performance of "what-if" analysis. (SCANS 2,3,4,6,8,9) Prerequisites: ACCT 1370 or ACCT 2301.

Accounting Courses

ACCT 1370 Introduction to College Accounting (52.0301.5125)
(3-0) .....3 hours
For business and non-business majors. Designed for students with no course background or experience in bookkeeping or accounting. Introduces basic theory of double-entry accounting for sole proprietorships. Uses both manual and technological means to emphasize the complete accounting cycle, including accrual and deferral adjustments. Other topics include financial statement preparation, accounting for cash, merchandising, payroll, receivables and payables. Practice set may be required. (SCANS 3,4,6,8,9) Prerequisite: Math competency based on TASP.

ACCT 2301 Principles of Accounting I (52.0301.5125)
(3-1) .....3 hours
Introduces terminology, concepts and procedures used in financial accounting for sole proprietorships. The accounting cycle, including activities requiring students to analyze, record, and summarize data involved in preparation of financial statements, is covered. Other activities build on the accounting cycle as other topics—internal control, cash, payroll, receivables, payables, inventories, long-term assets and financial reporting issues—are studied. Learning activities are designed to allow students to apply acquired knowledge to exercises and problems. Manual and computer applications allow students to integrate factual learning into problem-solving situations. (SCANS 1,3,4,6,8,9) Prerequisite: Passed TASP English, reading and mathematics.

ACCT 2302 Principles of Accounting II (52.0301.5125)
(3-1) .....3 hours
Presents application of financial accounting concepts and principles for partnerships and corporations. Managerial and cost accounting topics are introduced: cost behavior, budgeting, responsibility accounting, cost systems and product costing, CVP, standard costs, variance analysis and incremental analysis. Learning activities are designed to allow students to apply acquired knowledge to exercises and problem-solving situations. Manual and computer applications allow students to integrate learned techniques and practices into problem-solving situations. (SCANS 1,3,4,6,8,9) Prerequisite: ACCT 2301.

Chemistry

Faculty: Dr. E. Don Taylor, chair; Darren Shelton, paraprofessional.

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 courses are compatible with the senior college degree program.

Course of Study for Associate in Science Degree

Chemistry

	Semester Hrs
General Education Requirements	**44**
COSC 1415 Introduction to Computer Science	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1348 Analytic Geometry	3
MATH 2313 Calculus I	3
*PHED (any two one-hour activity courses)	2
**PHYS 2425 Engineering Physics I	4
**PHYS 2426 Engineering Physics II	4
SPCH 1315 Public Speaking	3
Major Requirements	**18**
CHEM 1311/1111 General Inorganic Chemistry I/ Fundamentals of Chemistry Lab I	4
CHEM 1312/1112 General Inorganic Chemistry II/ Fundamentals of Chemistry Lab II	4
CHEM 2271 Organic Nomenclature	2
CHEM 2323/2123 Organic Chemistry I/Organic Chemistry Lab I	4
CHEM 2325/2125 Organic Chemistry II/Organic Chemistry Lab II	4
***Approved Electives	3-4
Total Semester Hours	**65-66**

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

***PHYS 1401 and PHYS 1402 satisfy the Odessa College requirement for an associate degree for premedical students, but only PHYS 2425 and PHYS 2426 will transfer to satisfy a science requirement.*

****Approved electives: CHEM 1207, CHEM 2301 and CHEM 2101; FREN 1411 and FREN 1412; GERM 1411 and GERM 1412; MATH 2314.*

Chemistry Courses

CHEM 1105 Introductory Chemistry Laboratory (40.0501.5139)
(0-3) ..... 1 hour
A laboratory course that illustrates and reinforces principles and concepts of CHEM 1305 by use of quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Lab fee required. (SCANS 1,3,6,8,9) Corequisite or Prerequisite: CHEM 1305.

CHEM 1111 Fundamentals of Chemistry Laboratory I (40.0501.5239)
(0-3) ..... 1 hour
A laboratory course that illustrates and reinforces principles and concepts of CHEM 1311 by use of quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Lab fee required. (SCANS 1,3,6,8,9) Corequisite or Prerequisite: CHEM 1311.

CHEM 1112 Fundamentals of Chemistry Laboratory II (40.0501.5239)
(0-3) ..... 1 hour
A laboratory course that illustrates and reinforces principles and concepts of CHEM 1312 by use of qualitative and quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Lab fee required. (SCANS 1,3,6,8,9) Corequisite or Prerequisite: CHEM 1312.

CHEM 1207 Chemical Calculations (40.0502.5239)
(2-0) ..... 2 hours
A lecture course that emphasizes the problem-solving techniques that are used in CHEM 1312. Involves reading problems and using critical thinking skills and mathematics to organize the information and arrive at an answer. Can be used to fulfill the 10-hour freshman chemistry course or chemical engineering calculations course taught at some senior colleges. (SCANS 1,3,6,9) Prerequisite: CHEM 1311.

CHEM 1305 Introductory Chemistry (40.0501.5139)
(3-0) ..... 3 hours
A lecture course in elementary chemistry. Primarily for non-majors or people desiring a one-semester introductory chemistry course. Includes terminology, nomenclature, stoichiometry, states of matter, solutions, equilibria, etc. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. (SCANS 1,3,6,9) Prerequisite: Passed all sections of the TASP exam. An understanding of basic mathematics, including simple algebra. (Credit probably not transferable until CHEM 1105 successfully completed.)

CHEM 1311 General Inorganic Chemistry I (40.0501.5239)
(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 chemical stoichiometry, atomic structure, bonding, formulas, equations, gas laws, solutions, etc. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. (SCANS 1,3,6,9) Prerequisite: Passed all sections of the TASP exam and be eligible to take College Algebra. (Credit probably not transferable until CHEM 1111 is successfully completed.)

CHEM 1312 General Inorganic Chemistry II (40.0501.5239)
(3-0) ..... 3 hours
A lecture course that is a continuation of CHEM 1311. Includes solutions, chemical kinetics, acids and bases, equilibrium, electrochemistry, thermodynamics, coordination chemistry, nuclear chemistry, organic chemistry, etc. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. (SCANS 1,3,6,9) Prerequisite: Math 1314 and a minimum grade of "C" in CHEM 1311. (Credit probably not transferable until CHEM 1112 is successfully completed.)

CHEM 2101 Analytical Chemistry Laboratory I (40.0502.5139)
(0-4) ..... 1 hour
A laboratory course that illustrates and reinforces principles and concepts of CHEM 2301. The course uses techniques and quantitative experiments common to analytical chemistry. Techniques include classical gravimetric and volumetric techniques, also modern instrumental techniques as electrochemical, UV/visible and AA spectroscopy and gas chromatography. The course also requires an individual laboratory project with a formal written report over the project. Lab fee required. (SCANS 1,3,6,8,9) Corequisite or prerequisite: CHEM 2301.

CHEM 2123 Organic Chemistry Laboratory I (40.0504.5239)
(0-4) ..... 1 hour
A laboratory course that illustrates and reinforces principles and concepts of CHEM 2323. The course is designed to concentrate on the techniques of preparing organic compounds, separation, purification and identifying the prepared compound. Some of the techniques include melting points, recrystallization, extraction, distillation and interpretation of IR, NMR and chromatography spectra. A project will be done that includes using the library and writing a research paper. Lab fee required. (SCANS 1,3,6,8,9) Corequisite or prerequisite: CHEM 2323.

CHEM 2125 Organic Chemistry Laboratory II (40.0504.5239)
(0-4) ..... 1 hour
A laboratory course that illustrates and reinforces principles and concepts of CHEM 2325. The course includes organic synthesis, isolation of product and identification of product using the techniques from CHEM 2123 and CHEM 2323. Each synthesis requires the acquisition of instrumental spectra, interpretation of the spectra and qualitative analysis of the product. The course also requires an individual laboratory project with a formal written report over the project. Lab fee required. (SCANS 1,3,6,8,9) Corequisite or prerequisite: CHEM 2325.

CHEM 2271 Organic Nomenclature (40.0504.7239)
(2-0) ..... 2 hours
A lecture course that presents a systematic study of rules of nomenclature for organic compounds by functional group. The course emphasizes International Union of Pure and Applied Chemistry rules but also includes some common names and structural determinations. Students should check with the senior college to determine transferability of this course. (SCANS 1,6,9) Corequisite: CHEM 2323 or consent of the instructor.

CHEM 2301 Analytical Chemistry (40.0502.5139)
(3-0) ..... 3 hours
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). The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. (SCANS 1,3,6,9) Corequisite or prerequisite: CHEM 1312. (Credit probably not transferable until CHEM 2101 is successfully completed.)

CHEM 2323 Organic Chemistry I (40.0504.5239)
(3-0) ..... 3 hours
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. The student will be involved in reading information or problems and using critical thinking skills to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. (SCANS 1,6,9) Prerequisite: A minimum grade of "C" in CHEM 1312. Corequisite: CHEM 2271 or consent of the instructor. (Credit probably not transferable until CHEM 2123 is successfully completed.)

CHEM 2325 Organic Chemistry II (40.0504.5239)
(3-0) ..... 3 hours
A lecture course that is a continuation of CHEM 2323 which is an integrated study of organic compounds by functional groups. Includes an introduction to biochemistry. The student will be involved in reading information or problems and using critical thinking skills to organize the information to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. (SCANS 1,3,6,9) Prerequisite: A minimum grade of "C" in CHEM 2323. Corequisite: CHEM 2125 (Credit probably not transferable until CHEM 2125 is successfully completed.)

Child Development/Tech Prep

Faculty: Lucinda Hurlbut, chair; Mary Hanson.

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 or child care management. In all programs, the child development lab courses will include an actual experience with the children. Students enrolled in child development lab classes must meet Texas Department of Regulatory and Protective Services staff requirements for day-care centers.

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

See your high school counselor or the Odessa College department chair for information on tech-prep options.

Course of Study for Associate in Applied Science Degree

Child Development

	Semester Hrs
General Education Requirements	17
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR	
ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government or	
GOVT 2302 American National Government	3
MATH 1332 Structures of College Mathematics I or higher level math	3
*PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech	3

Major Requirements **40**
- CHLD 1302 Introduction to Child Development 3
- CHLD 1304 The Abused and Neglected Child 3
- CHLD 1305 Creative Activities for Children 3
- CHLD 1307 Discipline and Classroom Management 3
- CHLD 1308 Child Growth and Development of Infants and Toddlers 3
- CHLD 1310 Child Growth and Development from School Age Through Adolescence 3
- CHLD 1311 Child Health Care and Nutrition 3
- CHLD 2301 Personal and Family Management 3
- CHLD 2304 The Special Child 3
- CHLD 2305 Children's Language and Literature Development 3
- CHLD 2306 Science and Math Activities for Children 3
- CHLD 2377 Cooperative Work Experience 3
- CHLD 2403 Planning and Teaching Methods in Early Childhood 4

Related Requirements **6**
- PHED 1306 First Aid 3
- PSYC 2308 Child Psychology 3

Total Semester Hours **63**

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

Certificates of completion are available in the following fields.
Level I certificates are TASP -waived.

Level I Certificate - Child Care Aide

Semester Hrs

General Education Requirements **3**
- COSC 1301 Introduction to Computer Systems 3

Major Requirements **12**
- CHLD 1302 Introduction to Child Development 3
- CHLD 1305 Creative Activities for Children 3
- CHLD 1311 Child Health Care and Nutrition 3
- CHLD 2301 Personal and Family Management 3

Related Requirements **3**
- PHED 1306 First Aid 3

Total Semester Hours **18**

Level I Certificate - Child Care Assistant

Semester Hrs

General Education Requirements **6**
- COSC 1301 Introduction to Computer Systems 3
- MATH 1332 Structures of College Mathematics I or higher level math 3

Major Requirements **24**
- CHLD 1302 Introduction to Child Development 3
- CHLD 1304 The Abused and Neglected Child 3
- CHLD 1305 Creative Activities for Children 3
- CHLD 1307 Discipline and Classroom Management 3
- CHLD 1308 Child Growth and Development of Infants and Toddlers 3
- CHLD 1311 Child Health Care and Nutrition 3
- CHLD 2301 Personal and Family Management 3
- CHLD 2305 Children's Language and Literature Development 3

Related Requirements **6**
- PHED 1306 First Aid 3
- PSYC 2308 Child Psychology 3

Total Semester Hours **36**

Level III Certificate - Child Care Management

(Advanced Skills Certificate)

	Semester Hrs
Major Requirements	**6**
CHLD 2111 Legal Aspects and Minimum Standards	1
CHLD 2115 Managing Day Care Dollars	1
CHLD 2120 Communications and Discipline in the Child Care Program	1
CHLD 2125 Food and Meal Management for Child Care	1
CHLD 2130 Staff Management	1
CHLD 2135 Program Planning and Evaluation	1
Related Requirements	**6**
MGMT 1301 Introduction to Management	3
MGMT 2304 Personnel and Human Relations OR	
MGMT 2330 Entrepreneurial Issues	3
Total Semester Hours	**12**

Prerequisite or corequisite for the level III certificate is completion of the associate degree in child development or a closely related discipline.

Child Development Courses

CHLD 1302 Introduction to Child Development
(2-3) ..... 3 hours
Introduces the profession of teaching children. Overviews the responsibilities and relationship of the staff, the types of child care programs, good environment for children, safety, health, first aid, child abuse and nutrition with emphasis on interpreting the Texas licensing standards. Presents the development theorists, the four areas of development, the ages and stages of development as well as how to choose and implement appropriate activities. Introduces interviewing and resume writing skills needed for securing a child care career. Lab assignments are designed to allow students to use their reasoning ability to solve problems, make decisions and interpret observational forms. (SCANS 1,4,9) Lab fee required. Prerequisite: None.

CHLD 1304 The Abused and Neglected Child
(3-0) ..... 3 hours
Designed to educate individuals in all aspects of child maltreatment including procedures for observations, documentation and interpretation of policies. Utilizes outside resource persons, as well as films, lectures, etc. Includes classroom activities to encourage problem-solving and decision-making techniques for situational problems. Reviews current federal, state and local child abuse laws, including Texas licensing standards. (SCANS 1,6,9,10) Prerequisite: None.

CHLD 1305 Creative Activities for Children
(2-3) ..... 3 hours
Emphasizes the creative process as a basis for problem-solving. Creative activities will be planned and presented for all activity areas, including art, movement, music, language, science, mathematics, social studies, in addition to holiday and seasonal activities for young children. Emphasis is placed on appropriate use of all resources, including time, materials and facilities, as they apply to creative thinking. (SCANS 4,6,9) Lab fee required. Prerequisite: None.

CHLD 1307 Discipline and Classroom Management
(2-3) .....3 hours
Provides opportunity to evaluate and understand individuals' expectations regarding discipline and classroom management with emphasis on Texas licensing standards. Students will have the opportunity to evaluate situations based on good problem-solving and decision-making techniques and implementation of alternative discipline strategies. Emphasizes techniques of communication with children as well as coworkers. Offers opportunity to learn theories of behavior-shaping. Presents major theorists and theories of individual and group management. (SCANS 5,6,7,9,11) Lab fee required. Prerequisite: None.

CHLD 1308 Child Growth and Development of Infants and Toddlers
(3-2) .....3 hours
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 such as individual daily schedules, record keeping, food preparation, age appropriate discipline techniques and activities. Also, includes interpreting the Texas licensing standards for infants and toddlers. (SCANS 1,6,9) Lab fee required. Prerequisite: None.

CHLD 1310 Child Growth and Development from School Age Through Adolescence
(3-0) .....3 hours
Focuses on social, emotional, mental and physical development processes. Emphasizes interpreting Texas licensing standards, problem-solving techniques and personal qualities as related to guiding children ages 6 to 18 years old. Designed particularly for anyone working with individuals or with groups from school age through adolescence. (SCANS 1,9,10) Prerequisite: None.

CHLD 1311 Child Health Care and Nutrition
(2-3) .....3 hours
Emphasizes appropriate health, safety and nutrition practices in children's programs as well as interpreting Texas licensing standards. Stresses effect of nutrition on growth and development. Requires assignments which train the student to utilize forms, procedures and perform calculations required by the USDA Child Care Food Program and the Texas licensing standards for food service. Also, requires choosing, planning and implementing food, health and safety activities with children. (SCANS 1,3) Lab fee required. Prerequisite: None.

CHLD 2111 Legal Aspects and Minimum Standards
(1-0) .....1 hour
Interprets local, state and federal regulations. By becoming familiar with Texas state licensing standards and funding agency regulations which concern an employer in the child care program, the student will be able to locate, revise and interpret documents, such as manuals, charts and schedules. Emphasis is placed on making decisions concerning legal issues such as insurance liabilities, contracts with individuals and with companies for services and on litigations. This is accomplished through the use of speakers, and by students investigating or researching topics and making reports. (SCANS 1,6,9) Prerequisite: None.

CHLD 2115 Managing Day Care Dollars
(1-0) .....1 hour
Presents basic concepts and strategies helpful to the director of a child care program regarding responsibilities in budgeting, record keeping, controlling costs and ensuring a stable income. This course is designed to allow students to develop budgets, read and interpret graphs and charts, use their reasoning abilities to solve problems and make decisions related to the financial system. (SCANS 1,3,4,7,9) Prerequisite: None.

CHLD 2120 Communication and Discipline in the Child Care Program
(1-0) ..... 1 hour
Emphasizes the importance of open communication and positive relationships between the staff members and the parents. Also, concentrates on choosing strategies and techniques which can be used in guiding child behavior. (SCANS 5,9,11) Prerequisite: None.

CHLD 2125 Food and Meal Management for Child Care
(1-0) ..... 1 hour
Presents interpretation of local, state and federal regulations regarding planning and servicing nutritious meals to the children, with sanitation and cost factors being considered. Emphasizes planning a cycle menu, evaluating nutrient content and calculating food costs as well as listing required kitchen equipment and outlining systems of sanitation, safety and purchasing for food service. Also, stresses serving meals to children in order to make mealtime fun and organized. (SCANS 2,3,7) Prerequisite: None.

CHLD 2130 Staff Management
(1-0) ..... 1 hour
Presents organizational skills, such as developing and communicating, job descriptions, job qualifications, employee policies and staff work schedules. Develops skills in hiring and dismissing employees. Staff maintenance will be covered, including staff meetings, employee records, self-analysis and improvement. Emphasizes staff training strategies, such as educational activities, planning workshops, use of consultants and resource libraries. (SCANS 4,5,6,7,10,11) Prerequisite: None.

CHLD 2135 Program Planning and Evaluation
(1-0) ..... 1 hour
Presents facility development through interpreting local, state, and federal regulations, formulating guidelines, analyzing physical space, evaluating designs that accommodate children. Includes analyzing types of child care programs, outlining procedures for developing program plans, developing a philosophy of caregiving, summarizing state standards, analyzing group patterns, developing a comprehensive curriculum and involving staff, parents and board members in planning a child care program. Emphasizes director/ staff relationship and selection of supplies and equipment for implementing a child care program. A variety of procedures for on-going and periodic evaluation of a child care program will be presented. (SCANS 2,4,5,9) Prerequisite: None.

CHLD 2301 Personal and Family Management
(3-0) ..... 3 hours
Presents development and relationships between individual family members, including various decision-making and problem-solving techniques. Includes changing role of men and women in society and discusses stages of family cycle. Introduces management techniques applicable to the individual and the family, including time management, money management, and related topics. (SCANS 5,6,10,11) Prerequisite: None.

CHLD 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. (SCANS 5,6,10,11) Lab fee required. Prerequisite: None.

CHLD 2305 Children's Language and Literature Development
(2-3) .....3 hours
Introduces techniques for development of age appropriate language experiences in listening, speaking, reading and writing readiness. Includes criteria for selecting and using children's literature in a school environment. Introduces methods of story telling with and without audiovisual aids such as puppets, flannel graphs, story rolls and use of media equipment such as TV/VCRs, laminators, paper copiers, and glue guns. Includes introduction to bilingual language development. (SCANS 1,2,8,11) Lab fee required. Prerequisite: None.

CHLD 2306 Science and Math Activities for Children
(2-3) .....3 hours
Applies scientific approach of problem solving and creative thinking to a child's world. Includes how to make or select inexpensive, simple science and/or math materials. Emphasizes how to write and present age appropriate science and/or math activities on subjects such as animals, plants, electricity, the five senses, measurements, shapes, sizes, numbers symbols, etc. Also, includes criteria for arranging a science/discovery learning area in a classroom. (SCANS 1,3,4,9) Lab fee required. Prerequisite: None.

CHLD 2377 Cooperative Work Experience
(1-20) .....3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences in a child care facility or early childhood educational programs. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: 21 hours of child development courses including CHLD 1302, CHLD 1307, CHLD 1308, CHLD 2403, and PSYC 2308 as well as consent of the department chair. Requires a grade of "C" or better for credit to be validated.

CHLD 2403 Planning and Teaching Methods in Early Childhood
(2-4) .....4 hours
Emphasizes planning and teaching curriculum for children birth to five years of age. Includes assessing children's developmental level by use of written observation techniques and planning and implementation of developmentally appropriate curricula which includes selecting appropriate equipment such as computer programs and videos. Also, presents techniques for parent involvement and interpersonal communication, creation of appropriate physical environments and classroom management. (SCANS 5,7,9,10) Lab fee required. Prerequisite: CHLD 1302, CHLD 1307 and a minimum of two of the following courses: CHLD 1305, CHLD 1311, CHLD 2305, CHLD 2306 or consent of the department chair.

Clinical Laboratory Sciences

Faculty: Joel Smith, chair; Annette McMinn, education coordinator; Eloisa Corbell, paraprofessional; Dr. Kris Challapalli, medical advisor.

Medical Laboratory Technology

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 in applied science degree. The Odessa College MLT program is NAACLS-accredited. Laboratory practicums are under the full-time supervision of a qualified education coordinator at affiliated clinical laboratories. 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 clinical laboratory science course to continue the program.

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

Student liability **and health insurance** are required for all laboratories and clinical practicums.

Course of Study for Associate in Applied Science Degree

Medical Laboratory Technology

First Year

Summer Session II

	Semester Hrs
CLSC 1304 Urinalysis and Body Fluids	3
MATH 1332 Structures of College Mathematics I OR higher level math	3

Fall Semester

CHEM 1305 Introductory Chemistry	3
CHEM 1105 Introductory Chemistry Laboratory	1
CLSC 1211 Urinalysis, Hematology & Hemostasis Lab	2
CLSC 1601 Hematology & Hemostasis	6
ENGL 1301 Composition & Rhetoric	3

Spring Semester

BIOL 1407 General Biology	4
CLSC 1212 Immunology & Immunohematology Lab	2
CLSC 1602 Immunology & Immunohematology	6
SPCH 1321 Business and Professional Speech	3

Summer Session I

COSC 1301 Introduction to Computer Systems	3
HIST 1301 United States History to 1877 OR HIST 1302 United States History from 1877	3

Second Year

Summer Session II

	Semester Hrs
GOVT 2301 U.S. and Texas Government OR GOVT 2302 American National Government	3

Fall Semester

CLSC 2211 Clinical Microbiology Laboratory	2
CLSC 2321 Clinical Practicum	3
CLSC 2601 Clinical Microbiology	6
PHED 1100 Lifestyle Assessment & Modification	1

Spring Semester

CLSC 2212 Clinical Chemistry Laboratory	2
CLSC 2322 Clinical Practicum	3
CLSC 2602 Clinical Chemistry	6
PHED one-hour activity course	1

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

Phlebotomy

Phlebotomy is a special 10-week program of combined classroom instruction and clinical experience in affiliated medical laboratories which prepares students with career entry skills in phlebotomy, completes requirements for a certificate of completion in phlebotomy and completes prerequisites for certification by examination in the category of phlebotomy technician. The Odessa College phlebotomy program is approved by the National Accrediting Agency for Clinical Laboratory Sciences. The practicums are under the full-time supervision of a certified medical technologist or certified phlebotomist.

Because practicum space is limited, students will be admitted on a selected basis. To be admitted to the phlebotomy program, students must be a high school graduate or equivalent and must show evidence of good physical and mental health. Applications must be submitted no later than two weeks prior to the start of the published date for the start of the next class.

Students must attain no grade lower than "C" in any phlebotomy course to complete the course of study. The student must have a grade no lower than "C" in CLSC 1500 to enroll in CLSC 1220.

The phlebotomy program is offered throughout the year as applicants become sufficient for the formation of a class. Classes are tentatively scheduled for the fall, spring and summer terms. Interested parties should contact the clinical laboratory sciences department for projected class offerings. Phlebotomy courses are offered on a credit and non-credit basis.

Students seeking additional information should contact the chair, clinical laboratory sciences department. Applications for the phlebotomy program may be obtained from the counseling center.

Student liability **and health insurance** are required for all laboratories and clinical practicums.

Course Of Study For Certificate of Completion

	Semester Hrs
CLSC 1220 Phlebotomy Practicum	2
CLSC 1500 Phlebotomy	5

Clinical Laboratory Science Courses

CLSC 1211 Urinalysis, Hematology & Hemostasis Lab
(0-8) ..... 2 hours
Illustrates and reinforces content of CLSC 1304 and CLSC 1601. Emphasizes understanding of theories and principles of selected techniques used in urinalysis, hematology and hemostasis for diagnosing and/or monitoring of disease processes. Laboratory exercises are performed following written procedures and require the preparation of graphs and/or mathematical calculations on generated data; interpretation and correlation of results to normal or abnormal physiology; and submission of written or computer generated reports. Laboratory safety is stressed. (SCANS 1,2,3,6,7,8,9) Lab fee and liability insurance required. Prerequisite: CLSC 1304 and consent of the department chair. Corequisite: CLSC 1601.

CLSC 1212 Immunology and Immunohematology Lab
(0-8) ..... 2 hours
Illustrates and reinforces content of CLSC 1602. Emphasizes understanding of theories and principles of selected techniques for diagnosing and/or monitoring of disease processes using antigen–antibody reactions. Laboratory exercises are performed following written procedures and require mathematical calculations on generated data, interpretation and correlation of results to normal or abnormal physiology, and submission of written or computer generated reports. Includes procedures for donor screening, antibody identification and crossmatching of blood for transfusion. Laboratory safety is stressed. (SCANS 1,2,3,6,7,8,9) Lab fee and liability insurance required. Prerequisite: CLSC 1211 and consent of the department chair. Corequisite: CLSC 1602.

CLSC 1220 Phlebotomy Practicum
(0-15) [7 weeks] ..... 2 hours
Consists of a total of 100 hours in an affiliated laboratory performing phlebotomy procedures under the supervision of a certified phlebotomist or clinical laboratory generalist. Requires interpretation of written orders and correlation with appropriate specimen types and volumes; conveying instructions to patients; maintaining specimen acquisition records; and professional conduct. Fulfills requirements for certificate of completion in phlebotomy and eligibility for certification examination as a phlebotomy technician. (SCANS 1,2,6,8,10,11) Liability insurance and proof of health insurance required. Prerequisites: Concurrent enrollment in CLSC 1500 and consent of the department chair.

CLSC 1304 Urinalysis and Body Fluids
(8-0)[6 weeks] ..... 3 hours
Introduces fundamentals of medical laboratory technology and professional ethics essential to the clinical laboratory. Emphasizes theory and practical application of urinalysis procedures, calculation of reportable data, their interpretation and correlation to disease processes, and the examination of body fluids by selected laboratory procedures for the diagnosis and monitoring of disease processes. (SCANS 1,3,5,6,7,9) Prerequisite: Admission to the medical laboratory technology program and consent of the department chair.

CLSC 1500 Phlebotomy
(8-0) [10 weeks] ..... 5 hours
Introduces fundamentals of phlebotomy. Emphasizes theories and principles of biological specimen collection. Includes laboratory organization, anticoagulant action, specimen requirements, acquisition and reporting procedures, interpersonal relationships, professional ethics, and procedures to safeguard against the acquisition or spread of pathogenic agents. Completion of course partially fulfills requirements for certificate of completion in phlebotomy and eligibility for certification by examination as a phlebotomy technician. (SCANS 1,2,3,5,6,7,9,10,11) Lab fee required. Prerequisite: Admission to phlebotomy program and consent of department chair. Corequisite: CLSC 1220.

CLSC 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, their selection and calculation, and their interpretation and correlation to disease processes. (SCANS 1,3,6,7,9,10,11) Prerequisite: CLSC 1304 and consent of the department chair. Corequisite: CLSC 1211.

CLSC 1602 Immunology and Immunohematology
(6-0) ..... 6 hours
Consists of study of immunology and immunohematology. Emphasizes study of antigen-antibody reactions and their use in serological testing and blood banking procedures. Requires ability to indicate appropriate test procedure to perform; calculation of dilutions and application to the related antigen/antibody; interpretation of laboratory data and correlation to specific disease processes; ability to indicate course of required action in blood donor selection, collection and processing; and the selection of appropriate procedures and interpretation for compatibility testing. (SCANS 1,2,3,4,6,7,8,9,11) Prerequisites: CLSC 1601 and consent of the department chair. Corequisite: CLSC 1212.

CLSC 2211 Clinical Microbiology Lab
(0-8) ..... 2 hours
Illustrates and reinforces content of CLSC 2601. Emphasizes understanding of theories, principles and procedures of selected techniques employed in clinical microbiology for the isolation and identification of microorganisms pathogenic to man. Laboratory exercises are performed following written procedures and require selection, performance and interpretation of stains and biochemical tests appropriate for the identification of a microorganism; compilation and correlation of generated data; and submission of narrative and form reports. Laboratory safety is stressed. (SCANS 1,2,3,4,6,7,8,9,10) Lab fee required. Prerequisite: Consent of department chair. Corequisite: CLSC 2601.

CLSC 2212 Clinical Chemistry Lab

(0-8) .....2 hours

Illustrates and reinforces content of CLSC 2602. Emphasizes understanding of theories and principles of selected techniques for diagnosing and/or monitoring of disease processes of a metabolic nature and monitoring of drug therapies. Laboratory exercises are performed following written procedures and require the preparation of reagent solutions; graphs and/or mathematical calculations on generated data; interpretation and correlation of results to normal or abnormal metabolism; determination of appropriate or inappropriate therapeutic drug concentrations; and submission of written or computer generated reports. Lab safety is stressed. (SCANS 1,2,3,6,7,8,9) Lab fee required. Prerequisite: Consent of department chair. Corequisite: CLSC 2602.

CLSC 2321 Clinical Practicum

(0-30) .....3 hours

Consists of 30 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a medical technologist and a pathologist. Requires acquisition of appropriate specimens for requested procedures; operation and maintenance of automated instruments; calculation of report values from generated data; recognition of obtained values as being expected or abnormal; correlation of obtained values with disease or pathology; and preparation of final laboratory reports for manual or computer posting. Specific procedures to be performed are a function of the assigned department(s). (SCANS 1,2,3,4,8) Liability insurance and proof of health insurance are required. Prerequisite: Consent of department chair. Corequisite: CLSC 2601.

CLSC 2322 Clinical Practicum

(0-30) .....3 hours

Consists of 30 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a medical technologist and a pathologist. Requires acquisition of appropriate specimens for requested procedures; operation and maintenance of automated instruments; calculation of report values from generated data; recognition of obtained values as being expected or abnormal; correlation of obtained values with disease or pathology; and preparation of final laboratory reports for manual or computer posting. Specific procedures to be performed are a function of the assigned department(s). (SCANS 1,2,3,4,8) Liability insurance and proof of health insurance are required. Prerequisite: CLSC 2321 and consent of department chair. Corequisite: CLSC 2602.

CLSC 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; their selection and performance; and their interpretation and correlation to human infections. (SCANS 1,2,4,6,7,8,9,11) Stresses safety measures to prevent spread of infection. Prerequisite: Consent of the department chair. Corequisite: CLSC 2211.

CLSC 2602 Clinical Chemistry

(6-0) .....6 hours

Consists of the study of clinical chemistry. Briefly reviews general chemistry, chemical calculation and reagent preparation. Emphasizes theory and practical application of clinical chemistry procedures; the selection of appropriate tests; and the interpretation and correlation of laboratory data to disease conditions. Includes discussion and comparison of manual and automated chemistry procedures. (SCANS 1,2,3,4,6,7,8,9,11) Prerequisites: CLSC 2601 and consent of the department chair. Corequisite: CLSC 2212.

Computer Information Systems

Faculty: Mitch Slusher, chair; Ray Cone, Linda Fry, James Jordan, Willard Mears.

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 professionals in a rapidly changing field.

Course of Study for Associate in Applied Science Degree

Computer Information Systems

	Semester Hrs
General Education Requirements	**23**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
GOVT 2301 U.S. and Texas Government OR	
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877 OR	
HIST 1302 U.S. History from 1877	3
MATH 1324 Mathematical Analysis for Business I	3
*PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**15**
BCIS 1200 Programming Logic	2
BCIS 1302 PC Operating Systems	3
BCIS 1401 Introduction to Computer Information Systems	4
BCIS 2305 Systems Analysis Methods	3
BCIS 2377 Cooperative Work Experience	3
****Major Emphasis (Select either option I or II below)**	**24**
Total Semester Hours	**65**

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

*****Major Emphasis Options:***

Option I - Business Programming*

	Semester Hrs
ACCT 1370 Introduction to College Accounting	3
BUSI 2379 Spreadsheet Applications for Decision Making OR	3
BCIS 2220 Spreadsheets AND	
OFST 1100 Basic Keyboarding Skills	3
BCIS 1320 AS/400 File Processing	3
BCIS 1403 COBOL Programming	4
BCIS 1419 RPG/400 Programming	4
BCIS 2419 Advanced RPG/400 Programming	4
BCIS 2320 AS/400 Operating Systems	3
Total Semester Hours	**24**

Option II - PC Support Specialist*

	Semester Hours
BCIS 1303 PC Hardware/Software	3
BCIS 1310 Database Management I	3
BCIS 1404 Programming in Pascal	4
BCIS 2215 Word Processing	2
BCIS 2220 Spreadsheets	2
BCIS 2302 Network Operating Systems	3
BCIS 2310 Database Management Systems II	3
BCIS 2415 Advanced Pascal/Data Structures	4
Total Semester Hours	**24**

**Minimal Entry Requirements: Keyboarding Skills, College Level Reading/Writing*

Course of Study for Certificate of Technology

Level I certificates are TASP -waived.

Level I - Business Programming

	Semester Hours
General Education Requirements	**12**
ACCT 1370 Introduction to College Accounting	3
ENGL 1301 Composition and Rhetoric	3
MATH 1324 Mathematical Analysis for Business I	3
SPCH 1321 Business and Professional Speech	3
Major Requirements	**23**
BCIS 1200 Programming Logic	2
BCIS 1320 AS/400 File Processing	3
BCIS 1401 Introduction to Computer Information Systems	4
BCIS 1419 RPG/400 Programming	4
BCIS 2305 Systems Analysis Methods	3
BCIS 2320 AS/400 Operating Systems	3
BCIS 2419 Advanced RPG/400 Programming	4
Total Semester Hours	**35**

Level I - PC Support Specialist

	Semester Hours
General Education Requirements	**9**
ENGL 1301 Composition and Rhetoric	3
MATH 1324 Mathematical Analysis for Business I	3
SPCH 1321 Business and Professional Speech	3
Major Requirements	**29**
BCIS 1200 Programming Logic	2
BCIS 1302 PC Operating Systems	3
BCIS 1303 PC Hardware/Software	3
BCIS 1310 Database Management Systems I	3
BCIS 1401 Introduction to Computer Information Systems	4
BCIS 1404 Programming in Pascal	4
BCIS 2215 Word Processing	2
BCIS 2220 Spreadsheets	2
BCIS 2302 Network Operating Systems	3
BCIS 2310 Database Management Systems II	3
Total Semester Hours	**38**

Computer Information Systems Courses

BCIS 1200 Programming Logic
(2-0) .....2 hours
Presents the concepts and techniques needed for structured business program design and problem solving. Emphasis is placed on interpreting and using design tools and techniques for developing algorithms, interpreting program specifications and solving computer programming problems. Students will create and interpret flowcharts, develop formulas and conduct structured walk-throughs with their peers. (SCANS 1,2,3,5,6,8,9) Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

BCIS 1302 PC Operating Systems
(3-0) .....3 hours
A course on Microsoft's Disk Operating System for IBM and IBM-compatible microcomputers. This course will train new DOS users and improve the skills of the experienced DOS user. Students learn to take full advantage of a microcomputer's disk operating system by working with common commands and utility programs, designing a subdirectory structure, streamlining work by developing operating procedures with BATCH files, and customizing DOS sessions with AUTOEXEC.BAT and CONFIG.SYS files. Students will conduct an in-depth study of how MS-DOS manages disks, memory and devices. Students will have an introduction to the Windows environment. (SCANS 3,4,6,7,8,9) Lab fee required. Prerequisites: BCIS 1401 or instructor approval.

BCIS 1303 Hardware and Software
(3-0) .....3 hours
Presents terminology, concepts and design techniques surrounding PC hardware and software. Students will learn to choose the correct computer hardware for the appropriate task for new systems as well as to improve the design of existing systems. Hardware and software problem solving are key issues requiring creative thinking and reasoning. Interpretation of technical manuals, verbal and written communications, cost estimation and efficient use of materials will also be covered. Fall only. (SCANS 1,2,3,4, 7,8,9) Lab fee required. Prerequisite: BCIS 1401 and BCIS 1302 or instructor approval.

BCIS 1310 Database Management Systems I
(3-0) .....3 hours
Presents terminology, concepts and techniques needed in database management and design methodology. Students will learn to acquire, organize and interpret written and verbal information in a technological system using problem solving and creative thinking skills and available resources to produce new information needed for enterprise management. Spring only. (SCANS 1,2,4,6,7,9) Lab fee required. Prerequisite: BCIS 1200 and BCIS 1401 or instructor approval.

BCIS 1320 AS/400 File Processing
(2-3) .....3 hours
Presents file design and structure, screen design and maintenance, query mechanisms and data file utilities. Includes hands-on applications for designing and maintaining file structures. Emphasis is placed on using system-application software packages to process information, perform mathematical as well as analytical calculations, create reports and design and improve application software. Students will learn how to choose the correct procedures and use their creativity/problem-solving skills to create a useful and informational database system. Spring only. (SCANS 2,3,6,7,8,9) Lab Fee Required. Prerequisite: BCIS 1200 and BCIS 1401. Corequisite: BCIS 1419 or instructor approval.

BCIS 1401 Introduction to Computer Information Systems
(3-3) .....4 hours
Presents terminology, concepts and techniques needed to begin study of computer information systems. Covers history, number systems, hardware fundamentals, software structure and design and societal trends. Includes an introduction to modular program design with flowcharts. Emphasis is placed on using computer software packages including a word processor to process textual information, an electronic spreadsheet for numerical information, a database management system, a

programming language and MS-DOS. Using these, a student will be able to select the correct hardware/software for application to a given problem. Students will become familiar with locating and interpreting information located in the written materials, enabling them to become familiar with these packages as well as other software packages/languages. Lab exercises are designed to allow students to use reasoning abilities to solve problems and make decisions. (SCANS 1,2,3,6,8,9) Lab fee required. Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

BCIS 1403 COBOL Programming
(3-3) ..... 4 hours
This first course in COBOL covers the fundamentals of designing and developing structured programs for business applications, sequential file processing, input validation techniques, conditional branching structures and tables. Output includes detail summary and exception reports. Students design, write, test and document COBOL programs. Fall only. (SCANS 2,3,6,7,8,9) Lab fee required. Prerequisite: BCIS 1200, and BCIS 1401 or instructor approval.

BCIS 1404 Pascal Programming
(3-3) ..... 4 hours
Introduces programming concepts using the PASCAL language. Through structured techniques, students learn industry-based methodologies to evaluate, organize, design, create, improve, maintain and document computer-based problems of elementary- and intermediate-level complexity. This includes beginning data structures through arrays, text files and records. Competencies also include the interpersonal, problem-solving and advanced reasoning skills needed to apply programming principles to diverse programming needs of clients and customers in business and industry. (SCANS 5,6,7,8,9) Lab fee required. Prerequisite: BCIS 1200 and BCIS 1401 or instructor approval.

BCIS 1419 RPG/400 Programming
(3-3) ..... 4 hours
Presents the concepts and techniques needed for RPG program design and problem solving. Emphasis is placed on understanding and using RPG specifications and techniques for interpreting program specifications, creating algorithms and coding computer programs. Students will code, test, and debug programs containing basic input/output operations, business calculations, control breaks and arrays. Spring only. (SCANS 1,2,3,6,7,8,9) Lab fee required. Prerequisite: BCIS 1200 and BCIS 1401 or instructor approval.

BCIS 2215 Word Processing
(2-1) ..... 2 hours
Presents concepts of editors and word processors on microcomputer systems. Introduces terminology and techniques of using word processors with emphasis placed on use of Word Perfect. Lab fee required. (SCANS 1,2,6,8,9) Prerequisite: None.

BCIS 2220 Spreadsheets
(2-1) ..... 2 hours
A course that teaches all the fundamentals and many of the advanced features of Lotus 1-2-3. Topics covered include formulas, range commands, formatting, printing, proper spreadsheet design, statistical and financial functions, data management, graphs, table lookup functions, spreadsheet security, macros and WYSIWYG. (SCANS 3,4,6,7,8,9) Lab fee required. Prerequisite: College math or instructor approval.

BCIS 2302 Network Operating Systems
(3-0) ..... 3 hours
Presents terminology, concepts and design techniques that apply to computer networks. Students will learn how to select the correct network technology, apply this technology to task, as well as maintain and troubleshoot network equipment. Understanding systems and improving upon designs will be focal points. Students will acquire and interpret information both verbally and in written form, solve problems using creative thinking and mathematics skills and communicate with other students their reasoning in network design technology. Spring only. (SCANS 1,2,3,7,8,9,10) Lab fee required. Prerequisite: BCIS 1302 and BCIS 1303 or instructor approval.

BCIS 2305 Systems Analysis Methods
(3-0) .....3 hours
Students will learn how to plan, design and construct complex technological systems utilizing Systems Development Life Cycle methodology and Rapid Development Prototyping concepts. Critical thinking, individual leadership and personal responsibility skills will be evaluated using real-world information systems problems and a teamwork approach. Spring only. (SCANS 4,5,6,7,8,9,10,11) Lab fee required. Prerequisite: BCIS 2310 or BCIS 2419 or instructor approval.

BCIS 2310 Database Management Systems II
(3-0) .....3 hours
A continuation of BCIS 1310. Students will engage in supervised Database Management design activities using 4GL languages. Teamwork, time management, written and verbal communications skills will be emphasized using hypothetical DBMS problems and a team approach. Fall only. (SCANS 1,2,4,5,6,9,10) Lab fee required. Prerequisite: BCIS 1310 and BCIS 1404 or instructor approval.

BCIS 2320 AS/400 Operating Systems
(2-3) .....3 hours
Presents operating systems, control language commands, control language programming and security techniques. Students will learn to monitor the system and job statuses, manage input/output devices, run save/restore procedures, understand and handle messages, create control language programs and manipulate system profiles and security. Emphasis is placed on reading and understanding technical manuals, the ability to gather and assimilate information from the computer system, the ability to prioritize and schedule jobs with existing resources, identify and solve problems with computer hardware and software, and the ability to recognize problems and implement plans of action. Fall only. (SCANS 1,4,6,8,9) Lab fee required. Prerequisite: BCIS 1401 and BCIS 1320 or instructor approval.

BCIS 2377 Cooperative Work Experience
(1-20) .....3 hours
A capstone course designed to integrate academic and technical course lectures and labs with on-the-job business/computer problems, modern business practices, human relations and job-finding techniques. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

BCIS 2415 Advanced Pascal/Data Structures
(3-3) .....4 hours
A continuation of BCIS 1404. Emphasis is placed on dynamic data structures and advanced file handling techniques. Students will design, code, test, debug and document programs. Programming techniques will involve arrays of record structures, both singly and doubly-linked dynamic record lists, binary tree dynamic record maintenance with recursive algorithms and both internally and externally indexed files. (SCANS 1,6,7,8,9) Lab fee required. Prerequisite: BCIS 1404 or instructor approval.

BCIS 2419 Advanced RPG/400 Programming
(3-3) .....4 hours
A continuation of BCIS 1419. Emphasis is placed on advanced techniques of RPG programming. The students will design, code, test and debug data validation programs, programs to create and update indexed files and programs to create and update sequential files. Students also will design display files and code interactive computer programs. Throughout this course the student will develop the skills needed to read and interpret technical manuals, recognize problems, implement plans of design/recovery, working with the systems software as well as newly developed software. Fall only. (SCANS 1,6,7,8,9) Lab fee required. Prerequisite: BCIS 1419 and BCIS 1320 or instructor approval.

Computer Science

Faculty: Mitch Slusher, chair; Ray Cone.

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) serve 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, C, and assembly programming languages.

The following curriculum in computer science has been designed as a guide for those students wishing to prepare for a bachelor's degree in computer science.

Course of Study for Associate in Science Degree

Computer Science

	Semester Hrs
General Education Requirements	**44**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (any sophomore level literature)	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
Lab Science Sequence in Chemistry or Engineering Physics	8
Lab Science Elective	4
*MATH 1314 College Algebra	3
*MATH 1316 Trigonometry	3
**PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech	3
Elective (must be outside the major area)	**3**
Major Requirements	**20**
COSC 1415 Introduction to Computer Science	4
COSC 1418 Programming Concepts I	4
COSC 2418 Programming Concepts II	4
COSC 2420 Programming Structures in C	4
COSC 2425 Organization and Assembly Language	4
Total Semester hours	**67**

** MATH 1348, MATH 2313 or MATH 2314 may be substituted. Because upper level institutions require advanced math courses, taking additional math courses in your degree plan is recommended.*

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

NOTE: Computer science majors should consult the degree requirements of the university which they plan to attend before selecting electives or specific general education courses.

Computer Science Courses

COSC 1301 Introduction to Computer Systems (11.0101.5127)
(3-0) ..... 3 hours
Presents extensive vocabulary, concepts and techniques needed to begin study of computers. Covers hardware/software fundamentals, history, information systems concepts and societal trends. Emphasis is placed on using the computer to process text and numeric information. By using software packages including a word processor,

electronic spreadsheet, database management system and MS-DOS, the student is able to identify and select the correct hardware/software to apply to a given problem. Lab exercises are designed to allow students to use their reasoning ability to solve problems and make decisions. Not for computer science majors or BCIS majors. (SCANS 1, 2,3,6,8,9) Lab fee required. Prerequisite: None.

COSC 1415 Introduction to Computer Science (11.0201.5227)
(3-3) .....4 hours
A first course for computer science majors or other majors where a computer language or computer minor would be of benefit. Presents terminology, concepts and techniques, including hardware, firmware and software. Emphasizes the application of software, logic and structured programming techniques. Using these, students will be able to select the correct hardware/software to apply to a given problem. Laboratory exercises focus on the use of word processing to process textual information, electronic spreadsheet for numerical information, desktop publishing, MS-DOS and data base application software. Introduces programming logic, structure and techniques using the Pascal language. Lab exercises are designed for students to use, follow and interpret written instructions and to use their reasoning ability to solve problems and make decisions. Lab fee required. (SCANS 1,2,3,6,8,9) Prerequisite: None.

COSC 1418 Programming Concepts I (11.0201.5227)
(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. (SCANS 5,6,7,8,9) Prerequisite: COSC 1415 or both BCIS 1200 and BCIS 1401 or instructor approval.

COSC 2418 Programming Concepts II (11.0201.5327)
(3-3) .....4 hours
A continuation of COSC 1418. Emphasis is placed on dynamic data structures and advanced file handling techniques. Students will design, code, test, debug and document programs. Programming techniques will involve arrays of record structures, both singly and doubly-linked dynamic record lists, binary tree dynamic record maintenance with recursive algorithms and both internally and externally indexed files. Lab fee required. (SCANS 5,6,7,8,9) Prerequisite: COSC 1418 or BCIS 1404 or instructor approval.

COSC 2420 Programming Structures in "C" (11.0201.5327)
(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. Design and development of libraries and use of system calls. Spring only. (SCANS 1,6,7,8,9) Prerequisite: COSC 1418 or BCIS 1404 or instructor approval.

COSC 2425 Computer Organization and Assembly Language (11.0201.5427)
(3-3) .....4 hours
Introduces concepts and terminology relating to the internal hardware and its operation. Includes detailed discussion of internal and external bus operation, memory access, external storage media and port access. Numerous programs are written using assembly level code. Program exercises range from simple data manipulation, structured data manipulation, file I/O, to port device I/O. Students will be expected to provide all program exercises with both internal and external documentation. Spring only. (SCANS 1,6,7,8,9) Lab fee required. Prerequisite: COSC 1418 or BCIS 1404 or instructor approval.

Cosmetology

Faculty: Linda Sullivan, chair; Sylvia Blain, Lou Ann Hitt, Johnnie Luttrell, Theresa Vaughn.

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 chair, and sending a $25 fee and one 1 1/2-inch-square picture 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 chair of the cosmetology department.

The program is designed around an open-entry and -exit concept. New students may start cosmetology classes the first Monday of every other month instead of waiting for the beginning of the term or semester. 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 COSM 2601 and COSM 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 cosmetology department chair and the dean of humanities and communications.**

Student liability insurance is required for students enrolled in cosmetology.

Course of Study for Associate in Applied Science Degree

Cosmetology

	Semester Hrs
General Education Requirements for all Cosmetology Degrees	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
GOVT 2301 U.S. and Texas Government	3
MATH 1332 Structures of College Mathematics I or higher level math	3
*PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3

In addition to the 20 hours listed, students must select one of the following options.

Cosmetology Operator Option

	Semester Hrs
Major Requirements (1500 Clock Hours)	**36**
(Classes meet eight hours per day, Monday through Thursday)	
COSM 2601 Introduction to Cosmetology	6
COSM 2602 Skills Development	6
COSM 2603 Cosmetology Practicum I	6
COSM 2604 Cosmetology Practicum II	6
COSM 2605 Cosmetology Practicum III	6
COSM 2606 Cosmetology Practicum IV	6

Elective (must be outside the major area) **3**

Related Required Courses **9**
- BUSI 2301 Business Law I 3
- MGMT 2304 Personal and Human Relations 3
- MGMT 2341 Visual Merchandising and Display 3

Total Semester Hours **68**

Note: Student not desiring the associate in applied science degree may receive a certificate of completion operator option.

Cosmetology Instructor Option

	Semester Hrs
Major Requirements (750 Clock Hours)	**32**
COSM 2811 Lesson Plan Development and Supervision	8
COSM 2812 Management and Assessment Practicum	8
COSM 2813 Classroom Teaching Practicum	8
COSM 2814 State Licensure Practicum	8
Elective	**3**
Related Required Courses	**9**
BUSI 2301 Business Law I	3
MGMT 2304 Personal and Human Relations	3
MGMT 2341 Visual Merchandising and Display	3
Total Semester Hours	**64**

Note: Student not desiring the associate in applied science degree may receive a certificate of completion instructor option.

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

Course of Study for Certificate Options

Level I certificates are TASP -waived.

Level I - Certificate of Completion – Operator Option

	Semester Hrs
Major Requirements (1500 Clock Hours)	**36**
COSM 2601 Introduction to Cosmetology	6
COSM 2602 Skills Development	6
COSM 2603 Cosmetology Practicum I	6
COSM 2604 Cosmetology Practicum II	6
COSM 2605 Cosmetology Practicum III	6
COSM 2606 Cosmetology Practicum IV	6
General Education Requirements	**6**
COSC 1301 Introduction to Computer Science	3
PSYC 2302 Applied Psychology	3
Total Semester Hours	**42**

Level I - Certificate of Completion – Instructor Option

	Semester Hrs
Major Requirements (1500 Clock Hours)	**32**
COSM 2811 Lesson Plan Development and Supervision	8
COSM 2812 Management and Assessment Practicum	8
COSM 2813 Classroom Teaching Practicum	8
COSM 2814 State Licensure Practicum	8

General Education Requirements **6**
COSC 1301 Introduction to Computer Science 3
PSYC 2302 Applied Psychology 3

Total Semester Hours **38**

Cosmetology Courses

COSM 2601 Introduction to Cosmetology
(4-28) ..... 6 hours
Introduces field of cosmetology by presenting terminology, concepts and techniques relevant to the industry. Emphasizes basic principles and practices involving hairdressing, personality development, visual poise, time management and sanitation/ safety habits. (SCANS 1,4,8,10) Prerequisite: None.

COSM 2602 Skills Development
(4-28) ..... 6 hours
Develops fundamental knowledge and understanding of related sciences and mathematics relevant to cosmetology. Teaches time management, safety and systematic procedures. (SCANS 3,4,8) Prerequisite or corequisite: COSM 2601.

COSM 2603 Cosmetology Practicum I
(4-28) ..... 6 hours
Provides instruction of manipulative skills, knowledge and desirable attitudes to promote gainful employment. Emphasizes sociability and communication skills to maintain customer relationships. Stresses rules, regulations and preparation for the Texas Cosmetology Commission licensure test. (SCANS 5,9,10,11) Prerequisite: COSM 2602.

COSM 2604 Cosmetology Practicum II
(4-28) ..... 6 hours
Provides manipulative skills for rendering personal beauty services. Includes all skills pertaining to hairdressing, nail care and skin care in conjunction with a time schedule. Emphasizes select care and proper use of commercial products and equipment. (SCANS 4,8,9) Prerequisite: COSM 2603.

COSM 2605 Cosmetology Practicum III
(4-28) ..... 6 hours
Presents basic chemical characteristics of cosmetics used in beauty salons. Stresses basic principles of chemistry essential to straighten, curl, color and bleach hair. Teaches customer relations, time management and decision making. (SCANS 4,5,8,9) Prerequisite: COSM 2604.

COSM 2606 Cosmetology Practicum IV
(4-28) ..... 6 hours
Introduces principles used in designing and planning a salon. Stresses location, space allotment and installation costs as well as financial aspects of salon operation. Includes insurance needs and legal requirements regarding wages, working hours, working conditions and customer relations as well as writing an employee guideline manual. (SCANS 2,3,4,5) Prerequisite: COSM 2605, COSC 1301 and PSYC 2302.

COSM 2811 Lesson Plan Development and Supervision
(8-24) ..... 8 hours
Develops teaching skills, methods and techniques. Emphasizes basic unit planning and daily lesson development. (SCANS 9,10) Prerequisite: Current Texas cosmetology operator's license.

COSM 2812 Management and Assessment Practicum
(8-24) ..... 8 hours
Develops practical clinic management techniques. Includes supervision of students in classroom situations, allocation of student load pertaining to facilities and materials as well as development of assessment tools. (SCANS 4, 5,8,9). Prerequisite or corequisite: COSM 2811.

COSM 2813 Classroom Teaching Practicum
(8-24) ..... 8 hours
Develops methods and techniques of teaching informational theory and resource allocation. Emphasizes self-management, oral and written communication, creative thinking and leadership skills. (SCANS 2,4,6,5,9,11) Prerequisite: COSM 2812.

COSM 2814 State Licensure Practicum
(8-24) ..... 8 hours
Designed to prepare students to pass Texas Cosmetology Commission examination for licensure of cosmetology instructors. Emphasizes organization of information for developing and presenting a lesson plan. (SCANS 2,5,6,11) Prerequisite: COSM 2813, PSYC 2302 and COSC 1301.

Specialization Programs

Manicurist Specialist Program

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

COSM 1501 Manicuring Specialization
(8-24) ..... 5 hours
Emphasizes basic manicuring skills, time allotment schedules and professional student/client relationships. Presents all aspects of manicures and pedicures. Includes artificial nail application and removal. Prepares students to test for state licensure as a manicurist upon completion of course. (SCANS 4,5,8) Prerequisite: None.

Facial Specialist Program

A licensed facial specialist is authorized to practice facials, which entail application of facial cosmetics and facial manipulations. Includes licensed salon work such as eye tabs, arches, lash and brow tints and temporary removal of facial hair.

COSM 1703 Facial Specialization I
(8-22) (10 weeks) ..... 7 hours
Prepares student to pass exam for state licensure with knowledge and skills needed as a facial specialist. Furnishes students with knowledge to allocate and follow a time schedule which coincides with the student/customer relationship. Emphasizes related technology selection necessary for application of cosmetics and facial manipulations. Includes eye tabs, arches, lash and brow tints and temporary removal of facial hair. (SCANS 4,5,8) Prerequisite: None.

COSM 1704 Facial Specialization II
(8-22) (10 weeks) ..... 7 hours
A continuation of COSM 1703. Provides student with knowledge and skills needed to pass exam for state licensure as a facial specialist. Furnishes students with knowledge to allocate and follow a time schedule which coincides with the student/customer relationship. Emphasizes related technology selection necessary for application of cosmetics and facial manipulations. (SCANS 4,5,8) Prerequisite: COSM 1703.

Shampoo-Conditioning Specialist Program

A licensed shampoo specialist is authorized to render shampoos, scalp manipulations and scalp treatments. Also authorizes the application of conditioners, rinses and shampoos in a licensed beauty salon.

COSM 1302 Shampoo and Conditioning Specialist
(5-20) ..... 3 hours
Teaches shampooing and conditioning as a responsible salon team member. Emphasizes professional student/customer relationship. Includes chemistry, histology, disorders and treatments of the skin and scalp. Completion qualifies student to test for state licensure as a shampoo-conditioning specialist. (SCANS 5,9,10) Prerequisite: None.

(The Texas Higher Education Coordinating Board is considering a shampoo-conditioning specialist certificate of completion. See the department chair for further information.)

Criminal Justice *(see Law Enforcement/Criminal Justice)*

Culinary Arts

Faculty: Peter Lewis, chair; Terry Gouley.

Odessa College offers an associate in applied science degree program in the 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 an opportunity to pursue and obtain advancement in their chosen profession.

Course of Study for Associate in Applied Science Degree

Culinary Arts

	Semester Hrs
General Education Requirements	**23**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
GOVT 2301 U.S. and Texas Government OR	
GOVT 2302 American National Government	3
MATH 1332 Structures of College Mathematics	3
MGMT 1301 Introduction to Management	3
*PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**30**
CULI 1201 Food Preparation and Production	2
CULI 1202 Soups and Sauces	2
CULI 1203 Pantry and Short-Order Cooking	2
CULI 1206 Introduction to Baking	2
CULI 1207 Patisserie	2
CULI 1208 Classical Desserts	2
CULI 1320 Sanitation Principles and Practices	3
CULI 2210 A La Carte Cooking	2
CULI 2211 International Cuisine	2
CULI 2212 American Regional Cuisine	2
CULI 2215 Food Sculpture and Design	2
CULI 2216 Charcuterie	2
CULI 2217 Buffet Theory and Production	2
CULI 2377 Cooperative Work Experience	3
Related Required Courses	**12**
CULI 1221 Tableservice and Mixology	2
CULI 1321 Stewarding	3
CULI 1322 Nutrition	3
CULI 2223 Food Service Management	2
CULI 2224 Menu Design and Layout	2
Total Semester Hours	**68**

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

Culinary Arts Certificate 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.

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I - Food Preparation Cook

	Semester Hrs
General Education Requirements	**3**
COSC 1301 Introduction to Computer Science	3
Major Requirements	**12**
CULI 1201 Food Preparation and Production	2
CULI 1202 Soups and Sauces	2
CULI 1203 Pantry and Short Order Cooking	2
CULI 1320 Sanitation Principles and Practices	3
CULI 1321 Stewarding	3
Related Required Course	**3**
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**18**

Level I - Food Production Cook

	Semester Hrs
General Education Requirements	**6**
COSC 1301 Introduction to Computer Science	3
PSYC 2302 Applied Psychology	3
Major Requirements	**20**
CULI 1201 Food Preparation and Production	2
CULI 1202 Soups and Sauces	2
CULI 1203 Pantry and Short Order Cooking	2
CULI 1221 Tableservice and Mixology	2
CULI 1320 Sanitation Principles and Practices	3
CULI 1321 Stewarding	3
CULI 2210 A La Carte Cooking	2
CULI 2211 International Cuisine	2
CULI 2212 American Regional Cuisine	2
Related Required Course	**3**
TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**29**

Student Equipment Requirements for Major Courses CULI 1201, 1202 and 1203
Two chef's uniforms consisting of long-sleeved jackets, checkered pants and aprons.
Basic chef's tool kit consisting of the following:

A. French knife 8" or 10" blade
B. Paring knife 3 1/2" blade
C. Vegetable peeler
D. Cook's fork
E. Boning knife—5 1/2" rigid blade
F. Metal measuring spoons
G. French whip

CULI 1206, 1207 and 1208
Two chef's uniforms consisting of long-sleeved jackets, checkered pants and aprons.
Basic Tool Kit consisting of the following:

A. French knife 8" or 10" blade
B. Paring knife 3 1/2" blade
C. Vegetable peeler
D. French whip
E. Two icing spatulas 8" or 10"
F. One Wilton decorating kit
G. One serrated meat slicer

CULI 2210, 2211 and 2212
Uniforms and tool kit identified in CA 1201, 1202 and 1203.

CULI 2215, 2216 and 2217
Uniforms and tool kit identified in CA 1201, 1202 and 1203 and:

1 set of 1/2" aspic cutters
1 Exacto knife
1 set of butter sculpture tools

Culinary Arts Courses

CULI 1201 Food Preparation and Production
(3-9) [5 weeks] .....2 hours
Introduces the basic principles, concepts and production systems associated with basic food preparation. The student will be able to read and interpret menus, perform basic calculations to obtain desired food quantities, and select the prescribed procedures, tools, equipment and food supplies to produce specific menu items. The student will also be able to apply the principles of food technology to the production systems and understand the interrelation between food preparation and the importance of food quality, with emphasis on employing the correct sanitation procedures. (SCANS 1,3,7,8) Lab fee required. Prerequisite: None. Corequisite: CULI 1202 and CULI 1203 or permission of the instructor.

CULI 1202 Soups and Sauces
(3-9) [5 weeks] .....2 hours
Introduces the basic concepts for the construction, production, holding for service and storage of stocks, soups and sauces. The student will be able to interpret recipes, calculate basic recipe conversions, select and acquire materials for the creation of specific food items. The student will also be able to use the basic technologies of stocks, soups and sauces to develop complex soups and short-sauces. Students will acquire and evaluate their proficiency in the holding for service, cooling, storage and reheating of specific food items. (SCANS 1,3,4,6,7,8) Lab fee required. Prerequisite: CULI 1201. Corequisite: CULI 1201 and CULI 1203 or permission of the instructor.

CULI 1203 Pantry and Short-Order Cooking
(3-9) [5 weeks] .....2 hours
Introduces the basic principles of pantry and short-order service with emphasis on the construction and production of salads, salad dressings, breakfast and short-order food items. The student will be able to interpret recipes, perform basic recipe conversions, select materials necessary to perform specific tasks and understand the basic production technologies associated with specific food items. The student will also participate as a team member and be able to understand how the various production systems are interrelated. (SCANS 1,3,4,5,7,8) Lab fee required. Prerequisite: CULI 1201 and CULI 1202. Corequisite: CULI 1201 and 1202 or permission of the instructor.

CULI 1206 Introduction to Baking
(3-9) [5 weeks] ..... 2 hours
Introduces the basic principles associated with the construction and presentation of basic breads and rolls, pies, cookies and cakes. The student will be able to interpret recipes, perform basic conversions to obtain desired quantities, acquire food supplies, tools and equipment necessary to produce baked goods. The student will also understand the principles of food technology and apply these principles to the various production systems for specific bakery items. (SCANS 1,3,4,7,8) Lab fee required. Prerequisite: None. Corequisite: CULI 1207 and 1208 or permission of the instructor.

CULI 1207 Patisserie
(3-9) [5 weeks] ..... 2 hours
Introduces pastry-based desserts with emphasis on the construction and presentation of "complex" pastries and desserts. The student will be able to interpret recipes, perform basic conversions and select the procedures, tools and equipment required to produce dessert items. The student will also understand the interrelationship between production technologies and solve problems associated with production strategies. (SCANS 1,3,4,8,9) Lab fee required. Prerequisite: CULI 1206. Corequisite: CULI 1206 and CULI 1208 or permission of the instructor.

CULI 1208 Classical Desserts
(3-9) [5 weeks] ..... 2 hours
Introduces the classical desserts developed by Careme and Escoffier with emphasis on gateauxs, meringues, tortes, mousses and gelatin-based desserts. The student will be able to understand the bakery systems applied to classical desserts, apply the specific technologies to specific tasks and solve or prevent problems. The student will also develop new ideas on the production and service of classical desserts and develop templates and marketing strategies. (SCANS 1,2,3,4,7,8,9) Lab fee required. Prerequisite: CULI 1206 and CULI 1207. Corequisite: CULI 1206 and CULI 1207 or permission of the instructor.

CULI 1221 Tableservice and Mixology
(2-0) [6 weeks] ..... 2 hours
Introduces the principles, concepts and systems of professional tableservice and mixology. The student will be able to interpret the guest's orders, write guest checks, tabulate the guest's charges and serve customers to their expectations. The student will also understand the basic systems associated with guest service, function individually and as a member of a team, and be aware of the legal strictures to prevent problems. The student must demonstrate the ability to listen and speak well to promote the guest's comfort and enjoyment. (SCANS 1,2,3,5,7,9,11) Prerequisite: None.

CULI 1320 Sanitation Principles and Practices
(3-0) ..... 3 hours
Introduces the causes and prevention strategies for food-borne illnesses and diseases; the methods employed for food protection, the principles of personal grooming and food handling practices. The student will be able to understand and interpret written information, communicate both verbally and in writing the visible and non-visible sanitation problems, exercise leadership to resolve sanitation issues and demonstrate an understanding of the preferred sanitation systems and suggest improvements for existing systems. The student will also select the appropriate chemicals, maintain kitchens in a safe and sanitary fashion and monitor the progress of the sanitation system. (SCANS 1,2,4,5,7,8,9,10) Prerequisite: None.

CULI 1321 Stewarding
(3-0) ..... 3 hours
Introduces the basic purchasing, storage, issuing and accounting principles employed in the food service industry. The student will be able to write and interpret food specifications, develop quotation sheets, select food and equipment merchandise, compute invoices and requisitions, select appropriate storage procedures, issue requested items and account for storeroom practices. The student will also communicate with coworkers to resolve conflicts and concerns, serve as a member of the management team and employ an honest and ethical course of action. (SCANS 2,3,5,10) Prerequisite: None.

CULI 1322 Nutrition
(3-0) [6 weeks] ..... 3 hours
Introduces the concepts and principles of normal nutrition, with emphasis on the importance of nutrients, their roles and functions within the body and throughout one's life. The student will be able to understand and interpret nutritional concepts and issues, through case analysis develop written thoughts and solutions to nutritional issues, and determine and estimate the nutritional value of specific food groups within one's diet. The student will also acquire and evaluate new concepts, resolve nutritional issues and exert a high level of effort to maintain a nutritionally sound lifestyle. (SCANS 1,2,3,4,6,9) Prerequisite: None.

CULI 2210 A La Carte Cooking
(3-9) [5 weeks] ..... 2 hours
Introduces advanced theories and production systems associated with a la carte or "cooking to order" concepts. The student will be able to interpret menus and recipes, calculate quantities, assemble food and equipment materials and employ appropriate cooking, plating and saucing principles. The student will also be able to identify and correct cooking errors, organize work stations for productive performance and serve as a member of a team. (SCANS 1,3,4,5,7,8) Lab fee required. Prerequisite: CULI 1201, 1202 and 1203. Corequisite: CULI 2211 and CULI 2212 or permission of the instructor.

CULI 2211 International Cuisine
(3-9) [5 weeks] ..... 2 hours
Introduces the classical cooking skills associated with the preparation and service of international and ethnic specific cuisines. The student will be able to understand the similarities between current food production systems in the United States and those in other regions of the world. The student will also be adaptable to various deviations in cooking strategies, develop an understanding of food sources and the availability of these items, making substitutions where warranted. International Cuisine also focuses on the heritage of the culinary arts as an art, and students acquire in-depth artistic appreciation for their chosen profession. (SCANS 4,6,8,9) Lab fee required. Prerequisite: CULI 2210. Corequisite: CULI 2210 and 2212 or permission of the instructor.

CULI 2212 American Regional Cuisine
(3-9) [5 weeks] ..... 2 hours
Introduces the development of regional cuisines in the United States with emphasis placed on the similarities in production and service systems. The student will be able to adapt regional recipes to standard systems of production, calculate quantities for production, organize team members for production and service and be able to anticipate the desired outcomes. The student will also be able to develop, organize and build a portfolio of recipe strategies and production systems. Lab fee required. (SCANS 1,2,3,4,6,8,9) Prerequisite: CULI 2210 and CULI 2211. Corequisite: CULI 2210 and CULI 2211 or permission of the instructor.

CULI 2215 Food Sculpture and Design
(3-9) [5 weeks] .....2 hours
Introduces the garde manger arts with emphasis on the construction and presentation of canapés, hors d'oeuvres, aspics and chaud-froid display pieces. The student will be able to read and interpret recipes, organize and write production activities, design templates, calculate food and labor costs, construct a variety of hot and cold canapés and hors d'oeuvres based on a systems concept, and understand the basic construction and assembly processes for aspic and hot/cold food displays. The student will also solve assembly and production problems, organize a teamwork process for the garde manger arts and critically evaluate the finished products. Lab fee required. (SCANS 1,2,3,5,8,9) Prerequisite: CULI 1201, 1202, 1203. Corequisite: CULI 2216 and CULI 2217 or permission of the instructor.

CULI 2216 Charcuterie
(3-9) [5 weeks] .....2 hours
Introduces the student to complex garde manger skills associated with the construction of pates, galantines, terrines, meat mousses, timbales and gross display pieces. The student will be able to read, write and convert recipes, calculate quantities to be prepared, determine food and labor costs, organize the work area, acquire unique food items and tools, and know how to assemble unique food items. The student will also function as a member of a team and suggest new or alternative methods for the construction of charcuterie based items. Lab fee required. (SCANS 1,2,3,5,7,8,9) Prerequisite: CULI 2215. Corequisite: CULI 2215 and CULI 2217 or permission of the instructor.

CULI 2217 Buffet Theory & Production
(3-9) [5 weeks] .....2 hours
Introduces the student to the construction of non-edible display items such as ice carvings, butter and tallow displays, pastillage and flower arranging; the development of buffet themes, the layout of tables and the production and service of buffet food items. The student will be able to read, write and calculate recipes, develop and implement work schedules for the production of display pieces, acquire specialized foods and equipment, demonstrate an understanding of basic production systems and correlate with the production of buffet items, and organize buffet tables for presentation and service. (SCANS 1,2,3,5,7,8) Lab fee required. Prerequisite: CULI 2216. Corequisite: CULI 2215 AND CULI 2216 or permission of the instructor.

CULI 2223 Food Service Management
(2-0) .....2 hours
Introduces the student to the principle concepts and topics of food service management and examines the issues, concerns and systems employed to ensure a successful food service operation. The student will be able to interpret policy manuals and procedures, communicate with others, both verbally and in writing, the policies and procedures, project income, expenditures and profits, prioritize activities, acquire and evaluate information and monitor and correct the performance of other employees. The student will also understand the importance of a team strategy, generate new ideas, project a professional work ethic and be able to listen and respond effectively. (SCANS 1,2,3,4,5,6,7,9,10,11) Prerequisite: None. Corequisite: None.

CULI 2224 Menu Design and Layout
(2-0) .....2 hours
Introduces a variety of menu strategies which are employed in the construction of menus. The student will be able to select and develop four types of menu strategies, develop a menu layout using printing technology and write copy, calculate menu selling prices, reconcile the fixed and variable costs with profit margins and expectations, and acquire, interpret and evaluate menu sales. The student will also understand the importance of a menu in relationship to the organization of the kitchen and dining room, service to patrons and the skills required of a professional staff. (SCANS 1,2,3,4,5,6,8,9) Prerequisite: None. Corequisite: None.

Developmental Education

Staff: Dr. David J. Tarver, dean; Judy Merritt, counselor.

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 education 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 education will transfer for degree credit.

Developmental Science Course

BIOL 0371 Developmental Science (32.0101.5139)
(3-3) .....3 hours
This is a compensatory, non-transferable science course designed to improve basic knowledge of the biological sciences, develop critical thinking skills and learn how to interpret data related to biological concepts. Students learn and use biological terminology, mathematical calculations involved in converting between the English and metric systems of measurement, and basic chemical calculations. Students also learn specific information about the basic chemistry of life processes, cells, tissue, organs and systems with emphasis on human biology. Lab fee is required. (SCANS 1,3,6,9)
Prerequisite: None.

Courses and Services Available in Developmental Studies

English Courses and the Writing Lab

ENGL 0371, Basic English, and the four one-hour lab courses — ENGL 0171, ENGL 0172, ENGL 0173 and ENGL 0174 — 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 1301, 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 0370 Basic English (32.0108.5335)
(3-0) .....3 hours
A compensatory course designed to improve basic thinking and writing skills. Emphasizes essay development and use of conventional English. Requires essays composed in response to various prompts. Prepares student for ENGL 1301. 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 1301. (SCANS 2,9) Lab fee required for ENGL 0370 WP (Word Processing).
Prerequisite: None. Corequisite: Students who have not taken and passed the reading section of TASP must enroll in a reading class.

The lab courses, ENGL 0171 through 0174, 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 0171 Sentence Structure (32.0108.5335)
(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 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Prerequisite: Consent of the instructor.

ENGL 0172 Focus and Unity (32.0108.5335)
(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 as well as composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Prerequisite: Consent of the instructor.

ENGL 0173 Organization and Development (32.0108.5335)
(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 as well as composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Prerequisite: Consent of the instructor.

ENGL 0174 Usage (32.0108.5335)
(0-1) ..... 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition and incorporation of standard usage in sentence composition, focusing on verb and pronoun usage, standard punctuation, modifier usage, plural and possessive conventions, and precise and appropriate word choice as well as composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Prerequisite: Consent of the instructor.

The tutoring center, 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 for Odessa College students.

Math Courses and the Tutoring Lab

MATH 0371, Basic Mathematics, addresses the four fundamental operations of mathematics and additional topics. The course is designed to prepare students for MATH 0372, Introductory Algebra, and should be taken as a preparatory course only. MATH 0372, Introductory Algebra, continues the review of the basic functions in mathematics and introduces elementary algebra concepts. MATH 0375, 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, MATH 0172, MATH 0173 and MATH 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 may be guided into the courses on the basis of optional diagnostic pre-tests that are available in the testing center on the second floor of the Student Union Building.

MATH 0371 Basic Mathematics (32.0104.5135)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. 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. (SCANS 3,8,9) Prerequisite: None.

MATH 0372 Introductory Algebra (27.0101.5437)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. 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. (SCANS 3,8,9) Prerequisite: MATH 0371 or satisfactory placement score.

MATH 0373 Elementary Mathematics of Finance (27.0101.6637)
(3-0) .....3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. This course does satisfy requirements for any degree plan at Odessa College and may not be accepted for credit by all senior colleges. (SCANS 3,8,9) Prerequisite: MATH 0372 or equivalent placement score.

MATH 0375 Intermediate Algebra (27.0101.5237)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted for credit by all senior colleges. Placement testing available. (SCANS 3,8,9) Prerequisite: MATH 0372, satisfactory placement score or passing score on TASP.

The tutoring center, located in Room 120 of the Electronics Technology Building, offers tutoring to Odessa College students and has extensive supplemental materials that parallel the developmental mathematics courses. Audio-tutorial and computer programs demonstrate 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 may be guided into these courses according to their performance on the TASP test or on optional placement tests administered in the testing center, located on the second floor of the Student Union Building.

MATH 0171 Fundamental Math (32.0104.5135)
(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, use measure of central tendency, and variability. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0172 Algebra — Graphing and Equations (32.0104.5135)
(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. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0173 Algebra — Operations and Quadratics (32.0104.5135)
(0-1) ..... 1 hour
Provides a review of algebra — operations and quadratics. Presents operations with algebraic expressions. Investigates problems involving quadratic equations, inequalities and their graphs. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0174 Geometry and Problem Solving (32.0108.5135)
(0-1) ..... 1 hour
Provides a review of geometry and reasoning. Presents problems involving geometric figures and investigates how to apply reasoning skills, apply combinations of mathematical skills to solve problems. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) 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 0371 Basic Reading (32.0108.5235)
(3-0) ..... 3 hours
Initiates instruction in developmental reading with emphasis on building vocabulary, increasing reading rate, and improving comprehension. Aims to empower students with independent learning techniques and effective study skills to enhance self-esteem and reaffirm the belief in self as a successful learner. Includes individual diagnosis of reading strengths and weaknesses for placement in multi-leveled materials. Lab fee required. (SCANS 1,9,10) Prerequisite: None or placement by counselors.

READ 0372 College Reading (32.0108.5235)
(3-0) ..... 3 hours
Stresses efficient learning techniques and application of reading and study skills. Students are encouraged to establish habits that result in increased success in learning in both the classroom and job environments. Includes diagnosis of reading strengths and weaknesses for placement in computer exercises, timed reading practices and vocabulary study. (SCANS 1,9,10) Lab fee required. Prerequisite: Read 0371 passed with a "C" or better or satisfactory placement score.

READ 0373 Advanced College Reading (32.0108.5235)
(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. The student monitors and corrects ineffective behavior as he assesses self accurately, sets personal goals, and monitors progress. (SCANS 1,7,9,10) Lab fee required. Prerequisite: Read 0372 passed with a "C" or better or satisfactory placement score.

College Reading Techniques

The college reading techniques course taught in the Electronics Technology Building, Room 110, 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- 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 110.

Students should consult with the lab instructor in person during the first week of classes to arrange a meeting time.

READ 0171 Improving Reading Skills (32.0108.5235)
(0-24) ..... 1 hour
Introduces a self-paced, individualized instruction in a multimedia environment which is designed to teach the student efficient reading techniques. Students establish habits that result in increased success in learning in both the classroom and job environments, resulting in higher self-esteem. Through independent learning activities, students learn to validate their understanding of reading materials. A student's vocabulary is increased with various written activities. To increase individual reading rate, students utilize computers and other pacing media. (SCANS 1,4,7,10) Lab fee required. Prerequisite: None.

Speech Communication

Speech 0300 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 0300 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 0300 Basic Speech Communication Skills (32.0108.5135)
(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 is developmental in nature and may not satisfy requirements toward a specific degree. (SCANS 5,9,10,11) Prerequisite: None.

Diesel Mechanics *(see Automotive Technology and Diesel Mechanics)*

Drafting Technology

Faculty: James McPherson, chair.

Drafters 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 1301 Composition and Rhetoric OR	
ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR	
MATH 1372 Technical College Algebra	3
MATH 1316 Plane Trigonometry	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Major Requirements	35
DRAF 1401 Technical Drafting	4
DRAF 2377 Cooperative Work Experience	3
DRAF 2401 Architectural Drafting	4
DRAF 2402 Machine Drafting	4
DRAF 2403 Technical Illustration	4
DRAF 2404 Piping Drafting	4
DRAF 2406 Structural Drafting	4
DRAF 2408 Computer Aided Drafting	4
DRAF 2418 Advanced Computer Aided Drafting	4

Related Requirements 14
- MACH 1401 Basic Machine Shop Fundamentals 4
- OSHA 2395 Industrial Safety 3
- PETR 1300 Petroleum Overview 3
- WELD 1401 General Welding 4

Total Semester Hours 66

Certificates of Technology

Level I certificates are TASP-waived

Architectural Detailer (Level I)

General Education Core
- ENGL 1301 Composition & Rhetoric OR ENGL 1312 Report Writing 3
- MATH 1314 College Algebra OR MATH 1372 Technical College Algebra 3

Technical Core
- DRAF 1401 Technical Drafting 4
- DRAF 2377 Cooperative Work Experience 3
- DRAF 2401 Architectural Drafting 4
- DRAF 2406 Structural Drafting 4
- DRAF 2408 Computer Aided Drafting 4
- DRAF 2418 Advanced Computer Aided Drafting 4
- OSHA 2395 Industrial Safety 3

Total Semester Hours 32

Machine Drafting Detailer (Level I)

General Education Core
- ENGL 1301 Composition & Rhetoric OR ENGL 1312 Report Writing 3
- MATH 1314 College Algebra OR MATH 1372 Technical College Algebra 3

Technical Core
- DRAF 1401 Technical Drafting 4
- DRAF 2377 Cooperative Work Experience 3
- DRAF 2402 Machine Drafting 4
- DRAF 2403 Technical Illustration 4
- DRAF 2408 Computer Aided Drafting 4
- DRAF 2418 Advanced Computer Aided Drafting 4
- MACH 1401 Basic Machine Shop Fundamentals 4

Total Semester Hours 33

Structural Drafting Detailer (Level I)

General Education Core
- ENGL 1301 Composition & Rhetoric OR ENGL 1312 Report Writing 3
- MATH 1314 College Algebra OR MATH 1372 Technical College Algebra 3

Technical Core
- DRAF 1401 Technical Drafting 4
- DRAF 2377 Cooperative Work Experience 3
- DRAF 2406 Structural Drafting 4
- DRAF 2408 Computer Aided Drafting 4
- DRAF 2418 Advanced Computer Aided Drafting 4
- OSHA 2395 Industrial Safety 3
- WELD 1401 General Welding 4

Total Semester Hours 32

Pipe Drafting Detailer (Level I)

	Semester Hrs
General Education Core	
ENGL 1312 Report Writing	3
MATH 1314 College Algebra OR MATH 1372 Technical College Algebra	3
Technical Core	
DRAF 1401 Technical Drafting	4
DRAF 2377 Cooperative Work Experience	3
DRAF 2404 Pipe Drafting	4
DRAF 2408 Computer Aided Drafting	4
DRAF 2418 Advanced Computer Aided Drafting	4
OSHA 2395 Industrial Safety	3
Total Semester Hours	**28**

Advanced Skills Certificate of Technology

Technical Illustrator (Level III)

	Semester Hrs
Technical Core	
DRAF 2411 Advanced Architectural Drafting	4
DRAF 2412 Advanced Machine Drafting	4
DRAF 2413 Advanced Technical Illustration	4
Total Semester Hours	**12**

Drafting Technology Courses

DRAF 1401 Technical Drafting
(2-4) ..... 4 hour
Presents fundamental concepts, terminology, techniques and procedures of drafting for the technical student. Competencies include lettering, scale reading, report writing, the use of resources, the concepts of working within an organization, geometric construction, sketching and shape description, multi-views and the interpretation of industrial sketches. Emphasizes skills development as well as theory. (SCANS 1,2,3,4,7,8) Prerequisite: None.

DRAF 2377 Cooperative Work Experience
(1-20) ..... 3 hour
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

DRAF 2401 Architectural Drafting
(2-4) ..... 4 hour
Presents the fundamental concepts, terminology and procedures of residential architecture. Competencies include lettering, interpreting information, procedures and communication of written thoughts through cost estimation. Fall only. (SCANS 1,2,3,8) Lab fee required. Prerequisite: DRAF 1401 or ENGR 1304.

DRAF 2402 Machine Drafting
(2-4) ..... 4 hour
Competencies include the skills needed to create engineering sketches, conventional practices, detail and assembly drawings and fasteners. Emphasis is placed on the use of common reference manuals to locate and interpret information, performing mathematical calculations, teamwork, drafting procedures and problem solving. (SCANS 1,3,5,8,9) Lab fee required. Prerequisite: DRAF 1401 or ENGR 1304.

DRAF 2403 Technical Illustration
(2-4) ..... 4 hour
Competencies include skills needed to produce pictorial drawings used in industrial catalogs, training aids, engineering designs, assembly sheets and promotional literature. Emphasis is placed on interpreting drawings, using appropriate procedures and problem solving. SCANS (1,8,9) Lab fee required. Prerequisite: DRAF 1401 or ENGR 1304.

DRAF 2404 Piping Drafting
(2-4) ..... 4 hour
Study of pipes and pipe fittings, symbols and specifications of process systems. Competencies emphasize the drawing of flow diagrams, pumps, compressors and various other mechanical equipment. Emphasis is placed on interpreting data from manuals, performing appropriate mathematical calculations, interpreting information, choosing appropriate procedures and problem solving. Offered spring semester even numbered years. (SCANS 1,3,6,8,9) Lab fee required. Prerequisite: DRAF 1401 or ENGR 1304.

DRAF 2406 Structural Drafting
(2-4) ..... 4 hour
Competencies include the design and development of details and specifications for industrial structures. Emphasizes structural steel, pipe, reinforced concrete, interpreting technical data, appropriate mathematical calculations, information evaluation and problem solving. Offered spring semester odd numbered years. (SCANS 1,3,6,9) Lab fee required. Prerequisite: DRAF 1401 or ENGR 1304.

DRAF 2408 Computer-Aided Drafting
(2-4) ..... 4 hour
An introductory course; Competencies cover basic commands and functions utilized to produce drawings using the computer terminal, menu tablet, printer and/or plotter. Emphasizes development of interpersonal skills and qualities needed to succeed in the workplace, learning and applying system functions to basic problems, interpreting instructions, organizing drawing files and problem solving. (SCANS 1,3,5,8,9,10) Lab fee required. Prerequisite: DRAF 1401 or ENGR 1304.

DRAF 2411 Advanced Architectural Drafting
(2-4) ..... 4 hour
A continuation of DRAF 2401. Competencies include commercial and industrial construction. Emphasis is placed on interpreting information, appropriate mathematical calculations, communicating ideas, interpreting information, creative thinking and communication procedures. Fall only. (SCANS 3,6,9,11) Lab fee required. Prerequisite: DRAF 2401.

DRAF 2412 Advanced Machine Drafting
(2-4) ..... 4 hour
A continuation of DRAF 2402. Competencies include a thorough study of position geometric dimensioning and tolerancing. Emphasizes interpretation of information, creating documents, performing mathematical calculation, working as a team, evaluating information, using correct procedures, and problem solving. (SCANS 2,3,5,6,8,9) Lab fee required. Prerequisite: DRAF 2402.

DRAF 2413 Advanced Technical Illustration
(2-4) ..... 4 hour
A continuation of DRAF 2403. Competencies include inking, shading, and airbrush rendering. Emphasizes the use of correct procedure, creative thinking and self-management. (SCANS 8,9,10) Lab fee required. Prerequisite: DRAF 2403.

DRAF 2418 Advanced Computer-Aided Drafting
(2-4) ..... 4 hour
A continuation of DRAF 2408. Competencies include skills applied to advanced CAD drafting assignments by using more complex capabilities of the equipment to produce customized menus, libraries, reports and graphic presentations. The use of advanced editing techniques, report generation, drawing interchange files and configuration changes are also discussed and practiced. Emphasizes interpreting written material, information processing by the computer, applying CAD technology and problem solving. (SCANS 2,6,8,9) Lab fee required. Prerequisite: DRAF 2408.

Economics *(see Social Sciences)*

Education

Advisor: Don Jacobs

Course of Study for Associate in Arts Degree

Education Majors

	Semester Hrs
General Education Requirements	**48-49**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (Sophomore level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History from 1877	3
MATH 1314 College Algebra OR	
MATH 1332 Structures of College Mathematics OR higher level math	3
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
*PHED (any two one-hour activity courses)	2
PSYC 2308 Child Psychology	3
**An additional college level math or laboratory science	3-4
Any four-hour laboratory science	4
Any three-hour fine arts course	3
Elective (must be outside the major area)	**3**

Elementary Education

Electives (Should be selected from social science, natural science, mathematics, foreign languages, fine arts, and humanities)	**11-12**

Secondary Education

Electives (Should be selected from freshman and sophomore courses which will count toward a specialized teaching field. This teaching field must be in a discipline which is taught in the secondary schools. Before elective courses are selected, education students are strongly encouraged to consult with the catalog of senior institution to which they intend to transfer)	**11-12**
Total Semester Hours	**63**

**PHED 1100 should be the first course taken in physical education.*
***These will meet the six to eight hours required in either math or science for an associate of arts degree.*

Electrical/Electronics Technology

Faculty: Danny Bailey, chair.

The electrical/electronics technology curriculum is designed to prepare individuals for technical careers in the industrial electrical field. Students may follow a plan leading toward an associate in applied science degree or follow a plan leading toward a certificate. Individuals currently employed in the field can increase or update their technical knowledge and skills by enrolling in specialized electrical/electronics courses (note prerequisites). While the overall program is broad based, some specialization is possible in motors, controls, and programmable controllers in electrical technology and communication and computer repair in electronics technology.

Course of Study for Associate in Applied Science Degree

Electrical Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR MATH 1371 College Algebra for Business OR MATH 1372 Technical College Algebra	3
*PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Elective	**3**
Technical Core	**16**
MAIN 2404 Structural Repair	4
ELEC 2410 National Electrical Code	4
HVAC 1401 Refrigeration Theory	4
MAIN 1402 Plumbing	4
Major Requirements	**26**
ELEC 1401 D.C. Circuits	4
ELEC 1404 Electronics I	4
ELEC 2302 Electrical Power Technology	3
ELEC 2377 Cooperative Work Experience	3
ELEC 2400 Electronics II	4
ELEC 2404 Electrical Machinery and Controls	4
ELEC 2411 Programmable Logic Controllers	4
Total Semester Hours	**65**

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

Credit for ELEC 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 chair.

Certificates in Electrical Technology

Level I certificates are TASP-waived.

Level I Electrical Technician

	Semester Hrs
General Education Core	
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher math	3
Technical Core	
ELEC 1401 DC Circuits	4
ELEC 2404 Electrical Machinery and Controls	4
ELEC 2410 National Electrical Code	4
Total Hours	**18**

Level II Advanced Electrical Technician

	Semester Hrs
General Education Core	
COSC 1301 Introduction to Computer Systems	3
PSYC 2302 Applied Psychology	3
TMTH 1370 Technical College Mathematics OR higher math	3
Technical Core	
ELEC 1401 DC Circuits	4
ELEC 1404 Electronics I	4
ELEC 2205 Electronic Instruments	2
ELEC 2302 Electrical Power Technology	3
ELEC 2305 Electrical Business Operations	3
ELEC 2377 Cooperative Work Experience	3
(May be substituted with department chair's approval)	
ELEC 2400 Electronics II	4
ELEC 2404 Electrical Machinery and Controls	4
ELEC 2410 National Electrical Code	4
ELEC 2411 Programmable Logic Controllers	4
Total Hours	**44**

Course of Study for Associate in Applied Science Degree

Electronics Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR MATH 1371 College Algebra for Business OR MATH 1372 Technical College Algebra	3
PSYC 2302 Applied Psychology	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Elective	**3**

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

Major Requirements **39**
- ELEC 1401 D.C. Circuits 4
- ELEC 1402 Computer Circuits I 4
- ELEC 1403 A.C. Circuits 4
- ELEC 1404 Electronics I 4
- ELEC 1408 Computer Circuits II 4
- ELEC 2377 Cooperative Work Experience 3
- ELEC 2400 Electronics II 4
- ELEC 2401 Two Way Radio 4
- ELEC 2408 Computer Circuits III 4
- ELEC 2414 Circuit Analysis 4

Related Requirements **4**
- DRAF 1401 Technical Drafting 4

Total Semester Hours **66**

Credit for ELEC 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 chair.

Certificates in Electronics Technology

Level I certificates are TASP-waived.

Level I Certificate for Electronics Technician

Semester Hrs

General Education Core
- TMTH 1370 Technical College Math or higher math 3

Technical Core
- ELEC 1401 D.C. Circuits 4
- ELEC 1402 Computer Circuits I 4
- ELEC 1403 A.C. Circuits 4
- ELEC 1404 Electronics I 4
- ELEC 1408 Computer Circuits II 4

Total Semester Hours **23**

Level II Certificate for Advanced Electronics Technician

Semester Hrs

General Education Core
- COSC 1301 Introduction to Computer Systems 3
- ENGL 1312 Report Writing 3
- TMTH 1370 Technical College Math OR higher level math 3

Technical Core
- ELEC 1401 DC Circuits 4
- ELEC 1402 Computer Circuits I 4
- ELEC 1403 A.C. Circuits 4
- ELEC 1404 Electronics I 4
- ELEC 1408 Computer Circuits II 4
- ELEC 2400 Electronics II 4
- ELEC 2401 Two Way Radio 4
- ELEC 2408 Computer Circuits III 4
- ELEC 2414 Circuit Analysis 4

Total Semester Hours **45**

Electronics Technology Courses

ELEC 1401 D. C. Circuits

(3-3) .....4 hours

Presents principles and applications of direct current circuitry. Includes Ohm's Law, series-parallel circuits, batteries, meters, conductors, insulators and basic circuitry. Emphasis is placed on solving practical electrical problems by choosing appropriate math techniques. The electronics lab will enable the student, along with a lab partner, to choose the materials, tools, equipment, and procedures necessary to identify, construct and troubleshoot basic circuitry. (SCANS 3,5,8,9) Lab fee required. Prerequisite: None.

ELEC 1402 Computer Circuits I

(3-3) .....4 hours

Presents principles and applications of logic circuitry basic to computers, telemetry and automation. Includes gates; counters; adders; I/O, D/A, and A/D converters; storage devices; binary, octal, BCD, and hexadecimal systems. Emphasis is placed on designing, identifying, and constructing logic circuitry. The electronics lab will enable the student, along with a lab partner, to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot digital circuitry. Acquiring and evaluating information from technical manuals will be an integral part of the student's responsibility. (SCANS 5,6,7,8,9,10) Lab fee required. Prerequisite: None.

ELEC 1403 A.C. Circuits

(3-3) .....4 hours

Presents principles and applications of alternating current circuitry. Includes basic formulas pertaining to induction, capacitance, reactance, impedance and resonance. Emphasis is placed on solving practical problems by choosing appropriate math techniques. The electronics lab will enable the student, along with a lab partner, to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot alternating current circuitry. (SCANS 3,5,8,9) Requires a scientific calculator. Lab fee required. Prerequisite: ELEC 1401 or consent of the department chair.

ELEC 1404 Electronics I

(3-3) .....4 hours

Presents the fundamentals of solid state devices. Includes basic devices such as diodes, bipolar transistors, and field effect transistors. Emphasis is placed on designing and troubleshooting solid state systems such as power supplies, amplifiers, regulators and linear integrated circuits. By gathering information from technical manuals and interpreting schematics, the student, along with a lab partner, is able to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot solid state circuitry. (SCANS 1,5,7,8,9) Lab fee required. Prerequisite: ELEC 1401 or consent of the department chair.

ELEC 1408 Computer Circuits II

(3-3) .....4 hours

Presents terminology, principles and applications of microprocessors and associated peripheral circuitry such as EEPROMs, RAMs, and ROMs. Includes programming; machine and assembly languages; octal binary and hexadecimal systems. The student will construct a microprocessor trainer. By constructing a microprocessor trainer, the student is able, to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot microprocessor systems. By designing logic flowcharts, the student will also be able to identify design techniques used in microprocessor systems. (SCANS 2,3,7,8,9) Lab fee required. Prerequisite: ELEC 1402 or the consent of the department chair.

ELEC 2205 Electronic Instruments
(2-0) ..... 2 hours
Presents the principles in the operation of electronic instruments. Introduces methods used in instruments such as meters, oscilloscopes, power supplies, generators, counters, and controls. By interpreting schematics and technical catalogs, the student is able to identify circuitry used in electronic instruments. The student is also able to identify common problems and solve common problems in the instrumentation field. (SCANS 1,9) Prerequisite: ELEC 1404 or the consent of the department chair.

ELEC 2302 Electrical Power Technology
(3-0) ..... 3 hours
Presents methods and equipment for generation, transmission and distribution of electrical power. Emphasis is placed on the past, present, and future of electrical power technology including power consumption, power supplies, and alternative power supplies. The student is able to identify electrical power techniques by researching and presenting a written report on a related subject. (SCANS 6,10,11) Prerequisite: None.

ELEC 2305 Electrical/Electronics Business Operations
(3-0) ..... 3 hours
Introduces basic understanding of setting up and operating a small business. By designing a small business and preparing a budget for that business, the student is able to identify: types of ownership, types of loans, accounting techniques, marketing techniques, cash flow, legal aspects, material control, and equipment control. (SCANS 3,4,6,7,9,10) Prerequisite: None.

ELEC 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

ELEC 2400 Electronics II
(3-3) ..... 4 hours
A continuation of ELEC 1404. Includes devices such as operational amplifiers, oscillators, multivibrators, UJTs, SCRs, Diacs, Triacs, varactors and RF amplifiers. Emphasis is placed on designing and troubleshooting solid state systems such as oscillators, filters, solid state motor controls, and comparators. The electronics lab will enable the student, along with a lab partner, to choose the material, tools, equipment, and procedures necessary to identify, construct, and troubleshoot solid state circuitry. (SCANS 5,7,8,9) Lab fee required. Prerequisite: ELEC 1404 or consent of the department chair.

ELEC 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. Emphasis is placed on services and troubleshooting communication equipment such as two-way radios. The electronics lab will enable the student, along with a lab partner, to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot communication systems. (SCANS 5,7,8,9) Lab fee required. Prerequisite: ELEC 2400 or consent of the department chair.

ELEC 2404 Electrical Machinery and Controls
(3-3) ..... 4 hours
Presents principles, applications and peripherals of control circuitry. Includes electrical motors transformers, relays, contactors, starters, and ladder logic. Emphasis is placed on designing, constructing, and troubleshooting motor control systems. The electrical lab will enable the student, along with a lab partner, to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot electrical control circuitry. (SCANS 5,8,9) Lab fee required. Prerequisite: None.

ELEC 2408 Computer Circuits III
(3-3) ..... 4 hours
Presents terminology and principles of computer repair. Includes topics on operating systems, bus structures, disk drives, monitors, modems, and printers. The computer lab will enable the student to choose the procedure and equipment necessary to troubleshoot and repair modern computers and their peripheral devices. (SCANS 5,8,9) Lab fee required. Prerequisite: ELEC 1408.

ELEC 2410 National Electrical Code
(3-3) ..... 4 hours
Presents applications of the National Electrical code for industrial, commercial, and residential wiring. Emphasis is placed on designing, constructing, and troubleshooting electrical systems. The electrical lab will enable the student, along with a lab partner to choose the material, tools, equipment, and procedures necessary to identify, construct and troubleshoot electrical circuitry. (SCANS 5,8,9) Lab fee required. Prerequisite: None.

ELEC 2411 Programmable Logic Controllers
(3-3) ..... 4 hours
Introduces the use of programmable controllers and their related industrial and commercial uses. Emphasis is placed on methods and techniques used in programming control circuits. Students will learn programming techniques by using programmable controllers. The electrical lab will enable the student, along with a lab partner, to design and program ladder logic circuitry using devices such as shift registers, counters, sequences and timers. (SCANS 5,8,9) Lab fee required. Prerequisite: ELEC 2404 or consent of the department chair.

ELEC 2414 Circuit Analysis
(4-0) ..... 4 hours
Introduces students to computer analysis of electronic circuits. PSPICE, GENESIS, and other computer software will be used. Emphasis is placed on student designing and evaluating analog circuitry with the computer. The lab will enable students to write programs for diagnosis. The student will design and analyze resistive, reactive, transistor, and other circuits. (SCANS 2,6,7,8,9) Lab fee required. Prerequisite: ELEC 1403 and ELEC 1404 or consent of the department chair.

Emergency Medical Technology

Faculty: LeeDon Martin, chair; Phyllis Howard, 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 EMED 2801 and EMED 2802 is limited, and students are urged to contact the department chair early to ensure acceptance to the program. Applicants or those seeking additional information should contact the emergency medical technology director or counseling center.

Enrollment in EMED 1301, 2401, 2801 and 2802 requires student liability insurance. In addition to the student liability, the student will be responsible for other necessary equipment as well. This equipment is mandatory for class and the student should be aware of the extra costs involved. The student should contact the department chair or one of the faculty members before enrolling in the class to get a list of the necessary equipment.

Course of Study for Associate in Applied Science Degree

Emergency Medical Technology

First Year

First Semester

	Semester Hrs
BIOL 1170 Medical Terminology	1
BIOL 2401 Anatomy and Physiology I	4
ENGL 1301 Composition and Rhetoric	3
GOVT 2301 U.S. and Texas Government OR GOVT 2302 American National Government	3
MATH 1332 Structures of College Mathematics or higher level math	3
*PHED 1100 Lifestyle Assessment and Modification	1

Second Semester

BIOL 2402 Anatomy and Physiology II	4
EMED 1301 Clinical Practicum	3
EMED 1501 Emergency Care of Sick and Injured	5
ENGL 1302 Composition and Literature	3
*PHED (any one-hour activity course)	1

First Summer Session

EMED 2201 Basic Electrocardiography and Introduction to Emergency Pharmacology	2

Second Year

Third Semester

COSC 1301 Introduction to Computer Science	3
EMED 2801 Advanced Emergency Care of Sick and Injured	8
NURS 1201 Pharmacology	2
Elective	3-4

Fourth Semester

EMED 2802 Advanced Emergency Care of Sick and Injured	8
PSYC 2301 Introduction to Psychology	3
SPCH 1321 Business and Professional Speech	3
Total Semester Hours	**63-64**

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I Basic Emergency Medical Technician

First Semester

EMED 1301 Clinical Practicum	3
EMED 1501 Emergency Care of Sick and Injured	5
*PHED (any one-hour activity course)	1

Second Semester

COSC 1301 Introduction to Computer Science	3
SPCH 1321 Business and Professional Speech	3
Total Semester Hours	**15**

Level I Intermediate Emergency Medical Technician

First Semester
- EMED 1301 Clinical Practicum 3
- EMED 1501 Emergency Care of Sick and Injured 5
- SPCH 1321 Business and Professional Speech 3

Second Semester
- COSC 1301 Introduction to Computer Science 3
- EMED 2401 Intermediate Practicum 4
- EMED 2601 Intermediate Care of the Sick and Injured 6
- *PHED (any one-hour activity course) 1

Total Semester Hours 25

Level I Advanced Emergency Medical Technician

First Semester
- EMED 1301 Clinical Practicum 3
- EMED 1501 Emergency Care of Sick and Injured 5

Second Semester
- COSC 1301 Introduction to Computer Science 3
- EMED 2201 Basic Electrocardiography and Introduction to Emergency Pharmacology 2
- *PHED (any one-hour activity course) 1
- SPCH 1321 Business and Professional Speech 3

Third Semester
- EMED 2801 Advanced Emergency Care of the Sick or Injured 8

Fourth Semester
- EMED 2802 Advanced Emergency Care of the Sick or Injured 8

Total Semester Hours 33

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

Emergency Medical Technology Courses

EMED 1301 Clinical Practicum
(0-9) ..... 3 hours
Introduction to emergency patient care. Designed to complement EMED 1501 and required of students wishing to write the exam, for emergency medical technician. Includes students writing and interpreting patient records and relevant reports. Students learn to prioritize care, participate as part of the ambulance and hospital team, and perform skills to their level of knowledge and ability. Students will be exposed to the pre-hospital setting and hospital setting, and learn how to apply and use their knowledge and skills. The student will be responsible for achieving their EMED clinical goals and learn to communicate with instructors, hospital, and ambulance staff and patients. (SCANS 1,2,4,5,8,9,10,11) Corequisite: 18 years of age, EMED 1501.

EMED 1501 Emergency Care of the Sick and Injured
(4-4) ..... 5 hours
Introduction to roles and responsibilities of the emergency medical technician by presenting terminology, concepts and techniques of pre-hospital patient care. Students learn to prioritize emergency care, medical-legal aspects, functional anatomy, cardiac and pulmonary problems, wounds and fractures, medical and environmental emergencies, extrication, rescue and ambulance operations. Students will function as part of the pre-hospital team and learn how to control an emergency and apply their new knowledge and skills and achieve the goal of communicating with medical personnel and patients. Prepares student to write the basic EMED state certification. State certification requires EMED 1301 as a corequisite: Lab fee required. State certification fee required. (SCANS 1,2,4,5,7,8,9,10) Prerequisite: Must be 18 years of age.

EMED 2200 Emergency Medical Review
(2-0) .....2 hours
Presents periodic review of terminology, concepts and techniques needed to meet the continuing education needs of the EMT. Students learn methods of prioritizing tasks and skills as well as improved communication skills as well as the latest techniques and theories of emergency medicine. Lab fee required. (SCANS 1,2,4,8,9,11) Prerequisite: Basic EMT certification.

EMED 2201 Basic Electrocardiography and Introduction to Emergency Pharmacology
(4-0) [6 weeks] .....2 hours
Presents terminology, concepts and techniques needed to begin a study of paramedic level training. Covers cardiac fundamentals, cardiac monitoring and basic concepts of the electrical system of the heart. Presents emergency cardiac pharmacology concepts to students. Requires ability to perform basic drug calculations. (SCANS 1,3,6,9) *This course will be a prerequisite to EMED 2801 starting in the fall 1995 semester.

EMED 2400 Advanced Paramedic Review
(4-0) .....4 hours
Presents students with terminology, concepts, new technology of emergency medicine and team approach concepts. Allows students to learn new techniques and skills. (SCANS 1,2,5,8,9) Prerequisite: Current EMT-paramedic certification.

EMED 2401 Intermediate Practicum
(0-10) .....4 hours
Designed to complement EMED 2604. Presents clinical opportunities for the student to meet the competencies required on an EMT-I. Students work in various hospital departments and on an MICU ambulance, where they provide patient care. Students must be able to communicate with multiple agencies, have leadership qualities, be able to perform treatments. Students must be professional and have high medical ethic standards. (SCANS 1,2,5,8,9,10,11) Corequisite: EMED 2601.

EMED 2601 Intermediate Care of the Sick and Injured
(4-2) .....6 hours
Students will be introduced to intermediate level of emergency care of sick and injured patients. Students must be able to communicate with a medical director, medical facilities and mobile intensive care ambulance units. Students must be able to perform at a higher level than the EMT by mastering the intermediate skills of advanced airway procedures, IV therapy, advanced patient assessment and MAST pants therapy. Students must understand the anatomy and physiology in greater depth, and learn to assess patients to a higher degree who may require the advanced emergency care. Critical workplace competencies include leadership, decision making ability, team work with various other agencies. Personal qualities must include responsibility, sociability, self-motivation, self-management and good medical ethics to ensure safe and efficient patient care. Lab fee required. (SCANS 1,2,3,4,5,7,8,9,11) Prerequisites: Current Texas EMT certification and be 18 years of age. Corequisite: EMED 2401.

EMED 2801 Advanced Emergency Care of the Sick or Injured
(4-12) .....8 hours
Presents terminology, concepts, and techniques needed to care for the acutely ill. Students learn to read, write and interpret data and learn basic drug calculations, as well as learn to prioritize time and tasks and enhance their interpersonal team communications. Students learn advance skill techniques, and how to become part of the ambulance and hospital systems. Lab fee required. (SCANS 1,2,3,4,5,7,8,9,11) Prerequisite: EMED 2201 and EMT certification and consent of the department chair.

EMED 2802 Advanced Emergency Care of the Sick or Injured
(4-12) .....8 hours
A continuation of EMED 2801 which emphasizes advanced emergency care of the acutely ill.

Students will learn to read, write and interpret medical data concerning basic electrocardiology, obstetrics, pediatrics, rescue techniques, communication and management of emotionally disturbed. Students will be part of the ambulance and hospital teams and will be responsible for total patient care decisions. Students will learn independent thinking and decision-making techniques. At the completion of the course, students may take the EMT-paramedic state certification examination. Lab fee required. State exam fee required. (SCANS 1,2,3,5,8,9,10,11) Prerequisite: EMED 2801 and consent of the department chair.

Engineering

Faculty: George Brewer, chair.

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 1301 Composition and Rhetoric	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1348 Analytic Geometry	3
MATH 2313 Calculus I	3
*PHED (any two one-hour activity courses)	2
PHYS 2425 Engineering Physics I	4
PHYS 2426 Engineering Physics II	4
SPCH 1321 Business and Professional Speech	3
Major Requirements	**18**
ENGR 1304 Engineering Drawing	3
ENGR 2301 Mechanics I	3
ENGR 2302 Mechanics II	3
MATH 2314 Calculus II	3
MATH 2315 Calculus III	3
MATH 2320 Differential Equations	3
Related Requirements	**12**
CHEM 1111 Fundamentals of Chemistry Lab I	1
CHEM 1112 Fundamentals of Chemistry Lab II	1
CHEM 1311 General Inorganic Chemistry I	3
CHEM 1312 General Inorganic Chemistry II	3
COSC 1415 Introduction to Computer Science	4
Total Semester Hours	**64**

**PHED 1100 should be the first course taken in physical education.*
Chemical engineering majors should take Chemistry 2323, 2123, 2125 and 2325.
It is recommended that all engineering majors take MATH 2318 (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.

Engineering Courses

ENGR 1304 Engineering Drawing (48.0101.5129)
(2-4) ..... 3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3,6,9) Prerequisite: None.

ENGR 1370 Engineering Analysis (14.1101.5229)
(3-0) ..... 3 hours
Introduces the profession of engineering. Presents an overview of various disciplines within the engineering field. Includes methods of analyzing and solving engineering problems. Includes an introduction to FORTRAN. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3,6,9) Lab fee required. Prerequisite: None; however, algebra, trigonometry and physics backgrounds are recommended.

ENGR 1305 Descriptive Geometry (48.0101.5129)
(2-4) ..... 3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3,6,9) Prerequisite: ENGR 1304 or DT 1401.

ENGR 2301 Mechanics I (14.1101.5229)
(3-0) ..... 3 hours
A basic mechanics course utilizing vectors. 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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3,6,9) Prerequisite or corequisite: MATH 2314.

ENGR 2302 Mechanics II (14.1101.5329)
(3-0) ..... 3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3,6,9) Prerequisite: ENGR 2301.

English and Foreign Languages

Faculty: Ned Pilcher, chair; I-Fan Chen, Dr. Judith Comes, Wayne Johnson, Mark Jordan, Ulrike Kalt, Dr. Daryl Lane, Ivan Reyez, Donna Smith, Dr. Michael White, Lynn Whitson.

English

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.

Tutoring Labs

A tutoring lab is located in the Electronics Technology Building, Room 120. An additional writing lab, equipped with computers, 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.

Course of Study for Associate in Arts Degree

English Major

	Semester Hrs
General Education Requirements	**48**
COSC 1301 Introduction to Computer Systems	3
Foreign Language (FREN, GERM or SPAN 1411 and 1412)	8
Foreign Language (sophomore Level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
**MATH 1314 College Algebra OR	
MATH 1332 Structures of College Mathematics I	3
**MATH 1316 Plane Trigonometry OR	
MATH 1333 Structures of College Mathematics II OR	
MATH 1342 Mathematical Statistics	3
*PHED (any two one-hour activity courses)	2
Science (two sequential laboratory courses)	8
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3

Major Requirements 12
- ENGL 1301 Composition and Rhetoric 3
- ENGL 1302 Composition and Literature 3
- ENGL 2322 Survey of British Literature I 3
- ENGL 2323 Survey of British Literature II 3

Approved Electives 3

Total Semester Hours 63

**PHED 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.

*** Students should check math requirement of designated senior institution.*

English Courses

ENGL 0171 Sentence Structure (32.0108.5335)
(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 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Lab fee required. Prerequisite: Consent of the instructor.

ENGL 0172 Focus and Unity (32.0108.5335)
(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 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Lab fee required. Prerequisite: Consent of the instructor.

ENGL 0173 Organization and Development (36.0108.5335)
(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 as well as other composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Lab fee required. Prerequisite: Consent of the instructor.

ENGL 0174 Usage (32.0108.5335)
(0-1) ..... 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition and incorporation of standard usage in sentence composition, focusing on verb and pronoun usage, standard punctuation, modifier usage, plural and possessive conventions, and precise and appropriate word choice as well as other composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 2,9) Lab fee required. Prerequisite: Consent of the instructor.

ENGL 0370 Basic English (32.0108.5335)
(3-0) .....3 hours
A compensatory course designed to improve basic thinking and writing skills. Emphasizes essay development and use of conventional English. Requires essays composed in response to various prompts. Prepares student for ENGL 1301. 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 1301. (SCANS 2,9) Lab fee required for ENGL 0370 WP (Word Processing). Prerequisite: None. Corequisite: Students who have not taken and passed the reading section of TASP must enroll in a reading class.

ENGL 1301 Composition and Rhetoric (23.0401.5135)
(3-0) .....3 hours
Consists of essentials of correctness and effectiveness in writing skills. Emphasizes reading and writing expository prose. Requires expository essays and collateral readings. (SCANS 1,2,9) Lab fee required for ENGL 1301 (Word Processing). Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

ENGL 1302 Composition and Literature (23.0401.5135)
(3-0) .....3 hours
Consists of reading and analyzing selected works from the principle genres of literature and introduces research techniques. Requires analytical papers on literature, research exercises, supplemental readings and examinations. (SCANS 1,2,9) Prerequisite: ENGL 1301.

ENGL 1312 Report Writing (23.1101.5135)
(3-0) .....3 hours
Consists of reading and writing directions, proposals, abstracts, summaries, letters and other report forms commonly used in business and industry. Gives attention to style, paragraphing, organization, mechanics, and usage as they apply to technical writing. Students should check with senior college regarding course transferability. (SCANS 2,9,11) Lab free required for ENGL 1312 (Word Processing). Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

ENGL 1379 Advanced Composition and Rhetoric (23.0401.5135)
(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. (SCANS 2,9) Prerequisite: ENGL 1301.

ENGL 2307 Creative Writing (23.0501.5135)
(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. (SCANS 2,9) Prerequisite: ENGL 1302 or consent of the instructor.

ENGL 2311 Technical and Report Writing (23.1101.5135)
(3-0) .....3 hours
Consists of reading and writing technical documents used in business and industry. Offers practical experience in the use of technical terms and in the processes of collection, interpretation, organization, and textual presentation of data. Students should check with universities regarding course transferability. (SCANS 2,6,9) L ab fee required for ENGL 2311 (Word Processing). Prerequisite: ENGL 1302 or consent of the department chairperson.

ENGL 2322 Survey of British Literature I (23.0801.5135)
(3-0) .....3 hours
Consists of reading and analyzing significant works of British literature from the Old English period through the Neoclassical period. Requires research paper or several short analytical papers. Required of all English majors. (SCANS 1,2,9) Prerequisite: ENGL 1302.

ENGL 2323 Survey of British Literature II (23.0801.5135)
(3-0) .....3 hours
Consists of reading and analyzing significant works of British literature from the Romantic period to the present day. Requires research paper or several short analytical papers. Required of all English majors. (SCANS 1,2,9) Prerequisite: ENGL 1302.

ENGL 2327 Survey of American Literature I (23.0701.5135)
(3-0) .....3 hours
Consists of reading and analyzing significant works of American literature from the Colonial period through the Romantic period. Requires research paper or several short analytical papers. (SCANS 1,2,9) Prerequisite: ENGL 1302.

ENGL 2328 Survey of American Literature II 23.0701.5135)
(3-0) .....3 hours
Consists of reading and analyzing significant works of American literature from the Realistic period to the present day. Requires research paper or several short analytical papers. (SCANS 1,2,9) Prerequisite: ENGL 1302.

ENGL 2332 Survey of World Literature I (23.0301.5235)
(3-0) .....3 hours
Consists of reading and analyzing significant works of literature of the western world from the Classical period through the Renaissance. Requires research paper or several short analytical papers. (SCANS 1,2,9) Prerequisite: ENGL 1302.

ENGL 2333 Survey of World Literature II (23.0301.5235)
(3-0) .....3 hours
Consists of reading and analyzing significant works of literature of the western world from the Neoclassical period through the present day. Requires research paper or several short analytical papers. (SCANS 1,2,9) Prerequisite: ENGL 1302.

Options

Students who enroll in ENGL 0370-Word Processing or ENGL 1301-Word Processing and who lack keyboarding skills should also enroll in OE 1100 Basic Keyboarding Skills, a one-hour, eight-week course that develops touch-method skills on the alpha-numeric keyboard.

Students have two alternatives to regular ENGL 1302 courses listed above. The first is ENGL 1302-Film, which substitutes movies for written literature. The second is ENGL 1302-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 2327 and ENGL 2328. 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 2327. At this point, they may or may not choose to continue with ENGL 2328, which will be completed in the second half of the semester.

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	**43**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra	3
*PHED (any two one-hour activity courses)	2
Science (two sequential laboratory courses)	8
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Major Requirements	**22**
Foreign Language 1411 and 1412	8
Foreign Language 1411 and 1412 (second language)	8
Foreign Language (sophomore level)	6
Approved Elective	**3**
Total Semester Hours	**68**

**PHED 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

FREN 1411 First Year French I (16.0901.5131)
(3-2) ..... 4 hours
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. (SCANS 2,9) Lab fee required. Prerequisite: None.

FREN 1412 First Year French II (16.0901.5131)
(3-2) ..... 4 hours
A continuation of FREN 1411. Has same purposes and uses same techniques. (SCANS 2,9) Lab fee required. Prerequisite: FREN 1411 or its equivalent.

FREN 2311 Second Year French I (16.0901.5231)
(3-0) ..... 3 hours
A continuation of FREN 1411 and FREN 1412. Conducted in French. Emphasizes conversation based on reading assignments. Includes grammar and composition. Individual help available. (SCANS 2,9) Prerequisite: FREN 1412 or its equivalent.

FREN 2312 Second Year French II (16.0902.5232)
(3-0) .....3 hours
A continuation of FREN 2311. Has same purposes and uses same techniques. (SCANS 2,9) Prerequisite: FREN 2311 or its equivalent.

German

GERM 1411 First Year German I (16.0501.5131)
(3-2) .....4 hours
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. (SCANS 2,9) Lab fee required. Prerequisite: None.

GERM 1412 First Year German II (16.0501.5131)
(3-2) .....4 hours
A continuation of GERM 1411. Has same purposes and uses same techniques. Lab fee required. (SCANS 2,9) Prerequisite: GERM 1411 or its equivalent.

GERM 2311 Second Year German I (16.0501.5231)
(3-0) .....3 hours
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. (SCANS 2,9) Prerequisite: GERM 1412 or its equivalent.

GERM 2312 Second Year German II (16.0501.5231)
(3-0) .....3 hours
A continuation of GERM 2311. Has same purposes and uses same techniques. (SCANS 2,9) Prerequisite: GERM 2311 or its equivalent.

Latin

LATI 1411 First Year Latin I (16.1203.5131)
(3-2) .....4 hours
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. (SCANS 2,9) Lab fee required. Prerequisite: None.

LATI 1412 First Year Latin II (16.1203.5131)
(3-2) .....4 hours
A continuation of LATI 1411. Has same purposes and techniques, but goes further with vocabulary building and more advanced readings. (SCANS 2,9) Lab fee required. Prerequisite: LATI 1411 or its equivalent and consent of the instructor.

Spanish

SPAN 1300 Conversational Spanish I (16.0905.5431)
(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. (SCANS 2,9) Prerequisite: None.

SPAN 1310 Conversational Spanish II (16.0905.5431)
(3-0) .....3 hours
A continuation of SPAN 1300. Increases conversational ability and structural knowledge of Spanish. (SCANS 2,9) Prerequisite: SPAN 1300, its equivalent or consent of the instructor.

SPAN 1370 Intensive Spanish Practicum
(8-16)[2 weeks] .....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 round-trip airfare, room and board, institutional tuition and books. Odessa College fees not included. No previous knowledge of Spanish required. Students should check with senior college regarding course transferability. (SCANS 2,9) Prerequisite: None.

SPAN 1371 Spanish for Native Speakers of Spanish I
(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. (SCANS 2,9) Prerequisite: None.

SPAN 1372 Spanish for Native Speakers of Spanish II
(3-0) .....3 hours
A continuation of SPAN 1371. Examines structure of the language and uses advanced material for reading and writing. (SCANS 2,9) Prerequisite: SPAN 1371 or consent of the instructor.

SPAN 1411 First Year Spanish I (16.0905.5131)
(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. (SCANS 2,9) Lab fee required. Prerequisite: None.

SPAN 1412 First Year Spanish II (16.0905.5131)
(3-2) .....4 hours
Conducted in Spanish, a continuation of SPAN 1411. Emphasizes more advanced conversation: pronunciation, fluency and vocabulary. Presents more advanced grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available. Many course elements are self-paced. (SCANS 2,9) Lab fee required. Prerequisite: SPAN 1411 or its equivalent.

SPAN 2311 Second Year Spanish I (16.0905.5231)
(3-0).....3 hours
Conducted in Spanish, a continuation of SPAN 1411 and SPAN 1412. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many elements self-paced. (SCANS 2,9) Prerequisite: SPAN 1412 or its equivalent.

SPAN 2312 Second Year Spanish II (16.0905.5231)
(3-0).....3 hours
Conducted in Spanish, a continuation of Spanish 2311. Emphasizes conversation based on reading assignments. Includes grammar and composition. (SCANS 2,9) Prerequisite: SPAN 2311 or its equivalent.

SPAN 2321 Spanish Literature I (16.0905.5331)
(3-0) .....3 hours
Conducted in Spanish, 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. (SCANS 2,9) Prerequisite: SPAN 2312, its equivalent or consent of the instructor.

SPAN 2322 Spanish Literature II (16.0905.5331)
(3-0) .....3 hours
A continuation of SPAN 2321. Conducted in Spanish. Includes a further study of Spanish and Latin American literature and culture, along with conversation, writing and grammar review.

Environmental *(see Occupational Safety and Health Technology)*

Fire Technology

Faculty: LeeDon Martin, chair.

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 and the State Firemen's and Fire Marshals' Association.

Course of Study for Associate in Applied Science Degree

Fire Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing	3
ENGL 2311 Technical and Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1332 Structures of College Mathematics OR	
MATH 1372 Technical College Algebra OR higher level math	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**36**
FIRE 1301 Fundamentals of Fire Protection	3
FIRE 1304 Fire Protection Systems OR	
FIRE 2310 Fire Hydraulics and Equipment	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
FIRE 2377 Cooperative Work Experience	3
Related Requirements	**8**
EMED 1301 Clinical Practicum	3
EMED 1501 Emergency Care of the Sick and Injured	5
Total Semester Hours	**67**

A certificate of technology may be earned by those who do not wish to pursue an associate degree by completing the course of study listed below.

Certificates of Technology

Level I certificates are TASP-waived.

Level I Fire Protection

	Semester Hrs
General Education Requirements	**6**
COSC 1301 Introduction to Computer Systems	3
ENGL1312 Report Writing	3
Major Requirements	**21**
FIRE 1301 Fundamentals of Fire Protection	3
FIRE 2301 Fire and Arson Investigation	3
FIRE 2302 Building Codes and Construction	3
FIRE 2303 Fire Administration	3
FIRE 2306 Hazardous Materials	3
FIRE 2307 Fire Safety Education	3
FIRE 2316 Fire Ground Command	3
Related Requirements	**8**
EMED 1301 Clinical Practicum	3
EMED 1501 Emergency Care of the Sick and Injured	5
Total Semester Hours	**35**

Level I Fire Prevention and Arson Investigation

	Semester Hrs
General Education Requirements	**6**
COSC 1301 Introduction to Computer Systems	3
ENGL1312 Report Writing	3
Major Requirements	**27**
CRIJ 1301 Introduction to Criminal Justice	3
CRIJ 1306 The Courts and Criminal Procedure	3
CRIJ 2314 Criminal Investigation	3
CRIJ 2370 Physical Evidence and Investigation Techniques	3
FIRE 1301 Fundamentals of Fire Protection	3
FIRE 1305 Fire Prevention	3
FIRE 2301 Fire and Arson Investigation	3
FIRE 2302 Building Codes and Construction	3
FIRE 2303 Fire Administration	3
Total Semester Hours	**33**

Level I - Basic Fire Fighter Academy Certificate

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 three courses — 24 semester hours — in the fire technology curriculum. College credit for three 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 the student enrolls in the academy because space will be limited. Each student will be interviewed by the OC fire technology department chair, the Odessa Fire Department training chief and at least two of the three fire academy instructors. Upon satisfactory completion of the entire academy, the following credits will be awarded:

		Semester Hrs
FIRE 1385	Fire Prevention	3
FIRE 2381	Hazardous Materials	3
FIRE 2382	Fire Safety Education	3
FIRE 2581	Fundamentals of Fire Protection	5
FIRE 2582	Fire Hydraulics and Equipment	5
FIRE 2583	Fire Fighting Tactics and Strategy	5
Total Semester Hours		**24**

Students must complete the 24 semester hours of academy courses with a minimum grade of "C" in each class.

Fire Technology Courses

FIRE 1301 Fundamentals of Fire Protection
(3-0) ..... 3 hours
Presents history and philosophy of fire protection and evaluates the loss of life and property by fire. Introduces and locates the different agencies involved in fire protection. Students will select the proper technology to suppress and extinguish fires. Participants will catalogue, list, classify, and justify the specific requirements which must be considered in order to gain career employment at the local, state, and national level. Gives overview of the fire protection system including: suppression, arson investigation, fire prevention, hazardous materials, and emergency medical service. (SCANS 1,2,6,7,8,9) Prerequisite: None.

FIRE 1304 Fire Protection Systems
(3-0) ..... 3 hours
Will understand the required standards for water supply, special hazards, automatic signaling, detection, and protective systems as well as automatic sprinklers and extinguishing systems. Interprets the role of rating organizations and underwriting agencies. Project the required water flow to accomplish extinguishment. (SCANS 3,6,7,9) Prerequisite: None.

FIRE 1305 Fire Prevention
(3-0) ..... 3 hours
Students will understand the recognition of fire hazards and the objectives and views of inspections, fundamental principles, methods, techniques, and procedures of fire prevention administration. Will project the estimated expenditures and/or budget needs of fire prevention. Includes interpretation of fire prevention organization, 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 relative 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. (SCANS 3,7,8,9,10) Prerequisite: None.

FIRE 1306 Chemistry for Fire Fighters
(3-0) .....3 hours
The student will understand and deal with the principles of fire protection chemistry. Will deal with the study of the effects of fire on combustible and noncombustible materials and will understand the role of chemistry in the fire service. Will perform the basic calculations required to convert chemical equations. (SCANS 3,6,8,9) Prerequisite: None.

FIRE 1385 Fire Prevention
(3-0) .....3 hours
Students will understand the recognition of fire hazards and the objectives and views of administration. Will project the estimated expenditures and/or budget needs of fire prevention. Includes interpretation of the fire prevention organization, 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 relative 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. (SCANS 7,8,9,10) Prerequisite: None.

FIRE 2301 Fire and Arson Investigation
(3-0) .....3 hours
Deals with the problem of fire and arson in today's society. Introduces investigative theory, collection and preservation of evidence and sources of information. Students will be able to observe documents and other tangible items and determine their evidence quality, write reports on investigative findings, and learn to allocate resources, exercise leadership over activities, evaluate information and use creative thinking and deductive reasoning in the process of fire scene investigation. Students will become familiar with forensic sciences and processes for case preparation and trial procedures. (SCANS 2,4,5,6,7,9) Prerequisite: None.

FIRE 2302 Building Codes and Construction
(3-0) .....3 hours
Considers and interprets fundamentals of building construction and design. Emphasizes fire resistance of building materials and assemblies, exposures and related data focused on fire protection concerns. Student will select the correct technology for fire suppression, ventilation, and forcible entry. Reviews related statutory and suggested guidelines, both local and national. Reviews Model Building Codes and Life Safety Code. (SCANS 6,8,9) Prerequisite: None.

FIRE 2303 Fire Administration
(3-0) .....3 hours
Presents organization and management of fire departments. Includes budgeting, maintaining records and reports, and managing personnel. Also includes relation of various governmental agencies to fire protection areas. Views fire service leadership from the administrative position. (SCANS 6,7,9,10) Prerequisite: None.

FIRE 2306 Hazardous Materials
(3-0) .....3 hours
Student will understand and interpret the different chemical characteristics and behavior of various hazardous materials, including flammable liquids, combustible gases and solids. Emphasizes emergency situations and the most favorable methods of extinguishing, controlling, and handling such substances. (SCANS 6,8,9) Prerequisite: None.

FIRE 2307 Fire Safety Education
(3-0) .....3 hours
Evaluates the many different physical, chemical, and electrical hazards encountered by fire protection personnel. Students will interpret their relationship to loss of property and/or life. 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, at the fire station, and while driving emergency vehicles. (SCANS 6,7,8,9) Prerequisite: None.

FIRE 2310 Fire Hydraulics and Equipment
(3-0) .....3 hours
Interprets the laws of mathematics and physics to properties of fluid states, force pressure, and flow velocities. Students will perform basic calculations applying principles of hydraulics to fire fighting problems. Will select technology to evaluate water supply, flow requirements of standpipes, sprinklers, appliances and methods of determining available quantities of water for fire protection purposes. (SCANS 3,6,8,9) Prerequisite: FIRE 1301 or permission of department chair.

FIRE 2315 Fire Fighting Tactics and Strategy
(3-0) .....3 hours
Participants will cover the essential elements in analyzing the nature of fire and determining the requirements for extinguishment. Will select the correct technology to produce efficient and effective utilization of manpower and equipment. Emphasizes pre-planning, study of conflagration phenomena, fire ground organization and problem solving related to decision making and attack strategy and tactics. Includes use of mutual aid and large scale command problems. (SCANS 6,7,8,9) Prerequisite: FIRE 1301 or permission of department chair.

FIRE 2316 Fire Ground Command
(3-0) .....3 hours
Student will understand and demonstrate, in practice, the techniques for properly managing the fire or emergency scene. Fire scene operations will maintain the initial goal of safety and fire extinguishment. These technologies include assuming command, evaluating the situation, communicating, identifying strategies and developing plans, changes in command and total implementation. Emphasizes all aspects of the incident command system. (SCANS 6,8,9) Prerequisite: None.

FIRE 2377 Cooperative Work Experience
(1-20) .....3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

FIRE 2381 Hazardous Materials
(3-0) .....3 hours
Student will understand and interpret the different chemical characteristics and behavior of various hazardous materials, including flammable liquids, combustible gases and solids. Emphasizes emergency situations and the most favorable methods of extinguishing, controlling, and handling such substances. (SCANS 6,8,9) Prerequisite: None.

FIRE 2382 Fire Safety Education
(3-0) .....3 hours
Evaluates the many different physical, chemical, and electrical hazards encountered by fire protection personnel. Student will interpret their relationship to loss of property and/or life. 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, at the fire station, and while driving emergency vehicles. (SCANS 6,7,8,9,11) Prerequisite: None.

FIRE 2581 Fundamentals of Fire Protection
(3-4) .....5 hours
Presents history and philosophy of fire protection and reviews statistics of loss of life and property by fire. Introduces and locates the different agencies involved in fire protection. Students will select the proper technology to suppress and extinguish fires.

Participants will catalog, list, classify, and justify the specific requirements which must be considered in order to gain career employment at the local, state, and national level. Gives overview of the fire protection system including: suppression, arson investigation, fire prevention, hazardous materials, and emergency medical service. Lab fee required. (SCANS 1,2,6,7,8,9) Prerequisite: None.

FIRE 2582 Fire Hydraulics and Equipment
(3-3) .....5 hours
Interprets the laws of mathematics and physics to properties of fluid states, force pressure, and flow velocities. Students will perform basic calculations applying principles of hydraulics to fire fighting problems. Will select technology to evaluate water supply, flow requirements of standpipes, sprinklers, appliances and methods of determining available quantities of water for fire protection purposes. Lab fee required. (SCANS 3) Prerequisite: None.

FIRE 2583 Fire Fighting Tactics and Strategy
(3-3) .....5 hours
Participants will cover essential elements in analyzing the nature of fire and determining the requirements for extinguishment and will select the correct technology to produce efficient and effective utilization of manpower and equipment. Stresses efficient and effective utilization of manpower and equipment. Emphasizes pre-planning, study of conflagration phenomena, fire ground organization and problem solving related to decision making and attack strategy and tactics. Includes use of mutual aid and large scale command problems. Lab fee required. (SCANS 4,7,8,9) Prerequisite: None.

French *(see English and Foreign Languages)*

Geography *(see Geology, Anthropology and Geography)*

Geology, Anthropology and Geography

Faculty: G. Brent McAfee, chair.

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 on an increased interest in and understanding of their environment. However, for those majoring in geology, petroleum or civil engineering, and ecological or environmental studies, the first year of geology courses provides necessary background for further study. GEOL 1403 and GEOL 1404 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
Geology

	Semester Hrs
General Education Requirement	**58**
CHEM 1311 General Inorganic Chemistry I and CHEM 1111 Fundamentals of Chemistry Laboratory I	4
CHEM 1312 General Inorganic Chemistry II and CHEM 1112 Fundamentals of Chemistry Laboratory II	4
COSC 1415 Introduction to Computer Science	4
ENGL 1301 Composition and Rhetoric	3

ENGL 1302 Composition and Literature 3
ENGL (Sophomore level) 3
GOVT 2301 U.S. and Texas Government 3
GOVT 2302 American National Government 3
HIST 1301 U.S. History to 1877 3
HIST 1302 U.S. History from 1877 3
MATH 1314 College Algebra OR higher level math 3
MATH 1316 Plane Trigonometry OR higher level math 3
MATH 1348 Analytic Geometry OR higher level math 3
MATH 2313 Calculus I OR higher level math 3
*PHED (any two one-hour activity courses) 2
PHYS 1401 College Physics I OR PHYS 2425 Engineering Physics I 4
PHYS 1402 College Physics II OR PHYS 2426 Engineering Physics II 4
SPCH 1315 Public Speaking 3

Major Requirements 12
BIOL 2470 Marine Ecology 4
GEOL 1403 Physical Geology 4
GEOL 1404 Historical Geology 4

Total Semester Hours 70

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

GEOL 1403 Physical Geology (40.0601.5139)
(3-3) ..... 4 hours
This course is a study of the physical aspects of the Earth's crust. Students will study the origin, occurrence, and classification of minerals, rocks, structures and landforms. Laboratory activities involve the students in organizing and processing data related to the classification of minerals and rocks and principles underlying the relationships between topographic maps and geological processes. Lab fee required. (SCANS 6,9) Prerequisite: None.

GEOL 1404 Historical Geology (40.0601.5139)
(3-3) ..... 4 hours
Students study the chronological sequence of events in the physical history of the Earth and its life forms. Laboratory activities involve the students in acquiring and evaluating data related to fossils and their relationship to ancient environments. Students also organize and process data related to the classification of fossils and principles underlying the relationships between lithology, age, structure and geological map interpretation. Lab fee required. (SCANS 6,9) Prerequisite: None.

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 ANTH 2351 will fulfill social science requirements at many universities.

ANTH 2301 Physical Anthropology (45.0201.5142)
(3-0) ..... 3 hours
This course is a study of the physical characteristics of man. Students will interpret data related to modern man, fossil man, and higher primates. Students organize and process data related to physical characteristics of modern man and analyze principles underlying the relationships between modern man and prehistoric man. (SCANS 6,9) Prerequisite: GEOL 1403 or consent of the department chair.

ANTH 2351 Cultural Anthropology (45.0201.5142)
(3-0) ..... 3 hours
Students will study human culture in the historical perspective. Students also organize and process data related to the development of culture as well as comparing principles and relationships of present cultures. (SCANS 6,9) 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 1301 and GEOG 1302 will fulfill social science requirements at many colleges.

GEOG 1301 Principles of Geography I (45.0701.5142)
(3-0) ..... 3 hours
Students are taught to understand and interpret physical and cultural geography of North and South American countries. Students also organize and process data related to geographic maps of the various countries. (SCANS 6) Prerequisite: None.

GEOG 1302 Principles of Geography II (45.0701.5142)
(3-0) ..... 3 hours
Students study the physical and cultural geography of Europe, Asia, Africa, Australia, and the more important island groups. Students also organize and process data related to geographic maps of the countries and island groups. (SCANS 6) Prerequisite: None.

German *(see English and Foreign Languages)*

Government *(see Social Sciences)*

Heating, Ventilation, Air Conditioning Technology

Faculty: James Bates, chair.

Heating, ventilation and air conditioning (HVAC) 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
Heating, Ventilation, Air Conditioning

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR MATH 1371 College Algebra for Business OR MATH 1372 Technical College Algebra	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Technical Core	**16**
ELEC 2410 National Electrical Code	4
HVAC 1401 Refrigeration Theory	4
MAIN 1402 Plumbing Fundamentals	4
MAIN 2404 Structural Repair	4

Major Requirements **30**
- ELEC 2404 Electrical Machinery and Controls 4
- HVAC 1400 Basic Control Theory 4
- HVAC 1403 Commercial Refrigeration 4
- HVAC 1404 Heating 4
- HVAC 1405 Fundamentals of Sheet Metal 4
- HVAC 2302 Air Conditioning Design 3
- HVAC 2377 Cooperative Work Experience 3
- HVAC 2405 Mechanical Code 4

Total Semester Hours **66**

Certificate of Technology

Heating, Ventilation, Air Conditioning

Certificates of technology are available in the following job-specific fields. See the program chair for course requirements.

Level I certificates are TASP-waived.

Basic HVAC Technician (Level I)

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
HVAC 1400 Basic Control Theory	4
HVAC 1401 Refrigeration Theory	4
HVAC 1404 Heating	4
MATH 1314 College Algebra OR MATH 1372 Technical College Algebra OR MATH 1371 College Algebra for Business	3
PSYC 2302 Applied Psychology	3
Total Semester Hours	**21**

Sheet Metal Technician (Level I)

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
MATH 1314 College Algebra OR MATH 1371 College Algebra for Business OR MATH 1372 Technical College Algebra	3
HVAC 1405 Fundamentals of Sheet Metal Pattern Drafting and Layout	4
HVAC 2302 Air Conditioning Design	3
PSYC 2302 Applied Psychology	3
Total Semester Hours	**16**

Commercial Refrigeration Maintenance Technician (Level I)

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ELEC 2410 National Electrical Code	4
HVAC 1400 Basic Control Theory	4
HVAC 1401 Refrigeration Theory	4
HVAC 1403 Commercial Refrigeration	4
HVAC 2404 Refrigeration & Air Conditioning System Troubleshooting	4
MAIN 1402 Plumbing Fundamentals	4
MAIN 2404 Structural Repair	4
MATH 1314 College Algebra OR MATH 1372 Technical College Algebra OR MATH 1371 College Algebra for Business	3
PSYC 2302 Applied Psychology	3
Total Semester Hours	**37**

Advanced HVAC Technician (Level II)

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ELEC 2410 National Electrical Code	4
MATH 1314 College Algebra OR MATH 1371 College Algebra for Business OR MATH 1372 Technical College Algebra	3
HVAC 1400 Basic Control Theory	4
HVAC 1401 Refrigeration Theory	4
HVAC 1403 Commercial Refrigeration	4
HVAC 1404 Heating	4
HVAC 2302 Air Conditioning Design	3
HVAC 2305 Refrigeration and Air Conditioning Business Operations	3
HVAC 2405 Mechanical Code	4
HVAC 2409 Building Energy Audit Training	4
PSYC 2302 Applied Psychology	3
Total Semester Hours	**43**

HVAC Shop Manager — Advanced Skills Certificate (Level III)

	Semester Hrs
MGMT 1301 Introduction to Management	3
MGMT 1302 Managerial Functions	3
MGMT 2304 Personnel and Human Relations	3
MGMT 2306 Human Resource Management	3
Total Semester Hours	**12**

Heating, Ventilation, Air Conditioning Technology Courses

HVAC 1400 Basic Control Theory
(3-3) ..... 4 hours
Course includes the understanding and interpretation of schematic diagrams and basic electricity technology and progresses to electric motors, design and function of starters, contactors, relays, capacitors, overloads and control circuits applicable to the refrigeration and air conditioning industry. Students will perform mathematical calculations pertaining to OHMS Law and learn to deal with customer expectations. Lab fee required. (SCANS 1,3,5,8) Prerequisite: None. Corequisite: HVAC 1401.

HVAC 1401 Refrigeration Theory
(3-3) ..... 4 hours
Competencies include the technology of heat transfer, behavior of gases, refrigeration cycle, component parts of the compression refrigeration machine and its accessories. Students will learn to understand and interpret charging charts in order to charge systems, recover refrigerant using UL approved recovery systems. Students will be exposed to customer relations and troubleshooting techniques. (SCANS 1,5,8,9) Lab fee required. Prerequisite: None.

HVAC 1403 Commercial Refrigeration
(3-3) ..... 4 hours
Focuses on commercial refrigeration component technology. Designed for competency in theory and application of metering devices, evaporators, compressors, condensers, driers, sight glasses, system accessories, sizing of walk-in and reach-in boxes and line sizing. Customer relations and responsibility are stressed. (SCANS 3,5,8,9) Lab fee required. Prerequisite: HVAC 1401.

HVAC 1404 Heating
(3-3) ..... 4 hours
Competencies include 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, troubleshooting, and customer relations. (SCANS 5,8,9) Lab fee required. Prerequisite: None.

HVAC 1405 Fundamentals of Sheet Metal Layout
(3-3) ..... 4 hours
Competencies include the technology of basic sheet metal, the use of metal tools and calculations using fractions to enable the student to draw and interpret basic sheet metal sketches and construct projects from blueprints. Students will learn to work as a group on projects. (SCANS 1,2,3,8,10) Lab fee required.

HVAC 2302 Air Conditioning Design
(3-0) ..... 3 hours
Competencies include sizing and selecting air conditioning equipment and designing air distribution systems. Emphasizes estimating loads of residential and commercial applications. Students will learn to interpret blueprints and properly fill out heat load forms. (SCANS 1,3,8) Prerequisite: None.

HVAC 2305 Refrigeration and Air Conditioning Business Operations
(3-0) ..... 3 hours
Competencies include the basic understanding of set up and operating procedures of a small HVAC business. Topics include types of ownership, types of loans, accounting, marketing, taxation, cash flow, legal aspects and equipment and material control. (SCANS 3, 7, 10) Prerequisite: None.

HVAC 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10, 11) Prerequisite: Sophomore standing and consent of the department chair.

HVAC 2404 Refrigeration and Air Conditioning System Troubleshooting
(3-3) ..... 4 hours
Competencies prepare students to troubleshoot refrigeration and air conditioning systems and use of troubleshooting charts as well as dealing with customer's expectations. Emphasizes the mechanical refrigeration system. (SCANS 1,5,7,8,9) Prerequisite: HVAC 1400 and HVAC 1401.

HVAC 2405 Mechanical Code
(3-3) ..... 4 hours
Presents an overview of all HVAC courses and Electrical systems as related to HVAC, theories and concepts with special emphasis on the understanding, interpretation and documentation of the mechanical code and requirements for the state mechanical contractor's license. (SCANS 1,2,7,8) Prerequisite: HVAC 1401 or consent of the department chair.

HVAC 2409 Building Energy Audit Training
(3-3) ..... 4 hours
Competencies include methods of performing a building energy audit. Students will identify and evaluate available energy conservation options and evaluate differing air conditioning, lighting and refrigeration systems in order to help customers make the best selection. (SCANS 3,5,6,8) Lab fee required. Prerequisite: None.

History *(see Social Sciences)*

Human Development *(see Orientation)*

Humanities *(see Art and Humanities)*

Human Services

Faculty: James Jordan, chair.

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 (TCADA) in order to accept 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 or a certificate of completion in human services. The human services program also is approved by the Texas Association of Alcohol and Drug Abuse Counselors (TAADAC).

Course of Study for Associate in Applied Science Degree

Alcohol and Drug Abuse

	Semester Hrs
General Education Requirements	**38**
CHLD 1304 The Abused and Neglected Child	3
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
GOVT 2301 U.S. and Texas Government OR GOVT 2302 American National Government	3
MATH 1332 Structures of College Mathematics I OR higher level math	3
*PHED (any two one-hour activity courses)	2
PSYC 2301 Introduction to Psychology	3
PSYC 2302 Applied Psychology	3
SOCI 1301 Principles of Sociology	3
SOCI 1306 Social Problems	3
SOCI 2301 Sociology of the Family	3
SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**22**
HUMS 1301 Introduction to Chemical Dependency	3
HUMS 1302 Issues in Chemical Dependency	3
HUMS 1306 Basic Counseling Skills I	3
HUMS 1308 Basic Counseling Skills II	3
HUMS 2310 Special Studies in Chemical Dependency	3
HUMS 2401 Counseling Skills III	4
HUMS 2350 Clinical Practicum	3
Total Semester Hours	**63**

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

Students who wish only to qualify to take the TCADA licensure or TAADAC certification examination may do so by successfully completing 22 semester hours of human services courses.

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

Human Services Certificate 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 human services field as quickly as possible. Individuals who complete this program secure employment and may continue their studies toward a degree on a part-time basis without having to repeat major or related courses in the degree sequence.

Level I certificates are TASP-waived.

Course of Study for Certificate of Completion

Level I - Alcohol and Drug Abuse

	Semester Hrs
General Education Requirement	**12**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
MATH 1332 Structures of College Mathematics I OR higher level math	3
SPCH 1321 Business and Professional Speech	3
Major Requirements	**22**
HUMS 1301 Introduction to Chemical Dependency	3
HUMS 1302 Issues in Chemical Dependency	3
HUMS 1306 Basic Counseling Skills I	3
HUMS 1308 Basic Counseling Skills II	3
HUMS 2310 Special Studies in Chemical Dependency	3
HUMS 2350 Clinical Practicum	3
HUMS 2401 Counseling Skills III	4
Total Semester Hours	**34**

Human Services Courses

HUMS 1301 Introduction to Chemical Dependency

(3-0) ..... 3 hours

Presents an overview of chemical dependency, including concepts of addiction, the family, and the recovery process. Students will learn the complex interrelationships associated with addiction, the value of self-esteem, honesty, and integrity, and problem resolution involving divergent interests. Written and verbal communications will be highlighted as will interpretational skills. (SCANS 5,7,9,10) Prerequisite: None.

HUMS 1302 Issues in Chemical Dependency

(3-0) ..... 3 hours

Presents a detailed study of interpersonal behavior patterns, lifestyles, and social relationships associated with chemical dependency. Students will acquire and evaluate technical information pertaining to all major drug groups and be able to relate this information using didactic methods. Responsibility, self-esteem, integrity and honesty will be re-emphasized. (SCANS 5,6,10,11) Prerequisite: None.

HUMS 1306 Basic Counseling Skills I

(3-0) ..... 3 hours

Introduces the basic model of chemical dependency counseling therapy. Includes concepts of active listening, empathy, challenging and goal setting. Teaching others new skills, interpreting verbal and non-verbal cues, and monitoring client outcomes will be discussed. (SCANS 5,6,9,11) Prerequisite: None.

HUMS 1308 Basic Counseling Skills II
(3-0) .....3 hours
Introduces various chemical dependency counseling theories and provides a basis for developing individual counseling styles. Problem solving using probing, confrontation, and goal setting will be practiced in class using the methods discussed. Listening, communicating, and teaching individually and in groups will be focal points. (SCANS 5,6,9,10,11) Prerequisite: None.

HUMS 2310 Special Studies in Chemical Dependency
(3-0) .....3 hours
Introduces the student to the practical aspects of chemical dependency counseling. Interviewing techniques, case history preparation, treatment planning, assessment interpretation, group dynamics, and discharge summary analysis will be performed. Students will use individual and team approaches to manage resources, evaluate information, and propose creative ideas regarding client management. Oral presentations will be emphasized as well as listening skills. (SCANS 5,6,9,11) Prerequisite: HUMS 1301, HUMS 1302, HUMS 1306, and HUMS 1308, or department chair approval.

HUMS 2350 Clinical Practicum
(1-20) .....3 hours
Presents the 12 core functions of chemical dependency counseling in a clinical setting. Students will be required to work in a local substance abuse treatment center for a minimum of 300 hours during the semester fulfilling the Texas Commission on Alcohol and Drug Abuse practicum license requirement. Students will demonstrate their knowledge and understanding of resource management, interpersonal skills, information acquisition and interpretation, thinking, and personal listening and speaking skills. (SCANS 4,5,6,9,10,11) Prerequisites: Must be eligible to apply for counselor intern (CI) status through TCADA and/or counselor-in-training (CIT) status through TAADAC; a "B" average for all prior HUMS coursework; and department chair approval.

HUMS 2401 Counseling Skills III
(4-0) .....4 hours
Emphasis will be placed on the 12 core functions of chemical dependency counseling, including practical experience in utilizing counseling skills using micro-counseling techniques. Counseling ethics, AIDS, gambling addiction and sexual abuse will be discussed. Individual student personal qualities, creative thinking, listening and speaking skills, resource management, writing and interpersonal skills will be emphasized and sharpened. (SCANS 4,5,7,9,10,11) Prerequisites: HUMS 1301, HUMS 1302, HUMS 1306, and HUMS 1308.

Latin *(see English and Foreign Languages)*

Law Enforcement/Criminal Justice

Faculty: Sidney Lyle, chair; Annie Littlefield, paraprofessional; Jim McKown, Geoffrey Schwende.

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 chair.

Course of Study for Associate in Applied Science Degrees

Law Enforcement/Criminal Justice Option

	Semester Hrs
General Education Requirements	**17**
*COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government OR	
GOVT 2302 American National Government	3
MATH 1332 Structures of College Mathematics I OR	
MATH 1372 Technical College Algebra or higher level math	3
**PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Related Requirements	**3**
OFST 1321 Beginning Keyboarding OR	
OFST 1322 Intermediate Keyboarding OR	
OFST 1404 Beginning Word Processing	3
Major Requirements	**36**
*CRIJ 1301 Introduction to Criminal Justice	3
CRIJ 1306 The Courts and Criminal Procedure	3
*CRIJ 1307 Crime In America	3
CRIJ 1310 Fundamentals of Criminal Law	3
CRIJ 1318 Patrol Administration	3
CRIJ 1322 Traffic Law	3
CRIJ 1379 Law Enforcement Telecommunications	3
CRIJ 2314 Criminal Investigation	3
*CRIJ 2320 County Corrections	3
CRIJ 2323 Legal Aspects of Law Enforcement	3
CRIJ 2328 Police Systems and Practices	3
CRIJ 2331 Traffic Management and Supervision	3

AND any nine hours selected from the following pool of courses **9**
- CRIJ 1321 Probation and Parole 3
- CRIJ 2322 Juvenile Procedures 3
- CRIJ 2325 Correction Systems and Practices 3
- CRIJ 2330 Community Corrections and Rehabilitation 3
- CRIJ 2370 Physical Evidence & Investigation Techniques 3
- CRIJ 2374 Fundamentals of Interviewing 3
- CRIJ 2471 Firearms Proficiency 4
- CRIJ 2572 Introduction to Pre-Trial Release Services 5
- CRIJ 2578 Human Behavior Patterns 5
- PSYC 2302 Applied Psychology 3
- SPAN 1411 First Year Spanish I 4

Total Semester Hours **65**

***PHED 1100 should be the first course taken in physical education. PHED 1118 and PHED 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, CRIJ 2475 and CRIJ 2476 for CRIJ 1310 and CRIJ 2471.*

**Denotes courses which may be articulated from high school based on articulation agreements between Odessa College and an independent school district. Non-tech-prep students who desire to enroll in the program at Odessa College must complete these courses along with other leveling or bridge courses as indicated by assessment results and educational background.*

Students must complete 65 hours as approved by the department chair to meet degree requirements. Any variance from prerequisites or any substitution of courses must have prior, written approval.

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: CRIJ 1301, CRIJ 1306, CRIJ 1307, CRIJ 1310, CRIJ 2314, CRIJ 2323 and CRIJ 2328. 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.

Law Enforcement/Corrections Option

Semester Hrs

General Education Requirements **17**
- *COSC 1301 Introduction to Computer Systems 3
- ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing 3
- GOVT 2301 U.S. and Texas Government OR
  GOVT 2302 American National Government 3
- MATH 1332 Structures of College Mathematics I OR
  MATH 1372 Technical College Algebra or higher level math 3
- **PHED (any two one-hour activity courses) 2
- SPCH 1315 Public Speaking OR
  SPCH 1321 Business and Professional Speech 3

Related Requirements **3**
- OFST 1321 Beginning Keyboarding OR
  OFST 1322 Intermediate Keyboarding OR
  OFST 1404 Beginning Word Processing 3

Major Requirements **36**
- *CRIJ 1301 Introduction to Criminal Justice 3
- CRIJ 1306 The Courts and Criminal Procedure 3
- *CRIJ 1307 Crime In America 3
- CRIJ 1310 Fundamentals of Criminal Law 3
- CRIJ 1321 Probation and Parole 3
- CRIJ 1379 Law Enforcement Telecommunications 3
- CRIJ 2314 Criminal Investigation 3

*CRIJ 2320 County Corrections 3
CRIJ 2322 Juvenile Procedures 3
CRIJ 2323 Legal Aspects of Law Enforcement 3
CRIJ 2325 Correction Systems and Practice 3
CRIJ 2330 Community Correction and Rehabilitation 3

AND any nine hours selected from the following pool of courses 9
CRIJ 1318 Patrol Administration 3
CRIJ 1322 Traffic Law 3
CRIJ 1390 Armed Private Security Investigator 3
CRIJ 2328 Police Systems and Practice 3
CRIJ 2331 Traffic Management and Supervision 3
CRIJ 2370 Physical Evidence and Investigation Techniques 3
CRIJ 2374 Fundamentals of Interviewing 3
CRIJ 2385 Spanish for Law Enforcement and Emergency Workers 4
CRIJ 2471 Firearms Proficiency 4
CRIJ 2572 Introduction to Pre-Trial Release Services 5
CRIJ 2578 Human Behavior Patterns 5
PSYC 2302 Applied Psychology 3
SPAN 1411 First Year Spanish I 4

Total Semester Hours 65

***PHED 1100 should be the first course taken in physical education. PHED 1118 and PHED 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, CRIJ 2475 and CRIJ 2476 for CRIJ 1310 and CRIJ 2471.*

**Denotes courses which may be articulated from high school based on articulation agreements between Odessa College and an independent school district. Non-tech-prep students who desire to enroll in the program at Odessa College must complete these courses along with other leveling or bridge courses as indicated by assessment results and educational background.*

Students must complete 65 hours as approved by the department chair to meet degree requirements. Any variance from prerequisites or any substitution of courses must have prior, written approval.

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: CRIJ 1301, CRIJ 1306, CRIJ 1307, CRIJ 1310, CRIJ 2314, CRIJ 2323 and CRIJ 2328. 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.

Certificate of Completion in Law Enforcement

Level I certificates are TASP-waived.

Level I - County Correctional Officer

Semester Hrs

General Education Requirements 6
*COSC 1301 Introduction to Computer Systems 3
*OFST 1321 Beginning Keyboarding OR
*OFST 1322 Intermediate Keyboarding OR
*OFST 1404 Beginning Word Processing 3

Major Requirements 9
*CRIJ 1301 Introduction to Criminal Justice 3
*CRIJ 1307 Crime In America 3
*CRIJ 2320 County Corrections 3

Total Semester Hours 15

Level I - State Prison Guard

This is a basic program for persons interested in a career as a correctional officer (state prison guard). The following certificate contains the training curriculum segments mandated by the Texas Department of Criminal Justice, Institutional Division (TDCJ-ID).

	Semester Hrs
General Education Requirements	**6**
*COSC 1301 Introduction to Computer Systems	3
*OFST 1321 Beginning Keyboarding OR	
*OFST 1322 Intermediate Keyboarding OR	
*OFST 1404 Beginning Word Processing	3
Major Requirements	**9**
CRIJ 1371 Correctional Officer Theory and Technique	3
CRIJ 1372 Correctional Officer Procedure	3
CRIJ 1373 Correctional Officer Skills	3
Total Semester Hours	**15**

Prior to admission to the correctional officer program, applicants must be approved by the TDCJ-ID which will include the following qualifications:

1. Be at least 18 years of age.
2. Be a high school graduate or possess a state GED.
3. Complete the TDCJ application with all attachments.
4. Pass the TDCJ entrance examination.
5. Pass the pre-employment interview.
6. Pass a background check.

Level I - Emergency Telecommunications/Dispatcher

	Semester Hrs
General Education Requirements	**12**
*COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
*OFST 1321 Beginning Keyboarding OR	
*OFST 1322 Intermediate Keyboarding OR	
*OFST 1404 Beginning Word Processing	3
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speaking	3
Major Requirements	**21**
*CRIJ 1301 Introduction to Criminal Justice	3
CRIJ 1306 The Courts and Criminal Procedure	3
*CRIJ 1307 Crime In America	3
CRIJ 1310 Fundamentals of Criminal Law	3
CRIJ 1379 Law Enforcement Telecommunications	3
CRIJ 2314 Criminal Investigation	3
*CRIJ 2320 County Corrections	3
Total Semester Hours	**33**

**Denotes courses which may be articulated from high school based on articulation agreements between Odessa College and an independent school district. Non-tech-prep students who desire to enroll in the program at Odessa College must complete these courses along with other leveling or bridge courses as indicated by assessment results and educational background.*

Odessa College Basic Law Enforcement Academy Certificate (Level I)

The basic academy 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 nine courses (30 semester hours) in the law enforcement curriculum. College credit for the nine 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 complete the following:
1. ASSET Test, and
2. A sworn personal history statement with all required attachments.

Individuals may enroll only in the peace officer sequence (CRIJ 2474, CRIJ 2475 and CRIJ 2476) if they can first show proof of having successfully completed the seven transfer courses.

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

	Semester Hrs
CRIJ 1301 Introduction to Criminal Justice	3
CRIJ 1306 The Courts and Criminal Procedure	3
CRIJ 1322 Traffic Law	3
CRIJ 2314 Criminal Investigation	3
CRIJ 2323 Legal Aspects of Law Enforcement	3
CRIJ 2374 Fundamentals of Interviewing	3
CRIJ 2474 Texas Peace Officer Law	4
CRIJ 2475 Texas Peace Officer Procedures	4
CRIJ 2476 Texas Peace Officer Skills	4
Total Semester Hours	**30**

Certificates of Completion in Law Enforcement Advanced Skills

Level III - Texas Peace Officer

	Semester Hrs
Major Requirements	**12**
CRIJ 2474 Texas Peace Officer Law	4
CRIJ 2475 Texas Peace Officer Procedures	4
CRIJ 2476 Texas Peace Officer Skills	4
Total Semester Hours	**12**

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 CRIJ 2474, CRIJ 2475, and CRIJ 2476 (TCLEOSE sequence courses) **and** successful completion of the seven transfer courses (CRIJ 1301, CRIJ 1306, CRIJ 1307, CRIJ 1310, CRIJ 2314, CRIJ 2323, and CRIJ 2328) OR
2. Successful completion of the law enforcement academy.

Upon successful completion of either method, students will be awarded an advanced skills level III - Texas peace officer certificate from Odessa College and will be eligible to apply for peace officer licensure.

Level III - Texas Peace Officer Advanced Skills

	Semester Hrs
Major Requirements	**8**
CRIJ 2183 Use of Force	1
CRIJ 2184 Arrest, Search and Seizure	1
CRIJ 2280 Child Abuse Recognition	2
CRIJ 2281 Crime Scene Search	2
CRIJ 2282 Advanced Texas Peace Officer Skills	2
Total Semester Hours	**8**

Law Enforcement/Criminal Justice Courses

CRIJ 1301 Introduction to Criminal Justice
(3-0) ..... 3 hours
Presents history and philosophy of criminal justice and its ethical considerations. Students will use terms, concepts, and applications to identify and explain the relationships between the three branches of government, prepare written reports and charts explaining the flow of investigative information to, and jurisdiction of, the various court systems. Participants will catalogue, list, classify, and justify the specific requirements which must be met in order to gain career employment at the local, state, and national level. Recognize crime problems and crime's nature and impact on society. Gives overview of the criminal justice system: law enforcement, the courts, prosecution and defense, the trial process, and corrections. (SCANS 1,2,5,6,9,11) Prerequisite: None.

CRIJ 1306 The Courts and Criminal Procedure
(3-0) ..... 3 hours
Students will learn, understand, and be able to explain the functions of the judiciary in the criminal justice system. Class participants will write quality reports dealing with probable cause, the exclusionary rule and other vital subjects related to the judiciary. The student will demonstrate knowledge in selecting the court and court process whereby the criminal justice system is structured. Team projects and assignments will include the analysis of written and spoken words that capture the essence of the Supreme Court, and demonstrate an understanding of the management of rules of evidence and sentencing, right to counsel, pretrial release, grand juries, and the adjudication process. (SCANS 1,2,5,6,7,9,11) Prerequisite CRIJ 1301.

CRIJ 1307 Crime in America
(3-0) ..... 3 hours
Presents in historical perspective the problems of crime in America, and requires the student to interpret data and relate that data to current crime impact on society. Determine the allocation of resources needed to affect crime, explain the part-one and part-two crime reports, sociological, cultural, and financial status as a contributor to the overall crime picture. Students will demonstrate and apply knowledge of crime statistics to the management principles of a policing agency; students will compile numerical data for planning purposes. Students will recognize and list the various theories which attempt to explain why crime occurs. A systems approach to crime prevention will be explored and the student will develop and prepare a list of suggestions based on the course content which may reduce criminal conduct in specific crimes, and improve the techniques of overall crime prevention. (SCANS 1,2,3,4,6,7,9,11) Prerequisite: None.

CRIJ 1310 Fundamentals of Criminal Law
(3-0) ..... 3 hours
Students will understand and be able to apply the principles of law as it applies to the maintenance of order in a civilized society and list the penalties associated with the various offenses. The student will acquire the skills needed to determine specific offenses based upon the recognition of the classifications, and elements of crime and criminal responsibility, and will be able to identify specific chargeable offenses embodied in crime scene scenarios. The student will chart the occurrence of crime and its prevention on a time continuum, and demonstrate the allocation of resources as a tool for the understanding of criminal law. (SCANS 1,4,6,7,9,11) Prerequisite: CRIJ 1301.

CRIJ 1318 Patrol Administration
(3-0) .....3 hours
Introduces an overview of administration of the police patrol. Students will study distribution charts and graphs in order to determine what is required in an adequate patrol function from the point of view of the patrol officer, first-line supervisor, and the administration, supervisory and management responsibilities, and learn to apply primary thinking skills to problem solving. The administration process is in constant change requiring each student to demonstrate how the organization meets the skills of applied technology in an ever changing environment. Students will demonstrate their ability to evaluate and defend their own concept of management skills and learn to integrate new found principles into their own operational format and communicate to others the most appropriate options in the administration of the patrol function. (SCANS 1,4,5,6,8,9,10,11) Prerequisite: None.

CRIJ 1321 Probation and Parole
(3-0) .....3 hours
The history and evolution of the probation and parole function will be analyzed and evaluated on a cost basis, both to the individual and to society. The student will submit written reports documenting the successes and failures of the probation and parole system, and will theorize about the future of such activities. The student will be able to relate to the needs and duties of probation and parole and apply problem solving techniques to overcome short term and long term difficulties. (SCANS 2,7,9,11) Prerequisite: None.

CRIJ 1322 Traffic Law
(3-0) .....3 hours
This class presents the basic principles of traffic control, traffic law enforcement, and traffic court procedure in the context of Texas traffic laws. Students will read and interpret traffic laws as prescribed by the legislature and the courts, reconcile differences between strict enforcement and discretionary enforcement of state traffic laws, apply problem solving skills to traffic direction and control, and anticipate future changes. The student will apply measurement to the accident scene and use qualitative mathematical formulas in order to determine speed, direction, and kinetic energy at an accident scene. (SCANS 3,6,9,11) Prerequisite: None.

CRIJ 1371 Correctional Officer Theory and Technique
(3-0) .....3 hours
This class requires the student to relate to the concepts associated with correction officer activity and to be able to perform the duties required by the Texas Department of Criminal Justice. Students will research and understand the theory behind time management and the correctional system. The course familiarizes the student with the benefits and obligations covered under the rules of general conduct and the standards for inmate management through listening and directing others. (SCANS 1,2,4,6,7,9,11) Corequisites: CRIJ 1372 and CRIJ 1373.

CRIJ 1372 Correctional Officer Procedure
(3-0) .....3 hours
The body of instruction in this course includes the procedures required in the distribution of services to the inmates. The techniques of providing services including food, clothing, housing, medical, safety, and mail as well as other supportive functions will be developed. Students are also instructed in cultural awareness and substance abuse/chemical dependency. All students will develop an appreciation for work required in maintaining a correctional facility. (SCANS 1,2,9,10,11) Corequisites: CRIJ 1371 and CRIJ 1373.

CRIJ 1373 Correctional Officer Skills
(3-0) .....3 hours
During this class the student will become involved in hands-on instruction in those areas which train the correctional officer to function under adverse conditions. The student will practice techniques of inmate control, handling violent offenders, CPR and first aid training, riot control, firearms proficiency, and non-violent crisis intervention. (SCANS 1,2,7,9,10,11) Corequisites: CRIJ 1371 and CRIJ 1372.

CRIJ 1379 Law Enforcement Telecommunications
(3-0) ..... 3 hours
This class requires the student to interpret concepts of telecommunication and develop a flow-chart of interactive responses between various criminal justice agencies. The student will exercise leadership and communication in stressful situations, select procedures, equipment and specific technologies for modern communication techniques. The student will understand and relate to laws and regulations concerning public safety communication. Instruction will include field trips and hands-on instruction. (SCANS 1,2,5,6,8,9,10) Prerequisite: None.

CRIJ 1390 Armed Private Security/Investigator
(3-0) ..... 3 hours
This course meets state training requirements for employment as an armed private security officer/private investigator. Students will study criminal laws, alcohol beverage code and laws that regulate the use of force. Classroom work requires the students to write offense reports and read and evaluate laws and court decisions regulating private security. Limited powers and authority of security officers will be the subject of a required oral presentation. To receive credit for this course the student must successfully qualify with the handgun and the shotgun. (SCANS 1,2,6,9) Prerequisite: None.

CRIJ 2183 Use of Force
(1-0) ..... 1 hour
Students will read and be able to cite various court cases involving situations when the use of force is necessary, unnecessary or expressly forbidden. The student will study selected material and write a report evaluating the use of force. Instruction will include the use of creative thinking identifying alternatives aimed at avoiding having to use force. (SCANS 1,2,6,9) Prerequisite: None.

CRIJ 2184 Arrest, Search and Seizure
(1-0) ..... 1 hour
A study of the techniques and procedures used by peace officers in making an arrest, the limitation and authority of the search, kinds of search — vehicle, houses, packages, persons, the authority of those serving in "loco-parentis" — and the authority of seizure. The application of team searching and the written reports associated with the arrest, search and seizure will be structured to follow the established organizational patterns. (SCANS 2,5,6,7) Prerequisite: None.

CRIJ 2280 Child Abuse Recognition
(2-0) ..... 2 hours
Students will write a critical analysis of the procedures and standards for determining abuse of children. A study of the likely cause of injuries, scars, bruises and emotional disorders exhibited by victims of child abuse will become central to an oral presentation. Special attention is given to the application of laws designed to protect children and the alternatives to the court process. (SCANS 2,6,9) Prerequisite: None.

CRIJ 2281 Crime Scene Search
(2-0) ..... 2 hours
Presents scientific methods of following up an investigation at the scene of the crime. Attention is given to development of latent fingerprints, plaster casts, using limited available resources and crime scene technologies leading to the collection of admissible evidence. The student must evaluate and determine the types of evidence required by various criminal justice entities involved in the case. The application of computer-skills technologies and courtroom testimony will strengthen the student's professional competence while emphasizing the collection and storage of evidence. (SCANS 4,6,7,8,9) Prerequisite: None.

CRIJ 2282 Advanced Texas Peace Officer Skills

(2-0) .....2 hours

This collection of mandated training subjects — civil rights, racial sensitivity and cultural diversity; Child Abuse, Child Neglect; Family Violence; and Sexual Assault — meets the required training as specified by TCLEOSE. A thorough understanding of child abuse/ neglect will be stressed. The student will read and make oral and written reports on selected topics. The learner will evaluate and organize the identifiable causes and effects of family violence leading to disorder within the family structure and study the duties of law enforcement and other service organizations in family matters. Each student will develop problem-solving skills related to the study of sexual assault and its prevention. (SCANS 1,2,6,7,9,10) Prerequisite: None.

CRIJ 2314 Criminal Investigation

(3-0) .....3 hours

Introduces investigative theory, collection and preservation of evidence, sources of information. Students will be able to observe documents and other tangible items and determine their evidentiary quality, write extensive reports on investigative findings, and learn to allocate resources, exercise leadership over the collection of evidence activities, evaluate information, and use creative thinking and deductive reasoning in the process of crime scene investigation. Each student will be required to justify their problem solving techniques and offer alternatives to improve the information gathering processes. The student will demonstrate skills in measurement and application of formulas to the crime scene in order to test for levity, time and space. Students will become familiar with forensic sciences and develop processes for case preparation and trial procedure. (SCANS 2,3,6,9,10,11) Prerequisite: CRIJ 1301.

CRIJ 2320 County Corrections (Jail Operation & Management)

(3-0) .....3 hours

Presents the basic county corrections course as required for certification by the Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE). The student will learn to file, record, catalog and document inmate records entries, submit written documentation concerning prisoner conduct, medication distribution, work schedules and other forms, function under adverse situations involving stress, learn to think critically, and develop good listening and speaking skills. Successful completion admits qualified students to licensure examination for county corrections officer. (SCANS 2,7,9,11) Prerequisite: None.

CRIJ 2322 Juvenile Procedures

(3-0) .....3 hours

Provides the student with a foundation of history and philosophy of court procedures related to the handling of juveniles as opposed to adults. The student will be able to discern the differences in the legal system as they relate to juveniles, learn how to research juvenile law, write critical reports and prepare documents for court, acquire an understanding of the juvenile court process, and justify why most juvenile officers must process the case from the initial call all the way through the court process and into the adjudication phase. (SCANS 2,6,9) Prerequisite: None.

CRIJ 2323 Legal Aspects of Law Enforcement

(3-0) .....3 hours

This course presents police authority, responsibility and constitutional constraints on the criminal justice system. The student will learn how to read and understand the content of laws and be able to interpret and explain the rule of law dealing with arrest, search and seizure. The criminal justice system in light of constitutional liability requires the student to apply decision making skills and written reports which analyze the courts decision on specific topics. (SCANS 1,2,6,7,9,10) Prerequisite: CRIJ 1301.

CRIJ 2325 Correctional Systems and Practice
(3-0) .....3 hours
A study of correctional organizations, correctional roles, institutional operations, resource management and alternatives to the practice of institutionalization, treatment and rehabilitation. Students will study and demonstrate writing and speaking skills. Special attention will be given to communicating directives and developing appropriate technological skills using the latest hardware and software. Conflict resolution and problem solving will help the student sharpen social skills. Current and future issues surrounding corrections will be developed. (SCANS 2,4,6,7,8,9,10,11) Prerequisite: None.

CRIJ 2328 Police Systems and Practices
(3-0) .....3 hours
Students will demonstrate a high degree of understanding of the police profession by developing reports, charts and comparative data on law enforcement systems to include the role of police in society, police discretion, and criminal justice ethics. Problem-solving techniques will be demonstrated by each student as he/she selects and applies those skills which most appropriately fit the immediate need. Students will select current topics from the press for analysis and problem-solving action. Develop budget needs for operational conduct, and be able to develop schedules and justify the generation of new ideas associated with community relations, and current and future issues. (SCANS 2,4,6,7,8,9,10,11) Prerequisite: CRIJ 1301 and CRIJ 1307.

CRIJ 2330 Community Correction and Rehabilitation
(3-0) ..... 3 hours
This course of study involves an in-depth look at community programs for adult and juvenile offenders and treatment modalities in various correctional settings. The evaluation of legal issues and implementation of up-to-date technologies and computer-generated statistical data will be used to enhance self-management skills. Students will discuss and debate future trends associated with community-based correction in America. (SCANS 6,7,9,10,11) Prerequisite: None.

CRIJ 2331 Traffic Management and Supervision
(3-0) .....3 hours
Students will examine police responsibilities in traffic planning, and will interpret written information, charts, and graphs in order to project the cost of traffic flow maintenance. Students will write proposals to allocate manpower and equipment on a cost effective basis in order to solve or reduce engineering problems associated with the enforcement of traffic laws. Students will make comprehensive investigative reports of vehicle accidents and demonstrate an understanding of state reporting procedure for accidents involving casualties. (SCANS 1,2,4,5,6,7,9,10,11) Prerequisite: CRIJ 1322.

CRIJ 2370 Physical Evidence and Investigation Techniques
(2-1) .....3 hours
Presents scientific methods of investigation. Students will learn and be able to demonstrate proficiency in raising latent fingerprints using the latest technologies, classify and file prints, collect and preserve physical evidence, and prepare documentation for court testimony. Emphasizes fingerprinting, police photography and crime scene technology. Techniques will be stressed in which students will evaluate and employ common methods to obtain uncommon results by practicing the art of improvising. Lab fee required. (SCANS 4,6,7,8,9) Prerequisite: CRIJ 2314 or consent of the department chair.

CRIJ 2374 Fundamentals of Interviewing
(3-0) .....3 hours
The student will become familiar with the behavioral reactions and interactions in a face-to-face interview with suspects, witnesses, and other third parties who may have information concerning criminal offenses. Students will learn how to "read" the suspect and follow the suspect's body language, improve communication techniques, and the application of real life evidence to crime scene technology dealing with interrogation. (SCANS 5,6,7,9,10,11) Prerequisite: Sophomore level or consent of the department chair.

CRIJ 2385 Spanish for Law Enforcement and Emergency Workers
(3-0) ..... 3 hours
Provides a working knowledge of the Spanish phrases needed in basic emergency and interactive contexts for law enforcement, fire and emergency medical workers. Students discuss critical issues and apply newly acquired communication skills in simulated emergency situations. (SCANS 1,6,9,11) Prerequisite: None.

CRIJ 2471 Firearms Proficiency
(2-3) ..... 4 hours
Students will become proficient in the use of the handgun and shotgun. Safety procedures and liability risks will be integrated into skills application. Students will learn how to disassemble and make minor adjustments to the weapon. Live firing on the range is required. Proper method of cleaning the weapons will be stressed. Lab fee required. Lab fee does not include ammunition. (SCANS 6,7,8,11) Prerequisite: Be a declared CRIJ major, be enrolled in other CRIJ courses or consent of the department chair.

CRIJ 2474 Texas Peace Officer Law
(3-3) ..... 4 hours
A study of laws that are directly related to police field work including traffic law, intoxicated drivers, penal codes, elements of crime, the family code, alcoholic beverage code, and civil liability. (SCANS 6,7,9,10,11) Prerequisite: Approval by department faculty. (Course restricted to law enforcement academy students).

CRIJ 2475 Texas Peace Officer Procedures
(3-2) ..... 4 hours
A study of the techniques and procedures used by police officers on patrol including controlled substance identification, handling abnormal persons, traffic collision, traffic direction, crowd control and jail operations. Lab fee required. (SCANS 2,5,6,7,9,10,11) Prerequisite: Approval by department faculty. (Course restricted to law enforcement academy students).

CRIJ 2476 Texas Peace Officer Skills
(3-2) ..... 4 hours
Demonstration and practice of the skills expected of a law enforcement officer including patrol, traffic stops, use of force, mechanics of arrest, firearms safety and emergency medical care. Lab fee required. (SCANS 6,7,9,10,11) Prerequisite: Approval by department faculty. (Course restricted to law enforcement academy students).

CRIJ 2572 Introduction to Pre-Trial Release Services
(3-5) ..... 5 hours
Fundamentals of pre-trail release will require the student to become familiar with the different kinds of bonding available to persons charged with certain alleged crimes. Students will demonstrate a working knowledge of the techniques, reports, and justifications for decisions which the student will make to the presiding judge concerning personal recognizance release. (SCANS 6,7,11) Prerequisite: Sophomore level, third semester in law enforcement/criminal justice or a related field and consent of the department chair. Corequisite: CRIJ 2374.

CRIJ 2578 Human Behavior Patterns
(3-5) ..... 5 hours
Presents the dynamics of human behavior as it affects criminal activity. Students will list, catalog and be able to explain biological factors, the mentally disordered offender, human aggression and violence, juvenile delinquency and motives behind some types of behaviors and crimes. Students will be required to participate in lab time in a criminal justice agency. Lab is designed to provide students with an opportunity to apply academic training in practical situations. (SCANS 6,7,9,10,11) Prerequisite: CRIJ 2572, CRIJ 2374 or consent of the department chair.

Legal Assistant

Faculty: Nancy Stewart, chair

The legal assistant curriculum was developed to qualify men and women for positions as assistants or aides to the legal profession, and to upgrade the qualifications of legal support personnel. Upon completion of this curriculum, the legal assistant graduate will qualify to work under the supervision of a lawyer and may perform such duties as case screening, investigation and evaluation, detail work pertaining to probate matters, income tax returns, searching public records and court files, office management, accounting, library service, preparation of legal memoranda, servicing and filing of legal documents and preparing legal forms.

Course of Study for Associate in Arts Degree

Legal Assistant

	Semester Hrs
General Education Requirements	**38**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL any sophomore-level literature	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH (six hours) OR	
Foreign Language (six to eight hours; Spanish preferred)	6
**PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech	3
Major Requirements	**12**
LEGL 1301 Introduction to Legal Writing	3
LEGL 1302 Introduction to Paralegalism	3
LEGL 2301 Legal Drafting and Office Procedures	3
LEGL 2302 Legal Research	3
AND Any 18 hours selected from the following pool of courses	**18**
LEGL 1304 Principles of Family Law	3
LEGL 1305 Introduction to Civil Litigation	3
LEGL 2311 Wills, Trusts, and Probate Administration	3
LEGL 2312 Torts, Insurance, and Claims Investigation	3
LEGL 2316 Technique of Litigation Practice/Procedure	3
LEGL 2317 Administrative Law I	3
LEGL 2318 Administrative Law II	3
Total Semester Hours	**68**

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

Certificate of Completion

Level I certificates are TASP-waived.

Level I - Legal Assistant

	Semester Hrs
General Education Requirements	**6**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3

Major Requirements **12**
- LEGL 1301 Introduction to Legal Writing 3
- LEGL 1302 Introduction to Paralegalism 3
- LEGL 2301 Legal Drafting and Office Procedure 3
- LEGL 2302 Legal Research 3
- LEGL 2377 Cooperative Work Experience 3

Total Semester Hours **21**

Level II - Advanced Legal Assistant

Semester Hrs

General Education Requirements **12**
- COSC 1301 Introduction to Computer Systems 3
- ENGL 1301 Composition and Rhetoric 3
- ENGL 1302 Composition and Literature 3
- SPCH 1321 Business and Professional Speech 3

Major Requirements **36**
- LEGL 1301 Introduction to Legal Writing 3
- LEGL 1302 Introduction to Paralegalism 3
- LEGL 1304 Principles of Family Law 3
- LEGL 1305 Introduction to Civil Litigation 3
- LEGL 2301 Legal Drafting and Office Practice 3
- LEGL 2302 Legal Research 3
- LEGL 2311 Wills, Trusts and Probate Administration 3
- LEGL 2312 Tortes, Insurance and Claims Investigation 3
- LEGL 2316 Techniques of Litigation Practice/Procedures 3
- LEGL 2317 Administrative Law I 3
- LEGL 2318 Administrative Law II 3
- LEGL 2377 Cooperative Work Experience 3

Total Semester Hours **48**

National Association of Legal Assistants (NALA) —Upon completion of the associate of arts degree or certificate program, students become eligible to take the NALA Certified Legal Assistant Examination (CLA). Full-time students and/or those taking legal assistant courses may qualify for student membership in the national organization.

Legal Assistant Courses

LEGL 1301 Introduction to Legal Writing

(3-0) ..... 3 hours

The student will develop working vocabulary of legal terms and will be introduced to case and statutory law. The student will learn to analyze cases and write legal office memoranda. The student will become familiar with the Texas and federal court systems. (SCANS 1,6) Prerequisite: None.

LEGL 1302 Introduction to Paralegalism

(3-0) ..... 3 hours

The student will study the ethics of the legal profession with particular attention to the role of the legal assistant. The student will learn client interview techniques and process of case investigation, screening, and evaluation. (SCANS 5,6,9,10,11) Prerequisite: None.

LEGL 1304 Principles of Family Law

(3-0) ..... 3 hours

The student will study the substantive law of relationships between spouses and between parents and children. The student will learn the law regarding divorce, separations, custody, legitimacy, adoption, guardianship, support and related court procedures. The student will focus on the Texas law of community property. (SCANS 6,7,9) Prerequisite: None.

LEGL 1305 Introduction to Civil Litigation
(3-0) .....3 hours
The student will become familiar with the rules of evidence and will study the litigation process in detail. The student will learn Texas and federal procedures for instituting trial cases, discovery, pre-trial motions, motions after judgment and appeals to higher courts. (SCANS 4,6,9,10,11) Prerequisite: None.

LEGL 2301 Legal Drafting and Office Procedure
(3-3) .....3 hours
The student will apply the knowledge gained in previous courses and will prepare documents and maintain files of hypothetical cases. Projects will be drawn from the following areas: Real estate law, family law, contracts, secured transactions, corporations, partnerships, oil and gas law, probate, and administrative law. (SCANS 2) Prerequisite: LEGL 1302 (may be taken concurrently) LEGL 1305 and LEGL 2302.

LEGL 2302 Legal Research
(3-0) .....3 hours
Upon completion of this course, the student will have a working knowledge of the operation of a law library and legal research techniques. The student will learn the methodology of legal research using legal encyclopedias, case digests, case reporters and annotated statutes. The student will be able to solve specific legal problems by the use of research techniques. (SCANS 4,6,7) Prerequisite: None.

LEGL 2311 Wills, Trusts, and Probate Administration
(3-0) .....3 hours
The student will become familiar with the more common forms of will and trust and the law applicable to each. The student will learn to prepare probate documents and will learn to draft related documents. (SCANS 2,6,7) Prerequisite: None.

LEGL 2312 Torts, Insurance, and Claims Investigation
(3-0) .....3 hours
The student will learn the fundamental principles of personal injury and insurance law. The student will become familiar with investigative procedures and will learn to draft related documents. (SCANS 2,6,7) Prerequisite: None.

LEGL 2316 Technique of Litigation Practice/Procedure
(3-0) .....3 hours
Students will apply the knowledge used in other courses to draft documents and maintain files in a hypothetical court action. The student will draft pleadings, discovery documents, pre-trial motions. The student will organize litigation documents and create and maintain a system of docket control and billing. (SCANS 2,7) Prerequisite: LEGL 1305.

LEGL 2317 Administrative Law I
(3-0) .....3 hours
The student will become familiar with the creation and operations of state and federal administrative agencies. The administrative Procedure Act and the Texas Government Code will be studied in detail. The following substantive law areas, as they relate to administrative law, will also be discussed: Environmental regulation, consumer protection, oil and gas regulation, antitrust, and income tax regulation. (SCANS 6,7) Prerequisite: LEGL 1305.

LEGL 2318 Administrative Law II
(3-0) .....3 hours
The student will become familiar with the operation of administrative agencies in the following areas of law: worker's compensation, job safety, labor law, employment discrimination, and Social Security. The regulations of state and federal agencies will be studied in detail. (SCANS 6,7) Prerequisite: LEGL 1305 and 2317.

Machine Technology *(see Metal Trades Technology)*

Maintenance Technology

Faculty: James Bates, chair; Danny Bailey.

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

Maintenance Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR	
MATH 1371 College Algebra for Business OR	
MATH 1372 Technical College Algebra	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Technical Core	**16**
ELEC 2410 National Electrical Code	4
MAIN 1402 Plumbing Fundamentals	4
MAIN 2404 Structural Repair	4
HVAC 1401 Refrigeration Theory	4
General Maintenance	**27**
BLDG 1602 Carpentry I	6
BLDG 1604 Carpentry II	6
HVAC 1404 Heating	4
MAIN 2377 Cooperative Work Experience	3
ELEC 1401 D.C. Circuits	4
WELD 1401 General Welding	4
Total Semester Hours	**63**

Maintenance Technology Courses

MAIN 1402 Plumbing Fundamentals
(2-4) ..... 4 hours
Presents theory and application of basic plumbing technology. Involves practical instruction in both new construction and repair work. Students learn blueprint interpretation, basic calculations, and customer relations. Students will size D.W.V. and water systems. Includes preparation for students interested in obtaining a state plumbing license. Lab fee required. (SCANS 1,3,5,8) Prerequisite: None.

MAIN 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance to employability of a technically competent graduate. (SCANS 4,7,9,10,11) Prerequisite: Sophomore standing and consent of department chair.

MAIN 2404 Structural Repair
(3-3) ..... 4 hours
Presents principles and applications of building repair. Competencies emphasize minor and major wall, floor, ceiling, window and roof repairs. Repair manuals and text study, proposal writing, job cost estimation, negotiating with subcontractors, organizing and scheduling work, and construction troubleshooting are covered. (SCANS 1,2,3,4,9,10) Lab fee required. Prerequisite: None.

Building Courses *(See Building Trades)*

Electronics Courses *(See Electronics Technology)*

HVAC Courses *(See Heating, Ventilation, and Air Conditioning)*

Management/Tech Prep

Faculty: Robert Munoz, chair; Connie Nichols

The primary objective of the management program is to prepare each student for full-time employment in supervision. Students not only gain the knowledge of the science of management, but also learn the art of management through class participation, group projects and situational simulations. Students gain insight and knowledge regarding the interpersonal skills required to be successful in today's ever changing marketplace.

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.

Students can earn an associate in applied science degree in management or can opt for one of four certificates of technology including general management, marketing, small business and industrial supervision.

Course of Study for Associate in Applied Science Degree

Management

	Semester Hrs
General Education Requirements	**23**
ACCT 1370 Introduction to College Accounting	3
BCIS 1401 Introduction to Computer Information Systems OR	
COSC 1301 Introduction to Computer Systems	3
ECON 2301 Principles of Economics I (Macro) OR	
ECON 2302 Principles of Economics II (Micro)	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1324 Mathematical Analysis for Business I OR	
any other college-level mathematics	3
*PHED (any two one-hour activity courses)	2
SPCH 1321 Business & Professional Speech	3
Major Requirements for All Management Majors	**30**
MGMT 1301 Introduction to Management	3
MGMT 1302 Managerial Functions	3
MGMT 1321 Principles of Marketing	3
MGMT 2300 Management Issues	3
MGMT 2301 Management Skills Development	3
MGMT 2302 Leadership	3
MGMT 2304 Personnel and Human Relations	3
MGMT 2306 Human Resource Management	3
MGMT 2365 Introduction to Business Logistics	3
MGMT 2377 Cooperative Work Experience	3
MGMT (Approved management electives)	**12**
Total Semester Hours	**65**

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

A certificate of technology may be earned by those who do not wish to pursue an associate degree.

Certificates of Technology - General Management

Level I certificates are TASP-waived.

Level I - General Management Option

	Semester Hrs
BCIS 1401 Introduction to Computer Information Systems OR COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing	3
MGMT 1301 Introduction to Management	3
MGMT 1302 Managerial Functions	3
MGMT 2300 Management Issues	3
MGMT 2302 Leadership	3
MGMT 2301 Management Skills Development	3
MGMT 2304 Personnel and Human Relations	3
MGMT 2306 Human Resource Management	3
MGMT 2377 Cooperative Work Experience	3
Total Semester Hours	**30**

Level I - Marketing Option

	Semester Hrs
BCIS 1401 Introduction to Computer Information Systems OR COSC 1301 Introduction to Computer Systems	3-4
ENGL 1312 Report Writing	3
MGMT 1321 Principles of Marketing	3
MGMT 1323 Principles of Personal Selling	3
MGMT 1331 Principles of Retailing	3
MGMT 2303 Introduction to Public Relations	3
MGMT 2305 Internationalization of Business	3
MGMT 2320 Marketing Issues	3
MGMT 2322 Marketing Management	3
MGMT 2377 Cooperative Work Experience	3
Total Semester Hours	**30**

Level I - Small Business Option

	Semester Hrs
ACCT 1370 Introduction to College Accounting	3
MGMT 1301 Introduction to Management	3
MGMT 1302 Managerial Functions	3
MGMT 1321 Principles of Marketing	3
MGMT 2322 Marketing Management	3
MGMT 2325 Effective Advertising	3
MGMT 2331 Introduction to Small Business Management	3
MGMT 2332 Entrepreneurship	3
MGMT 2335 Entrepreneurial Issues	3
MGMT 2377 Cooperative Work Experience	3
Total Semester Hours	**30**

Level I - Certificate of Technology - Industrial Supervision

	Semester Hrs
BCIS 1401 Introduction to Computer Information Systems OR COSC 1301 Introduction to Computer Systems	3-4
ENGL 1312 Report Writing	3
MGMT 1301 Introduction to Management	3
MGMT 1302 Managerial Functions	3
MGMT 1361 Principles of Production Supervision	3

MGMT 1362 Industrial Safety 3
MGMT 1371 Introduction to Purchasing Management 3
MGMT 2301 Management Skills Development 3
MGMT 2365 Introduction to Business Logistics 3
MGMT 2377 Cooperative Work Experience 3

Total Semester Hours **30**

Level III - Management Advanced Skills Certificate

Semester Hrs

ENGL 2311 Technical and Report Writing 3
BCIS 1302 PC Operating Systems 3
MGMT 2190 Advanced Management Issues 1
MGMT 2290 Contemporary Topics for Managers 2

Total Semester Hours **9**

Management Courses

MGMT 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. Covers human resources, workflow, communications, selection, training, leadership, and professional development. (SCANS 4,5,10,11) Prerequisite: None.

MGMT 1302 Managerial Functions
(3-0) ..... 3 hours
A continuation of MGMT 1301. This course emphasizes the design and structural aspects of management, in such competencies as planning, organizing, and allocating resources; making decisions regarding such allocations; establishing and communicating systems to monitor the controlling process; and ensuring the legal and ethical conduct of the organization. (SCANS 4,6,9,10,11) Prerequisite: None.

MGMT 1321 Principles of Marketing
(3-0) ..... 3 hours
Introduces marketing. Analyzes factors that influence functions of marketing and environmental marketing activities. Emphasizes the gathering, processing and interpretation of demographic and other data used in consumer and business-to-business decision making. Covers the development of decision support systems, research and presentation; as well as classification and resource allocation for new product concepts. (SCANS 4,6,7,9,10,11) Prerequisite: None.

MGMT 1323 Principles of Personal Selling
(3-0) ..... 3 hours
Designed to introduce students to techniques that will prove immediately valuable in present or future selling positions. Emphasizes the interpersonal and organizational aspects of selling through student participation in reasoning and communicating exercises. Provides opportunities for practicing these techniques under realistic conditions. (SCANS 5,6,9,11) Prerequisite: None.

MGMT 1331 Principles of Retailing
(3-0) ..... 3 hours
Relates modern retailing industry to structure and environment of retailing, requirements of retailing; retail merchandising and sales promotion; and requirements of retailing management including gathering information in order to make decisions regarding legal and ethical issues, site location, store design, selecting appropriate technology to handle and secure merchandise and establishing pricing policies. (SCANS 3,6,8,9,10) Prerequisite: None.

MGMT 1361 Principles of Production Supervision
(3-0) ..... 3 hours
Introduces fundamental concepts of production management. Emphasizes formulation and evaluation of objectives, and the developments of a systems approach to monitor performance. Students will develop problem-solving and decision-making skills based on the use of available resources to meet customer and organizational production needs. (SCANS 4,5,6,7,9) Prerequisite: None.

MGMT 1362 Industrial Safety
(3-0) ..... 3 hours
Introduces principles and practices of safety management. Students will acquire knowledge of the legal requirements of the Occupational Safety and Health Act. Includes basic concepts and methods of administering, developing, communicating and teaching of safety programs to meet organizational needs. (SCANS 5,6,9,11) Prerequisite: None.

MGMT 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 in relation to business and customer needs while working within legal and ethical aspects of the purchasing function. (SCANS 4,5,9,10,11) Prerequisite: None.

MGMT 2190 Advanced Management Topics
(1-0) ..... 1 hour
A directed study of research in selected topic areas of concern for today's managers. Designed to meet the needs of the business and industrial community. Students will interact in group settings and compile data presented in both written and oral form. (SCANS 2,4,5,6,9,11) Prerequisite: Consent of the department chair.

MGMT 2290 Contemporary Topics for Managers
(1-0) ..... 2 hours
A directed study of research in selected topic areas of concern for today's managers. Designed to meet the needs of the business and industrial community. Students will interact in group settings and compile data presented in both written and oral form. (SCANS 2,4,5,6,9,11) Prerequisite: Consent of the department chair.

MGMT 2300 Management Issues
(3-0) ..... 3 hours
Presents current issues of particular interest to those preparing for supervisory positions in today's work force. Emphasis will be on competencies associated with present managerial concerns. Students will research and analyze information and, through the use of group discussion and other forms of participation, will create and present effective solutions to modern management problems/issues. (SCANS 5,6,9,11) Prerequisite: None.

MGMT 2301 Management Skills Development
(3-0) ..... 3 hours
Examines relationship between management principles and specific functions of management. Presents case studies and projects which will require students to interpret and create responses to various areas of management study: including situational leadership, creativity and innovation; problem solving and decision making using computer simulations. (SCANS 5,6,8,9) Prerequisite: None.

MGMT 2302 Leadership
(3-0) ..... 3 hours
Explores the concept of leadership and its relationship to management. Through the use of case studies, group interaction and simulations, students will focus on leadership skills needed to inspire and influence others in the organization. (SCANS 5,7,9) Prerequisite: MGMT 1301 or consent of department chair.

MGMT 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 after having listened to and studied the various constituencies involved. (SCANS 6,9,11) Prerequisite: None.

MGMT 2304 Personnel and Human Relations
(3-0) ..... 3 hours
Applies field of human relations to modern business management. Emphasizes the productive management of human resources through effective leadership, decision making and communicating. Explores responsibilities of management in dealing with subordinates one-on-one. (SCANS 5,9,10) Prerequisite: None.

MGMT 2305 Internationalization of Business
(3-0) ..... 3 hours
Introduces theory and practice in international business. Emphasizes the creation of appropriate systems for maintaining and controlling the flow of goods, people, information and funds for commercial purpose within and among international sovereignties. Stresses the decision-making process. (SCANS 4,5,6,7,9) Prerequisite: Completion of six hours of MGMT courses or consent of department chair.

MGMT 2306 Human Resources Management
(3-0) ..... 3 hours
Principles and practice in personnel relations, including topics such as recruiting, training, wage and salary administration, manpower planning and legal issues facing supervisors. (SCANS 4,5,6,7,11) Prerequisite: MGMT 1301 or consent of department chair.

MGMT 2320 Marketing Issues
(3-0) ..... 3 hours
Presents current issues of particular interest to those preparing for positions in today's changing marketplace. Emphasis will be on competencies associated with present marketing concerns. Students will research and analyze information and, through the use of group discussion and through forms of participation, will create and present effective solutions to modern marketing problems/issues. (SCANS 5,6,9,11) Prerequisite: None.

MGMT 2322 Marketing Management
(3-0) ..... 3 hours
A continuation of MGMT 1321. Emphasizes management of activities associated with marketing and distribution processes and institutions including the allocation of resources for monitoring distribution systems and channels; the creation and delivery of promotional messages and activities; and making decisions regarding various approaches to price determination. (SCANS 3,4,7,9,11) Prerequisite: MGMT 1321.

MGMT 2325 Effective Advertising
(3-0) ..... 3 hours
Designed to offer an overview of the social, economic and marketing environment for advertising. Examines techniques and skills used to execute effective advertising programs; including information acquisition, resource allocation, delivery system development and budgeting. Emphasizes creativity in decision making and communicating. (SCANS 2,4,6,7,9,11) Prerequisite: MGMT 1321 or MGMT 1331.

MGMT 2331 Introduction to Small Business Management
(3-0) ..... 3 hours
Presents an overview of the importance of the small business in today's national economy. Students will be required to acquire and interpret information regarding the competitive, economic, social, legal and technological environments necessary to complete business and marketing plans for small business. Students must also evaluate personal qualities in relation to qualities identified as being necessary to be a successful entrepreneur. (SCANS 6,7,9,10) Prerequisite: None.

MGMT 2332 Entrepreneurship
(3-0) ..... 3 hours
A continuation of MGMT 2331. Emphasizes management of personnel, operations, inventory and other resources of the small business enterprise. Presents case studies and projects which will require students to analyze and interpret information on particular topics and create responses having considered various systems introduced in course material. (SCANS 2,6,7,9) Prerequisite: None.

MGMT 2335 Entrepreneurial Issues
(3-0) ..... 3 hours
A comprehensive study of particular issues impacting entrepreneurship. Students will create a written business plan detailing the personal qualities needed to succeed as well as systems including computer-generated spreadsheets developed to monitor the use of needed human and physical resources. (SCANS 2,3,4,5,6,7,8,10) Prerequisite: MGMT 2331 and MGMT 2332 or consent of the instructor.

MGMT 2365 Introduction to Business Logistics
(3-0) ..... 3 hours
Presents a systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing and material handling. Emphasizes the acquisition and evaluation of information in order to develop sound decision-making techniques based on time, materials and space available in order to meet business and customer needs. (SCANS 4,5,6,7,9) Prerequisite: None.

MGMT 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and technical course lectures and labs with on-the-job business problems, modern business practices, human relations, and job-finding techniques. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Consent of the department chair.

Mass Communication

Faculty: Steve Goff, chair; Tom Hughes.

Mass communication students at Odessa College enroll mainly for three purposes: to prepare for university transfer, to prepare themselves vocationally for a career and to broaden their exposure to the mass media.

Requirements for the associate in arts degree are basically the same as required courses 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 attending college, Odessa College operates a public radio station, KOCV-FM, and a public television station, KOCV-TV. Practicums also help give on-site professional experience to the mass communication student.

Course of Study for Associate in Arts Degree

Broadcasting

	Semester Hrs
General Education Requirements	**46**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore Level)	6
Foreign Language or Science (six to eight hours in same discipline)	8
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra OR	
MATH 1332 Structures of College Mathematics I	3
*PHED (any two one-hour activity courses)	2
Philosophy, Psychology Sociology, Anthropology or Economics courses	6
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Elective (must be outside major area)	**3**
Major Requirements	**13**
(Choose from among the following)	
COMM 1307 Introduction to Mass Communications	3
COMM 1335 Survey of Radio and Television	3
COMM 1336 Television Production	3
COMM 2120 Practicum in Electronic Media	1
COMM 2121 Practicum in Electronic Media	1
COMM 2122 Practicum in Electronic Media	1
COMM 2220 Practicum in Electronic Media	2
COMM 2303 Audio and Radio Production	3
COMM 2324 Practicum in Electronic Media	3
COMM 2325 Practicum in Electronic Media	3
COMM 2326 Practicum in Electronic Media	3
COMM 2331 Announcing for Radio and Television	3
COMM 2339 Writing for Radio and Television	3
Total Semester Hours	**62**

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

Course of Study for Associate in Arts Degree

Mass Communication

	Semester Hrs
General Education Requirements	**46**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
Foreign Language or Science (six to eight hours in same discipline)	8
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH (College level)	3
*PHED (any two one-hour activity courses)	2
Philosophy, Psychology Sociology, Anthropology or Economics courses	6
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Elective (must be outside major area)	**3**
Major Requirements (Choose from among the following)	**13**
COMM 1307 Introduction to Mass Communications	3
COMM 1316 News Photography	3
COMM 1318 Basic Photography I	3
COMM 1319 Basic Photography I I	3
COMM 1335 Survey of Radio and Television	3
COMM 1336 Television Production	3
COMM 2303 Audio and Radio Production	3
Total Semester Hours	**62**

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

Mass Communication Courses

COMM 1307 Introduction to Mass Communications (09.0403.5126)
(3-0) ..... 3 hours
Surveys basic facets affecting human interaction through mass communications. This course is designed to develop understanding of the interrelationships of the mass media in society and to help project the future of communication in an ever changing world. (SCANS 6,7,9) Prerequisites: TASP competency in reading and writing or consent of instructor.

COMM 1316 News Photography (09.0401.5526)
(2-4) ..... 3 hours
Introduces basic aspects of photography for publications. Emphasizes the various uses and outlets for news and feature photography. Students will participate in group assignment and decision making. Lab fee required. (SCANS 2,5,6,8,9) Prerequisite: TASP competency in reading, writing and math or consent of instructor.

COMM 1318 Basic Photography I (50.0605.5130)
(2-4) ..... 3 hours
Introduces basic applied and aesthetic aspects of photography. The student will assess and select equipment, supplies and techniques to incorporate basic theories of film, exposure, development, filters and printing. Lab fee required. (SCANS 4,8,9) Prerequisites: TASP competency in reading, writing and math or consent of instructor.

COMM 1319 Basic Photography II (50.0605.5230)
(2-4) ..... 3 hours
A continuation of COMM 1318. Designed for additional experience in the photographic medium. Lab fee required. (SCANS 4,8,9) Prerequisites: COMM 1318; TASP competency in reading, writing and math or consent of instructor.

COMM 1335 Survey of Radio and Television (09.0403.5226)
(3-0) ..... 3 hours
Examines the development, regulation, economics, social responsibilities and industry practices in broadcasting and cable communication, non-broadcast television, new technology and other communication systems. (SCANS 6,7,8) Prerequisites: TASP competency in reading and writing or consent of instructor.

COMM 1336 Television Production (10.0104.5226)
(3-0) ..... 3 hours
Presents practical experience in the operation of television studio and control room equipment, with an emphasis on production. Includes pre-production techniques, student involvement in direction and assignments to all crew positions for class productions. (SCANS 5,6,8,11) Prerequisites: TASP competency in reading and writing or consent of instructor.

COMM 2303 Audio/Radio Production (10.0104.5126)
(3-0) ..... 3 hours
Presents the concepts and techniques of sound production, including the coordinating and directing of all aspects of sound production from the design of the production to the finished product, with emphasis on the manipulation of equipment and sound sources and direction of talent. (SCANS 6,8,9) Prerequisites: COMM 1307 or COMM 1335 or consent of instructor; TASP competency in reading and writing or consent of instructor.

COMM 2331 Announcing for Radio and Television (23.1001.6126)
(3-0) ..... 3 hours
Helps prepare the student for a career in voice talent for radio and television. Includes proper pronunciation, articulation, interviewing, reading of news and commercial copy and announcing music and sports. (SCANS 1,6,9,11) Prerequisites: COMM 1307 or COMM 1335 or consent of instructor; TASP competency in reading and writing or consent of instructor.

COMM 2339 Writing for Radio and Television (09.0402.5126)
(3-0) ..... 3 hours
Provides techniques and practical exercises in presenting effective communication of messages through radio and television. Presents procedures for writing commercial, public service, promotional, news and documentary programming. (SCANS 2,6,7,9,11) Prerequisites: COMM 1307 or COMM 1335 or consent of instructor; TASP competency in reading and writing or consent of instructor; ability to type approximately 30 words per minute.

COMM 2120, 2121, 2122 Practicum in Electronic Media (09.0701.5326)
(0-5) ..... 1 hour each
Provides framework for student participation at KOCV-FM, the college radio station. Requires working as a team member for 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. (SCANS 5,8,9,10,11) Lab fee required. Prerequisites: COMM 1307 or COMM 1335 or consent of the KOCV-FM station manager; TASP competency in reading and writing or consent of instructor.

COMM 2220 Practicum in Electronic Media (09.0701.5326)
(1-8) (eight weeks) ..... 2 hours
This radio option practicum is designed to allow students to tailor their Odessa College experience to their future career goals in audio/radio. Students may choose practicum experience at various local radio stations or produce specific projects. (SCANS 5,8,9,10,11) Lab fee required. Prerequisites: TASP competency in reading and writing or consent of instructor, successful completion or current enrollment in another broadcasting course and approval of the faculty advisor and prospective practicum site management.

COMM 2324 Practicum in Electronic Media (09.0701.5326)
(1-10) (eight weeks) ..... 3 hours
This radio option practicum is designed to allow students to tailor their Odessa College experience to their future career goals in audio/radio. Students may choose practicum experience at various local radio stations or produce specific projects. (SCANS 5,8,9,10,11) Lab fee required. Prerequisites: TASP competency in reading and writing or consent of instructor, successful completion or current enrollment in another broadcasting course and approval of the faculty advisor and prospective practicum site management.

COMM 2325 Practicum in Electronic Media (09.0701.5326)
(1-10) (eight weeks) ..... 3 hours
This television option practicum is designed to allow students to tailor their Odessa College experience to their future career goals in television/video production. Students may choose practicum experience at various local television stations or produce specific projects. (SCANS 5,8,9,10,11) Lab fee required. Prerequisites: TASP competency in reading and writing or consent of instructor; successful completion or current enrollment in another broadcasting course and approval of the faculty advisor and prospective practicum site management.

COMM 2326 Practicum in Electronic Media (09.0701.5326)
(1-10) (eight weeks) ..... 3 hours
This television option practicum is designed to allow students to tailor their Odessa College experience to their future career goals in television/video production. Students may choose practicum experience at various local television stations or produce specific projects. (SCANS 5,8,9,10,11) Lab fee required. Prerequisites: TASP competency in reading and writing or consent of instructor; successful completion or current enrollment in another broadcasting course and approval of the faculty advisor and prospective practicum site management.

Mathematics

Faculty: George Brewer, chair; Jim Camp, Dr. James Fields, Dr. Stephanie Kern, Yancy Nunez, Dr. Glynna Strait, Margaret Street, Dr. Charles Sweatt.

The mathematics department 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

Mathematics

	Semester Hrs
General Education Requirements	**41**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
Lab Science	12
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3

Major Requirements **18**
- **MATH 1348 Analytic Geometry 3
- MATH 2313 Calculus I 3
- MATH 2314 Calculus II 3
- MATH 2315 Calculus III 3
- MATH 2318 Linear Algebra 3
- MATH 2320 Differential Equations 3

Related Requirements **4**
- COSC 1415 Introduction to Computer Science 4

Total Semester Hours **63**

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

***Students not prepared for MATH 1348 Analytic Geometry should enroll in MATH 1316 Plane Trigonometry or a lower-level math course before enrolling in MATH 1348. Preregistration testing is available for placement aid for students planning to take MATH 0371, MATH 0372, TMTH 1370, MATH 0375, MATH 1371, MATH 1372, MATH 1314 or MATH 1332.*

Mathematics Courses

MATH 0171 Fundamental Math (32.0104.5137)
(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 and use measure of central tendency, and variability. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0172 Algebra — Graphing and Equations (32.0104.5137)
(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. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0173 Algebra — Operations and Quadratics (32.0104.5137)
(0-1) ..... 1 hour
Provides a review of algebra — operations and quadratics. Presents operations with algebraic expressions. Investigates problems involving quadratic equations, inequalities and their graphs. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0174 Geometry and Problem Solving (32.0104.5137)
(0-1) ..... 1 hour
Provides a review of geometry and reasoning. Presents problems involving geometric figures, investigates how to apply reasoning skills and apply combinations of mathematical skills to solve problems. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate

mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. (SCANS 3,4,8,9) Prerequisite: Consent of the instructor.

MATH 0371 Basic Mathematics (32.0104.5137)
(3-0) ..... 3 hours
Presents four fundamental operations of addition, subtraction, multiplication and division of whole numbers, common fractions and decimal fractions. Includes percentages, metric system and geometric measurements. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. 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. (SCANS 3,8,9) Prerequisite: None.

MATH 0372 Introductory Algebra (27.0101.5437)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. 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. (SCANS 3,8,9) Prerequisite: MATH 0371 or satisfactory placement score.

TMTH 1370 Technical College Mathematics
(3-0) ..... 3 hours
A study of skills, topics and techniques necessary to solve problems applicable to occupational and technical fields. Topics covered will include: measurement, applied geometry, algebra, graphs and right angle trigonometry. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. This course is for technical certificate programs and will not count toward an associate degree. (SCANS 3,8,9) Prerequisite: MATH 0372 or high school algebra I or satisfactory placement score.

MATH 0373 Elementary Mathematics of Finance (27.0101.6637)
(3-0) ..... 3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted for credit by all senior colleges. (SCANS 3,8,9) Prerequisite: MATH 0372 or equivalent placement score.

MATH 0375 Intermediate Algebra (27.0101.5237)
(3-0) ..... 3 hours
A study of real number operations, linear and quadratic inequalities, exponents and radicals, rational expressions, the straight line, linear equations and parabolas. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. This course does not satisfy requirements for any degree plan at Odessa College and may not be accepted for credit by all senior colleges. Placement testing available. (SCANS 3,8,9) Prerequisite: MATH 0372, satisfactory placement score or passing score on TASP.

MATH 1314 College Algebra (27.0101.5437)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. Placement testing available. (SCANS 3,8,9,11) Prerequisite: MATH 0375 passed with a "C" or better, high school algebra II, or an independent school district/OC concurrent enrollment form.

MATH 1316 Plane Trigonometry (27.0101.5337)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite or corequisite: MATH 1314 or equivalent competency, or an independent school district/OC concurrent enrollment form.

MATH 1324 Mathematical Analysis for Business I (27.0301.5237)
(3-0) ..... 3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. (SCANS 3,8,9) Prerequisite: MATH 0375 passed with a "C" or better, high school algebra II, or equivalent competency.

MATH 1325 Mathematical Analysis for Business II (27.0301.5237) ✓
(3-0) ..... 3 hours
Includes elementary calculus of differentiation, integration and application. Emphasizes application to business and economic problems. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 1324.

MATH 1332 Structures of College Mathematics I (27.0101.5137)
(3-0) ..... 3 hours
Topics covered will include sets, logic, number systems, relations and applications, concepts of mathematics and problem solving. The student will learn to select appropriate mathematical techniques and technologies and use these skills in problem solving. Students will develop and/or discover mathematical relationships. This course is designed primarily for liberal arts and education majors. (SCANS 3,8,9,11) Prerequisite: MATH 0375 or high school algebra II or passing score on TASP math section.

MATH 1333 Structures of College Mathematics II (27.0101.5137)
(3-0) ..... 3 hours
Topics covered will include algebra, geometry, measurement, and an introduction to probability and statistics. The student will learn to select appropriate mathematical techniques and technologies and use these skills in problem solving. The students will develop and or discover mathematical relationships. This course is designed primarily for liberal arts and education majors. (SCANS 3,8,9,11) Prerequisites: MATH 1332 or MATH 0375 or satisfactory placement score.

MATH 1342 Mathematical Statistics (27.0501.5137)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. Recommended for students in education, social science and physical science as well as mathematics. (SCANS 3,6,8,9) Prerequisite: MATH 0375 passed with a "C" or better or satisfactory placement score.

MATH 1348 Analytic Geometry (27.0101.5537)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 1316 or equivalent, or completed independent school district/OC concurrent enrollment form.

MATH 1371 College Algebra for Business (27.0301.5237)
(3-0) ..... 3 hours
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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. (SCANS 3,8,9) Prerequisite: MATH 0375 or equivalent placement score.

MATH 1372 Technical College Algebra (27.0101.5437)
(3-0) ..... 3 hours
A study of principles and methods of college algebra to solve physical problems in technical fields. Topics will include: algebra, graphing, exponential and logarithmic functions and applied trigonometry. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 0375 or TMTH 1370 or satisfactory placement score.

MATH 1442 Business Statistics (27.0501.5137)
(3-3) ..... 4 hours
Provides an 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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. (SCANS 3,6,8,9) Prerequisite: MATH 1324.

MATH 2313 Calculus I (27.0101.5937)
(3-0) ..... 3 hours
Presents a study of rate of change of functions, limits, derivatives of algebraic and trigonometric functions, integration and applications. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite or corequisite: MATH 1348.

MATH 2314 Calculus II (27.0101.5937)
(3-0) ..... 3 hours
Extends topics of MATH 2313 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 of mass sequences, and infinite series. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 2313.

MATH 2315 Calculus III (27.0101.5937)
(3-0) ..... 3 hours
Presents a study of sets, functions, vector fields, partial derivatives, and integration theory. Includes a study of line, surface and multiple integrals. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and perhaps describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 2314.

MATH 2318 Linear Algebra (27.0101.6137)
(3-0) ..... 3 hours
Presents a study of vector spaces, linear transformations, matrix algebra, eigenvalues, eigenvectors and applications. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 2314.

MATH 2320 Differential Equations (27.0301.5137)
(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. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3,8,9,11) Prerequisite: MATH 2314.

Medical Lab Technology *(see Clinical Laboratory Sciences)*

Metal Trades Technologies

Faculty: Galen Ballard, chair

Two options are available to students in the metal trades technologies program.*

The industrial machinist option 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.

The industrial welding option 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.

*While a certificate of technology with an emphasis in either machine or welding technology will prepare the student to be an effective employee, 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

Metal Trades Technologies

	Semester Hrs
General Education Requirements for all options	**17**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government OR	
GOVT 2302 American National Government	3
MATH 1314 College Algebra OR	
MATH 1371 College Algebra for Business OR	
MATH 1372 Technical College Algebra	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
Elective	**3**

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

Technical Core	**18**
DRAF 1401 Technical Drafting I	4
MACH 1401 Basic Machine Shop Fundamentals	4
OSHA 2395 Industrial Safety	3
PETR 1300 Petroleum Overview	3
WELD 1401 General Welding	4

and one of the following two options

Industrial Machinist Option

	Semester Hrs
Major Requirements	**27**
MACH 1402 Machines and Their Operations I	4
MACH 1403 Machines and Their Operations II	4
MACH 2377 Cooperative Work Experience	3
MACH 2401 Advanced Machine Tool Operations I	4
MACH 2402 Advanced Machine Tool Operations II	4
MACH 2403 Metallurgy	4
MACH 2404 Computerized Numerical Control (CNC)	4

Industrial Welding Option

	Semester Hrs
Major Requirements	**27**
WELD 1402 Intermediate Shielded-Metal Arc Welding	4
WELD 1403 Basic Layout	4
WELD 2377 Cooperative Work Experience	3
WELD 2401 Advanced Shielded-Metal Arc Welding	4
WELD 2402 Gas Metal Arc Welding	4
WELD 2403 Metallurgy	4
WELD 2404 Gas Tungsten Arc Welding	4
Total Semester Hours	**65**

Certificates of Technology in Metal Trades Technologies

Certificates of technologies are available in the following job-specific fields. See the program chairman for course requirements and Permian Basin job opportunities.

Level I certificates are TASP-waived.

Level I - Machinist Option

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
MACH 1401 Basic Machine Shop Fundamentals	4
MACH 1402 Machines & Their Operations	4
MACH 2401 Advanced Machine Tool Operations I	4
MACH 2403 Metallurgy	4
MACH 2404 Computerized Numerical Control	4
*TMTH 1370 Technical College Mathematics OR higher level math	3
WELD 1401 General Welding	4
Total Semester Hours	**37**

Level II - Machine Shop Foreman Option

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
MACH 1401 Basic Machine Shop Fundamentals	4
MACH 1402 Machines & Their Operations	4
MACH 1403 Machines and Their Operations	4
MACH 2401 Advanced Machine Tool Operations I	4
MACH 2402 Advanced Machine Tool Operations II	4
MACH 2403 Metallurgy	4
MACH 2404 Computerized Numerical Control	4
OSHA 2395 Industrial Safety	3
*TMTH 1370 Technical College Mathematics OR higher level math	3
WELD 1401 General Welding	4
Total Semester Hours	**48**

Level I - Computerized Numerical Control Programmer Option

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
MACH 1401 Basic Machine Shop Fundamentals	4
MACH 2404 Computerized Numerical Control	4
MATH 1314 College Algebra OR MATH 1372 Technical College Algebra	3
Total Semester Hours	**21**

Level I - Milling Machine Operator Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
MACH 1401 Basic Machine Shop Fundamentals	4
MACH 1402 Machines & Their Operations	4
MACH 1403 Machines and Their Operations	4
MACH 2401 Advanced Machine Tool Operations I	4
*TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**26**

Level I - Engine Lathe Operator Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
MACH 1401 Basic Machine Shop Fundamentals	4
MACH 1402 Machines & Their Operations	4
MACH 2401 Advanced Machine Tool Operations I	4
*TMTH 1370 Technical College Mathematics OR higher level math	3
Total Semester Hours	**22**

Level I - General Welder Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
*TMTH 1370 Technical College Mathematics OR higher level math	3
WELD 1401 General Welding	4
WELD 1402 Intermediate Shielded-Metal Arc Welding	4
Total Semester Hours	**18**

Level I - Fitter Welder Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
*TMTH 1370 Technical College Mathematics or higher level math	3
WELD 1401 General Welding	4
WELD 1402 Intermediate Shielded-Metal Arc Welding	4
WELD 1403 Basic Layout	4
Total Semester Hours	**22**

Level I - Certified Welder Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
*TMTH 1370 Technical College Mathematics OR higher level math	3
WELD 1401 General Welding	4
WELD 1402 Intermediate Shielded-Metal Arc Welding	4
WELD 2401 Advanced Shielded-Metal Arc Welding	4
WELD 2404 Gas Tungsten Arc Welding	4
Total Semester Hours	**26**

Level I - Pipe Welding Foreman Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
DRAF 1401 Technical Drafting I	4
*TMTH 1370 Technical College Mathematics OR higher level math	3
WELD 1401 General Welding	4
WELD 1402 Intermediate Shielded-Metal Arc Welding	4
WELD 1403 Basic Layout	4
WELD 2401 Advanced Shielded-Metal Arc Welding	4
WELD 2402 Gas Metal Arc Welding	4
WELD 2404 Gas Tungsten Arc Welding	4
Total Semester Hours	**34**

Level II - Welding Machine Operator Option

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
DRAF 1401 Technical Drafting I	4
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
OSHA 2395 Industrial Safety	3
*TMTH 1370 Technical College Mathematics OR higher level math	3
WELD 1401 General Welding	4
WELD 1402 Intermediate Shielded-Metal Arc Welding	4
WELD 1403 Basic Layout	4
WELD 2401 Advanced Shielded-Metal Arc Welding	4
WELD 2402 Gas Metal Arc Welding	4
WELD 2403 Metallurgy	4
WELD 2404 Gas Tungsten Arc Welding	4
Total Semester Hours	**44**

**TMTH 1370 Technical College Mathematics applicable toward certificates only.*

Machine Technology Courses

MACH 1401 Basic Machine Shop Fundamentals
(2-6) ..... 4 hours
Competencies include the basics of machine shop practices, trade terminology, shop safety, shop operations, semi-precision and precision measuring tools, hand tools and high speed tooling. Students will perform basic calculations, select and acquire appropriate materials, interpret simple blueprints and apply appropriate machine shop technology to complete the assigned tasks and describe complex systems to co-workers and supervisors. Students will learn problem-solving techniques and be responsible for producing quality work. Students will maintain and assist in repair of machine, perform daily maintenance and be responsible for time management and performance. Requires grinding and sharpening single-point cutting tools for simple lathe projects. (SCANS 1,3,4,7,8,9,10,11) Lab fee required. Prerequisite: None.

MACH 1402 Machines and Their Operations I
(2-6) ..... 4 hours
Students will learn to understand and interpret more complex blueprints, and approach practical problems using precision measuring instruments. Advanced math skills will be stressed for speeds and feeds calculations. Students will select and use a variety of equipment such as, power hacksaw, bandsaw and pedestal grinders. This course stresses advanced lathe operation, time management and set up and requires classroom and laboratory performance to demonstrate maximum machine tool performance. (SCANS 1,3,4,8,9,10) Lab fee required. Prerequisite or corequisite: MACH 1401 or consent of department chair.

MACH 1403 Machines and Their Operations II
(2-6) ..... 4 hours
This is a follow up course to MACH 1402. Students will enhance their understanding and interpretation of blueprints, and approach practical problems using precision measuring instruments. Students will use a variety of equipment such as milling machines, lathes and universal grinder. Calculations of material usage and advanced machine finishes will be the students' responsibility to maintain during the completion of required projects. Students also will learn to work with customers to satisfy their expectations and promote confidence in their work performance and to apply advanced machine practices to their performance. (SCANS 1,3,4,5,8,9,10) Lab fee required. Prerequisite or corequisite: MACH 1402 or consent of department chair.

MACH 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of department chair.

MACH 2401 Advanced Machine Tool Operations I
(2-6) ..... 4 hours
This course further enhances the students' abilities in the areas of equipment expertise, interpretation of blueprints, acquisition and allocation of materials, problem solving techniques, and working with customers. Students will learn bench metal work and advanced machine tool operations related to the major machine tools such as lathes and milling machines. Emphasizes shapers and grinders. Requires more complex projects and higher performance standards. (SCANS 1,4,5,6,8,9) Lab fee required. Prerequisite or corequisite: MACH 1403 or consent of department chair.

MACH 2402 Advanced Machine Tool Operations II
(2-6) ..... 4 hours
This is a follow-up course to MACH 2401. Competencies stress quality of finished products. Students will demonstrate proficiency in reading blueprints, use of material, task interpretation and ability to communicate problem-solving techniques to customers and employers. Demonstration of skills on required project without additional instruction is desired. Emphasizes production turning with automatic machinery and various machinability factors. (SCANS 1,4,5,6,8,9) Lab fee required. Prerequisite or corequisite: MACH 2401 or consent of department chair.

MACH 2403 Metallurgy
(2-6) ..... 4 hours
This course requires students to understand and interpret the terminology related to the properties and uses of ferrous and nonferrous metals and other alloys, create reports analyzing the specimens, and perform industrial tests to determine alloying elements. Competencies in the use of equipment for the forging and heat-treating of metals, and interpreting the composition of metals according to specification numbers also will be achieved. (SCANS 1,2,6,8) Lab fee required. Prerequisite: None.

MACH 2404 Computerized Numerical Control
(2-6) ..... 4 hours
Presents operations of computerized numerical control (CNC) machines using a variety of hardware and software. Students will understand and interpret the terminology related to programming of CNC equipment and perform calculations for writing programs. Competencies emphasize setup operation, organization of graphs and troubleshooting. Students may work with a lab partner to complete required projects. Special tasks assigned to meet specific needs to satisfy quality expectations. (SCANS 1,3,5,6,8,9) Lab fee required. Prerequisite: MACH 2402 or consent of department chair.

Welding Technology Courses

WELD 1401 General Welding
(2-6) ..... 4 hours
Introduces the basic competencies of oxy-fuel and electric arc welding. Students will acquire and evaluate information pertaining to the use of torches and regulators, flame adjustment, soldering, silver soldering, brazing, and arc welding on common metals and safe procedures for handling welding equipment. Emphasis is placed on students'

ability to acquire and apply new knowledge and skills. Students will be required to work in pairs and critique each other's work, and be able to communicate with each other. (SCANS 5,6,8,9,10,11) Lab fee required. Prerequisite: None.

WELD 1402 Intermediate Shielded-Metal Arc Welding
(2-6) ..... 4 hours
Competencies emphasis the use of welding technology for the proper execution of all-position, V-groove, carbon, steel plate and pipe welding with "open stringer" using mild steel electrodes (E6010). Students will be required to evaluate their performance abilities to troubleshoot potential problems. Students will learn to decipher coding system for AWS and proper use of available materials and equipment. (SCANS 4,6,7,8,9) Lab fee required. Prerequisite or corequisite: WELD 1401 or consent of department chair.

WELD 1403 Basic Layout
(2-6) ..... 4 hours
Competencies emphasize understanding and interpreting blueprints and welding terminology and using basic calculations to determine appropriate layouts according to specifications. Stresses related fittings and structures. Students will be responsible for choosing the proper procedures, tools and equipment to perform assigned actions and be able to explain their selections. (SCANS 1,3,6,8,9) Lab fee required. Prerequisite or corequisite: WELD 1402 or consent of department chair.

WELD 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of department chair.

WELD 2401 Advanced Shielded-Metal Arc Welding
(2-6) ..... 4 hours
Includes execution of all types of welds on various alloys and a study of electrodes. Continues fabrication, interpretation of blueprints and layout techniques with attention devoted to piping, job planning and cost factors to customers' satisfaction. Emphasizes technology of welding carbon steel plate and pipe with LH 7018 and stainless electrodes. Welds tested by AWS standards. (SCANS 1,3,4,5,8) Lab fee required. Prerequisite: WELD 1402 or consent of department chair.

WELD 2402 Gas Metal Arc Welding
(2-6) ..... 4 hours
Competencies include advanced skills using gas metal arc welding (GMAW) on steel, aluminum and stainless steel. Includes different shield gases. Emphasizes mixture of gases and their effect on arc and welds. Welds tested by AWS standards. Students will learn and demonstrate problem-solving techniques specific to GMAW. (SCANS 8,9) Lab fee required. Prerequisite or corequisite: WELD 1401 or WELD 2401 or consent of department chair.

WELD 2403 Metallurgy
(2-6) ..... 4 hours
This course requires students to understand and interpret the terminology related to the properties and uses of ferrous and nonferrous metals and other alloys, create reports analyzing the specimens, and perform industrial tests to determine alloying elements. Competencies in the use of equipment for the forging and heat-treating of metals, and interpreting the composition of metals according to specification numbers also will be achieved. (SCANS 1,2,6,8) Lab fee required. Prerequisite: None.

WELD 2404 Gas Tungsten Arc Welding
(2-6) ..... 4 hours
Competencies include advanced skills using gas tungsten arc welding (GTAW) technology and carbon arc cutting of various metals. Presents advantages and disadvantages of different shield and purge gases. Welds tested by AWS standards. Students will learn problem solving techniques specific to GTAW. (SCANS 8,9) Lab fee required. Prerequisite or corequisite: WELD 1401 or consent of the department chair.

Music

Faculty: Dr. Kathryn Hoppe, chair; Lonnie Clark, Randy Talley, Dr. Charlotte Whitaker.

The Odessa College music department, offering an associate of arts degree in music, provides a high quality academic program and cultural enrichment for all Ector County area residents. Courses and performing organizations supply pre-professional training for the music major, fulfill general education requirements, and offer personal enrichment and enjoyment for area residents. As a service to the community, the department presents performances of faculty, students, and ensembles; hosts area music clinics and competitions; and furnishes performance facilities for area music teachers. The music department is an accredited institutional member of the National Association of Schools of Music, a member of the Texas Association of Music Schools and the Texas Music Educators Association.

Course of Study for Associate in Arts Degree

Music

	Semester Hrs
General Education Requirements	**38**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
**Foreign Language, Math, or Science	6
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
*PHED (Any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3
Major Requirements	**34**
Class Piano, Secondary Piano, or Piano Ensemble (Piano Majors)	4
Freshman Principal Instrument or Voice	4
MUSI 1308 and MUSI 1309 Introduction to Music Literature	6
MUSI 1311 and MUSI 1312 Freshman Music Theory	6
MUSI 2311 and MUSI 2312 Advanced Study of Harmony	6
Music Ensemble	4
Sophomore Principal Instrument or Voice	4
Total Semester Hours	**72**

**PHED 1100 should be the first course taken in physical education.*
***Six to eight semester hours in same discipline.*

Music Ensemble Courses

MUSI 1121, 1122, 2121, 2122 Concert Band (50.0903.5530)
(0-3) ..... 1 hour each
Performance oriented course for students with at least high school playing experience. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1,5,10,11) Prerequisite: None.

MUSI 1131, 1132, 2131, 2132 Jazz Ensemble (50.0903.5530)
(0-3) ..... 1 hour each
Performance oriented course for students with at least high school playing experience. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1,5,10,11) Prerequisite: Consent of the instructor.

MUSI 1133, 1134, 2133, 2134 Orchestra (50.0903.5530)
(0-3) ..... 1 hour each
Performance oriented course for students who can play music of moderate difficulty on an orchestral instrument. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1,5,10,11) Prerequisite: Consent of the instructor.

MUSI 1137, 1138, 2137, 2138 Piano Ensemble and Accompanying (50.0903.5630)
(0-3) ..... 1 hour each
Designed to improve ensemble playing and to provide training in techniques of vocal and instrumental accompanying. Four semester hours required of all keyboard majors. Music reading and listening skills will be enhanced through ensemble playing and accompanying solo performers. (SCANS 1,5,11) Prerequisite: Consent of the instructor for all non-keyboard majors.

MUSI 1241, 1242, 2241, 2242 A Cappella Choir (50.0903.5730)
(0-5) ..... 2 hours each
A required course for music majors whose primary instrument is voice, or an elective course 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 performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1,5,10,11) Prerequisite: Admission by audition with acceptance based on musical ability and voice quality.

MUSI 1151, 1152, 2151, 2152 Vocal Ensemble (50.0903.5830)
(0-3) ..... 1 hour each
An elective course designed to acquaint the student with chamber music for the small vocal ensemble of all periods of music. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1,5,10,11) Prerequisite: Selection from the A Cappella Choir by audition with acceptance based on musical ability and voice quality.

Music Classes

MUSI 1306 Music Appreciation (50.0902.5130)
(3-0) ..... 3 hours
This course is open to all students and is designed to increase a student's understanding and enjoyment of the world's music. Music history information and listening skills will be acquired through a multimedia approach which includes lectures, videos, recordings, and live performances. (SCANS 6,11) Prerequisite: None.

MUSI 1308, 1309 Introduction to Music Literature (50.0902.5230)
(3-0) .....3 hours each
A chronological survey course for music majors, which acquaints students with musical composition from the Middle Ages through the 20th century. Historical aspects, as well as the music itself, are presented. Music history information and listening skills will be acquired through various audio-visual aids, including videotapes, CDs, CD-Roms, workbooks, and textbook. Required of all music majors. (SCANS 6,11) No prerequisite for MUSI 1308. Prerequisite for MUSI 1309: Consent of instructor.

MUSI 1311, 1312 Freshman Music Theory (50.0904.5130)
(3-3) .....3 hours each
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, part-writing, composition, ear-training, sight-singing, rhythmic reading and keyboard applications. Required for all music majors. (SCANS 6,11) Prerequisite for MUSI 1312: MUSI 1311.

MUSI 2311, 2312 Advanced Study of Harmony (50.0904.5230)
(3-3) .....3 hours each
Presents secondary seventh chords, modulation, chromatic melody and harmony, and small forms through analysis, part-writing, composition, ear-training, sight-singing, rhythmic reading and keyboard applications. Twentieth century melody and harmony and large forms are studied during the second semester. Required for all music majors. (SCANS 6,11) Prerequisite for MUSI 2311: Mu 1312. Prerequisite for MUSI 2312: MUSI 2311.

MUSI 1370 Music Fundamentals (50.0904.5530)
(3-0) .....3 hours
This course is open to all students and is a basic study of the principles of music and music theory information including notation, scales, intervals, and chords. (SCANS 6) Prerequisite: None.

MUSI 1371, 1372 Piano Literature (50.0902.5230)
(3-0) .....3 hours each
Surveys and studies solo literature for piano. Emphasizes individual and period idioms and styles. MUSI 1371 presents origins of keyboard and solo piano literature of the 18th century. MUSI 1372 presents solo piano literature of the 19th and 20th centuries. Information is acquired and listening skills are enhanced through the use of cassette tapes, videotapes, CD's, CD-Roms, and live performance. (SCANS 6,11) Prerequisite: Consent of the instructor.

MUSI 1160 Italian Diction (50.0908.5330)
(2-0) .....1 hour
Emphasizes Italian language and diction. Designed to promote ability to sing and phonetically spell the Italian language through listening and speaking exercises. Vocabulary derived from words commonly used in song and opera. (SCANS 11) Prerequisite: None.

MUSI 2160 German Diction (50.0908.5330)
(2-0) .....1 hour
Emphasizes German language and diction. Designed to promote ability to sing and phonetically spell the German language through listening and speaking exercises. Vocabulary derived from words commonly used in song and opera. (SCANS 11) Prerequisite: MUSI 1160.

MUSI 2161 French Diction (50.0908.5330)
(2-0) .....1 hour
Emphasizes French language and diction. Designed to promote ability to sing and phonetically spell the French language through listening and speaking exercises. Vocabulary derived from words commonly used in song and opera. (SCANS 11) Prerequisite: MUSI 1160.

MUSI 1170, 1171 General Foundations in Music (50.0904.5430)
(0-1/2) ..... 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for listening, creating rhythmic responses, and reading music notation. This course may involve an individual study project. Lab fee required. (SCANS 1,11) Prerequisite: None.

MUSI 1172, 1173 Instrumental Foundations in Music (50.0904.5430)
(0-1/2) ..... 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for satisfactory performance in playing an instrument, listening, creating rhythmic responses, and reading music notation. Lab fee required. (SCANS 1,11) Prerequisite: None.

MUSI 1174, 1175 Keyboard Foundations in Music (50.0904.5430)
(0-1/2) ..... 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for satisfactory performance in playing a keyboard instrument, listening, creating rhythmic responses, and reading music notation. Lab fee required. (SCANS 1,11) Prerequisite: None.

MUSI 1176, 1177 Vocal Foundations in Music (50.0904.5430)
(0-1/2) ..... 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for satisfactory vocal performance, listening, creating rhythmic responses, and reading music notation. Lab fee required. (SCANS 1,11) Prerequisite: None.

MUSI 1181, 1182, 2181, 2182 Class Piano (50.0907.5130)
(1-2) ..... 1 hour each
Courses for music majors designed to develop basic skills related to playing the piano 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. Class taught in state-of-the-art piano lab, using digital keyboards, sequencers and computers. (SCANS 1,5,6,8) Prerequisite: Consent of the instructor.

Private Lessons

Private study of piano, organ, voice, string, brass, woodwind, and percussion instruments is available to all students on both beginning and advanced levels of instruction. Students will develop and/or enhance their music reading and listening skills through practice and performance on their instrument. Music majors will have a one-hour lesson on their major instrument. They may also have a 1/2 hour lesson on a secondary instrument. Non-music majors will have a one-half hour lesson. Five hours of practice per week is required for a one-half hour lesson, and 10 hours for a one-hour lesson. (SCANS 1,11) Lab fee required. Prerequisite: None.

Non-Music Major Courses

MUAP 1189, 1190, 2189, 2190 Applied Music (50.0903.5430)
(0-1/2) ..... 1 hour each

Music Major Courses

MUAP 1201, 1202 Freshman Violin (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2201, 2202 Sophomore Violin (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1205, 1206 Freshman Viola (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2205, 2206 Sophomore Viola (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1209, 1210 Freshman Cello (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2209, 2210 Sophomore Cello (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1213, 1214 Freshman Double Bass (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2213, 2214 Sophomore Double Bass (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1217, 1218 Freshman Flute (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2217, 2218 Sophomore Flute (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1221, 1222 Freshman Oboe (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2221, 2222 Sophomore Oboe (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1225, 1226 Freshman Bassoon (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2225, 2226 Sophomore Bassoon (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1229, 1230 Freshman Clarinet (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2229, 2230 Sophomore Clarinet (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1233, 1234 Freshman Saxophone (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2233, 2234, Sophomore Saxophone (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1237, 1238 Freshman Cornet or Trumpet (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2237, 2238 Sophomore Cornet or Trumpet (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1241, 1242 Freshman French Horn (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2241, 2242 Sophomore French Horn (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1245, 1246 Freshman Trombone or Baritone (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2245, 2246 Sophomore Trombone or Baritone (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1253, 1254 Freshman Tuba (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2253, 2254 Sophomore Tuba (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1257, 1258 Freshman Percussion (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2257, 2258 Sophomore Percussion (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1261, 1262 Freshman Classical Guitar (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2261, 2262 Sophomore Classical Guitar (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1265, 1266 Freshman Organ (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2265, 2266 Sophomore Organ (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1269, 1270 Freshman Piano (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2269, 2270, Sophomore Piano (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1281, 1282 Freshman Voice (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 2281, 2282 Sophomore Voice (50.0903.5430)
(0-1) ..... 2 hours each

MUAP 1165, 1166, 2165, 2166 Secondary Organ (50.0903.5430)
(0-1/2) ..... 1 hour each

MUAP 1169, 1170, 2169, 2170 Secondary Piano (50.0903.5430)
(0-1/2) ..... 1 hour each

MUAP 1181, 1182, 2181, 2182 Secondary Voice (50.0903.5430)
(0-1/2) ..... 1 hour each

MUAP 1187, 1188, 2187, 2188 Secondary Instrument (50.0903.5430)
(0-1/2) ..... 1 hour each

Nursing RN/LVN/Tech-Prep

Faculty, Odessa: Carol Boswell, chair; Clarice Rowland, assistant director and coordinator of RN-Evening Direct Option Program; Ann Armstrong, Gail Barry, Marylin Boomer, Patty Chapman, Laura Cralle, Wanda Davis, Patty Jordan, Eva Mauldin, Jan Phillips, Pat Ritchey, Robbie Rogers and Naomi Warren.

Faculty, Andrews: Patricia Bayless, chair; DeAnna Moore

Faculty, Kermit: Anne Mitchell, chair; Stacy Wallis

The curriculum of the Odessa College nursing programs prepares the student for a variety of experiences in health care, including hospitals, home health care services, mental health agencies and occupational care in industry. Nursing is a caring-oriented human experience requiring a well educated nurse. Odessa College nursing programs are designed to allow students maximum flexibility to obtain this education. Options available to complete this goal are listed.

Career Ladder Option - Vocational/Associate Degree Level:
The Career Ladder Option on the Odessa Campus is designed to allow students the option of progressing through the two levels of nursing. Successful completion of the vocational level qualifies the student as an eligible candidate to take the National Council for Licensure Examination (NCLEX) - Practical Nurse (PN). The student will receive a certificate of completion. Successful completion of the associate-degree level qualifies the student as an eligible candidate to take the NCLEX - registered nurse (RN). The student will receive an associate in applied science degree. This option is also available through a six-year curriculum starting as a freshman in high school and continuing through the sophomore year at Odessa College. The vocational option requires two additional courses not reflected in the associate in applied science degree plan.

RN Direct Option-Evening - Associate Degree Level:
The RN Direct Option is designed for students to attend nursing classes and clinicals during evening hours, with the exception of the psychiatric clinicals, which will be offered during daytime hours. Classes are admitted in the fall of even numbered years. Successful completion qualifies the student as a candidate for application to take the National Council for Licensure Examination for the RN. The vocational option is available during the day to the Evening Option student.

Transition/Validation Option for the LVN - Associate Degree Level:
The Transition/Validation Option is designed for persons who are already licensed vocational nurses. The validation course is the initial course which serves to validate and enhance nursing skills. This brings the LVN to the level of the generic nursing student entering the second year of the RN Associate Degree Nursing Program. Upon successful completion of this course, the LVN will receive 17 hours of advanced credit. Successful completion of the second year qualifies the student as a candidate for application to take the National Council for Licensure Examination for the RN.

RN Tech-Prep Career Ladder Option:
The Tech-Prep Career Ladder option provides a six-year curriculum for nursing students, starting with the freshman year in high school and continuing through the sophomore year at Odessa College. It provides a variety of competencies and advanced work in nursing not possible to obtain in two years. These students will have the flexibility to progress through the Career Ladder Option. The vocational option requires two additional courses not reflected in the associate in applied science degree plan.

Nurse Tech I Option:
The Nurse Tech I Option is designed for students who complete NURS 1503 and NURS 1504 with a grade of "C" or higher to receive a certificate of completion and to be eligible for application to the registry for the state of Texas as a nurse aide.

Post RN Option:
The Post RN Option provides the student with advanced nursing skills. Four electives (NURS 2341, NURS 2342, NURS 2343 and NURS 2344) may transfer and articulate toward a bachelor of science in nursing degree. The student will receive a certificate of completion.

LVN Option, Andrews and Kermit Extensions:
The LVN Option is designed for those students who wish to complete their education at the vocational level. Successful completion of the vocational level qualifies the student as an eligible candidate to take the National Council for Licensure Examination for PN. The student will receive a certificate of completion.

The associate degree program is accredited by the Board of Nurse Examiners for the State of Texas and the National League for Nursing. The vocational programs are accredited by the Board of Vocational Nurse Examiners for the State of Texas. Curriculum plans are approved by the Texas Higher Education Coordinating Board.

Admission Requirements for the Career Ladder Option, RN-Evening Option, Transition/Validation for the LVN, and the Tech-Prep/Career Ladder Option:

1. Applications must be submitted by: March 1 for fall admission.
   October 1 for spring admission.
2. Persons who have been convicted of a felony or misdemeanor or who have a history of substance abuse must request a declaratory order from the Board of Nurse Examiners for the State of Texas prior to admission. Information and documentation must be submitted to the board prior to application for licensure. Eligibility for licensure will be decided by investigation. Persons who have been convicted of a felony will not qualify as an eligible candidate to take the National Council for Licensure Examination (NCLEX) - Practical Nurse (PN).
3. Prerequisites:
   BIOL 2401, Anatomy and Physiology I (must have completed within last five years.)
   BIOL 2402, Anatomy and Physiology II (must have completed within last five years.)
   MATH 1332 Structures of College Mathematics OR higher level math
   NURS 1201, Pharmacology
4. College cumulative GPA 2.0 or higher in all courses.
5. Official high school transcript or GED.
6. Passed TASP and/or satisfactory scores on ASSET placement tests.
7. A score of the 50th percentile or higher on the nursing entrance exam.
8. Current CPR Certification in Basic Life Support for Professionals (American Heart Association Course C or Red Cross Basic Life Support for the Professional).
9. Proof of health and accident insurance and professional liability coverage.

Admission Requirements for LVN Option, Andrews and Kermit Extensions:

1. Official high school transcript or GED.
2. College cumulative GPA of 2.0 or higher in all course work.
3. A satisfactory score on the Vocational Nursing Entrance Exam.
4. Current CPR certification (American Heart Association Course C or American Red Cross Basic Life Support for the Professional).
5. Persons who have been convicted of a felony will not qualify as an eligible candidate to take the National Council for Licensure Examination (NCLEX) - Practical Nurse (PN).
6. Applications should be submitted no later than May 1 for fall admission.

Although English language proficiency is not required for admission to the nursing options, successful completion of the program necessitates good communication skills in English. There is no discrimination due to age, sex, color, race, cultural or ethnic 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, geriatric nursing experiences and special selected services. All courses in the curriculum are required. A general education course may be required prior to some nursing courses.

Students must complete the outcome competencies for each level with a minimum of "C" in nursing courses and general education courses before progressing to the next semester. A grade of "D" or "F" is unacceptable. Students must maintain a cumulative GPA of 2.0 or above in all course work each semester.

Nursing students are required to maintain coverage in health and accident insurance. Professional liability insurance is mandatory.

Nursing students are responsible for their own transportation to clinical facilities. The nursing department 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.

RN - Career Ladder Option - Vocational/Associate Degree Level

The Career Ladder Nursing Option is designed to allow adult students who did not enter the high school program 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.

Certificate of Completion

	Semester Hrs
Prerequisite/Bridge Courses	13
BIOL 2401 Anatomy and Physiology I	4
BIOL 2402 Anatomy and Physiology II	4
MATH 1332 Structures of College Mathematics I OR higher level math	3
NURS 1201 Pharmacology	2

First Year

Summer Session II

NURS 1102 Adult Assessment	1
*PHED 1100 Lifestyle Assessment and Modification	1
SPCH 1315 Public Speaking	3

First Semester

PSYC 2308 Child Psychology	3
NURS 1503 Fundamentals of Nursing	5
NURS 1504 Fundamentals of Nursing Practicum	5

Second Semester

COSC 1301 Introduction to Computer Systems	3
NURS 1306 Nursing Practicum I	3
NURS 1805 Care of Adult Populations	8

Summer Sessions I and II

**NURS 1222 Nursing Practicum II	2
**NURS 1821 Nursing Care I	8

***Vocational level (These courses are optional.)*

Students who successfully complete the vocational level with a cumulative GPA of 2.0 or better in all course work are eligible to take the state board examination for licensure as a vocational nurse and receive a certificate of completion.

Second Year

	Semester Hrs
First Semester	
BIOL 2420 Microbiology	4
ENGL 1301 Composition and Rhetoric	3
NURS 2807 Nursing Care of Select Populations I	8
Second Semester	
GOVT 2301 U.S. and Texas Government	3
NURS 2808 Nursing Care of Select Populations II	8
PHED one-hour activity course	1
Total Hours	**72**

Students planning to enter the associate-degree level may take an additional academic course from the curriculum for the second year.

Students successfully completing the associate-degree level are eligible to take the state board examination for licensure as a registered nurse.

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

RN Associate Degree Nursing Program-Evening Option

The Odessa College RN Evening Option offers adult students who did not enter the high school program a sequence of evening classes leading to an associate in applied science degree and preparation to take 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 prerequisite/bridge course requirements designated in the curriculum and be currently certified in CPR. All students are governed by policies in the Nursing Student Handbook. The vocational nursing courses are available to the Evening Option students during the day.

	Semester Hrs
Prerequisite/Bridge Courses	**34**
BIOL 2401 Anatomy and Physiology I	4
ENGL 1301 Composition and Rhetoric	3
MATH 1332 Structures of College Mathematics I or higher level math	3
*PHED 1100 Lifestyle Assessment and Modification	1
SPCH 1315 Public Speaking	3
BIOL 2402 Anatomy and Physiology II	4
COSC 1301 Introduction to Computer Systems	3
PHED one-hour activity course	1
PSYC 2308 Child Psychology	3
BIOL 2420 Microbiology	4
GOVT 2301 U.S. and Texas Government	3
NURS 1201 Pharmacology	2

First Year

	Semester Hrs
First Semester	
NURS 1102 Adult Assessment	1
NURS 1503 Fundamentals of Nursing	5
NURS 1504 Fundamentals of Nursing Practicum	5
Second Semester	
NURS 1306 Nursing Practicum I	3
NURS 1805 Care of Adult Populations	8

Summer Session I and II
**NURS 1222 Nursing Practicum II 2
**NURS 1821 Nursing Care I 8

***Vocational level (These courses are optional.)*

Third Year

Semester Hrs

First Semester
NURS 2807 Nursing Care of Select Populations I 8

Second Semester
NURS 2808 Nursing Care of Select Populations II 8

Total Hours 72

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

Transition/Validation Option for the LVN - Associate Degree Level

Prior to taking the transition/validation course, licensed vocational nurses must be licensed to practice nursing in the state of Texas. Upon successful completion of the transition/validation course, students will follow the curriculum for the upper level of the career ladder program. All nursing students must have current CPR certification and are governed by policies in the Nursing Student Handbook.

Semester Hrs

Prerequisite Courses
BIOL 2401 Anatomy and Physiology I 4
BIOL 2402 Anatomy and Physiology II 4
COSC 1301 Introduction to Computer Systems 3
MATH 1332 Structures of College Mathematics I OR higher level math 3
NURS 1201 Pharmacology (or consent of instructor) 2
PSYC 2308 Child Psychology 3

First Year

First Semester
ENGL 1301 Composition and Rhetoric 3
*NURS 1601 Transition/Validation 6
**PHED 1100 Lifestyle Assessment and Modification 1
SPCH 1315 Public Speaking 3

Second Semester
BIOL 2420 Microbiology 4
NURS 2807 Nursing Care of Select Populations I 8

Second Year

First Semester
GOVT 2301 U.S. and Texas Government 3
NURS 2808 Nursing Care of Select Populations II 8
PHED one-hour activity course 1

**When students have successfully completed NURS 1601, they are eligible to enter the second year of the curriculum.*
***PHED 1100 should be the first activity course taken in physical education.*

RN Tech Prep/Career Ladder Option

Adult students who did not follow the RN Tech Prep/Career Ladder option during high school should follow either the RN Career Ladder option found on page 195 or the RN Evening option found on page 196.

Semester Hrs

***Prerequisite Courses** **16**
- BIOL 2401 Anatomy and Physiology I 4
- BIOL 2402 Anatomy and Physiology II 4
- COSC 1301 Introduction to Computer Systems 3
- MATH 1332 Structures of College Mathematics I or higher level math 3
- NURS 1201 Pharmacology 2

** Graduates of the high school tech-prep nursing program will have completed the prerequisite courses or equivalent competencies prior to graduation.*

First Year

Summer Session II
- NURS 1102 Adult Assessment 1
- SPCH 1315 Public Speaking 3

First Semester
- ENGL 1301 Composition and Rhetoric 3
- NURS 1503 Fundamentals of Nursing 5
- NURS 1504 Fundamentals of Nursing Practicum 5

Completers of NURS 1503 and 1504 with a grade of "C" or higher are eligible to receive a certificate of completion as a Nurse Tech I and are eligible for employment at the aide level.

Second Semester
- NURS 1306 Nursing Practicum I 3
- NURS 1805 Care of Adult Populations 8
- PSYC 2308 Child Psychology 3

Summer Sessions I and II
- NURS 1222 Nursing Practicum II 2
- NURS 1821 Nursing Care I 8

Completers of NURS 1821 with a grade of "C" or higher are eligible to (a) receive an LVN certificate of completion, (b) take the state board examination for licensure as a vocational nurse, and (c) enter the associate-degree level without completion of NURS 1601.

Second Year

Semester Hrs

First Semester
- BIOL 2420 Microbiology 4
- NURS 2807 Nursing Care of Select Populations I 8
- PHED 1100 Lifestyle Assessment and Modification 1

Second Semester
- GOVT 2301 U.S. and Texas Government 3
- NURS 2808 Nursing Care of Select Populations II 8
- PHED one-hour activity course 1

Students successfully completing the associate-degree level program are eligible to receive an associate degree in nursing and take the state board examination for licensure as a registered nurse. Academic courses listed in the second year may be taken earlier if the student's schedule and abilities allow.

LVN Option - Andrews and Kermit Extensions

The LVN Option is offered at the Andrews and Kermit extension sites. It is designed for those students who wish to complete their education at the vocational level. Successful completion of the vocational level qualifies the student as an eligible candidate to take the National Council for Licensure Examination for PN. The student will receive a certificate of completion from Odessa College.

Semester Hrs

First Semester
NURS 1611 Vocational Nursing I 6
NURS 1612 Vocational Nursing II 6

Second Semester
NURS 1613 Vocational Nursing III 6
NURS 1614 Vocational Nursing IV 6

Summer Session
NURS 1615 Vocational Nursing V 6

Nursing Courses

NURS 1102 Adult Assessment
(1-0) [16 weeks] ..... 1 hour (long term)
(3-0) [5 weeks] ..... 1 hour (summer)
Prepares the student with knowledge and skills concerning the overall performance of a complete physical examination of the adult client. Establishes expertise in obtaining a thorough client history. Utilizes problem solving as a basis for decision making in nursing practice. Acquires proficiency in documenting the data collected during history taking and assessment process. (SCANS 1,2,5,6,9,10,11) Prerequisites: BIOL 2401 and 2402.

NURS 1201 Pharmacology
(1-3) [16 week] ..... 2 hours (long term)
(3-9) [5 weeks] ..... 2 hours (summer)
Prepares the student to identify pharmacological classifications of medications, usage, side effects and toxic effects. Using dimensional analysis, the student performs drug dosage calculations for administration of medications and monitoring of intravenous solutions for clients. (SCANS 1,2,3,6,9) Prerequisites: BIOL 2401 and BIOL 2402.

NURS 1222 Nursing Practicum II
(0-6) [16 weeks] ..... 2 hours (long term)
(0-8) [12 weeks] ..... 2 hours (summer)
Utilizes NEAC Competencies as a foundation for roles and functions of graduate vocational nursing. Reviews ethical/legal issues. Clinical experience provides personal and vocational adjustment to the VN role. (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisite: NURS 1805.

NURS 1306 Nursing Practicum I
(0-9) ..... 3 hours (long term)
Provides clinical experience in the application of nursing skills in various health care settings. Explores the roles of the nurse as provider of care and manager of care in community focused health care settings. Includes research topics relevant to practice. Administers medications and treatments following established protocols. (To be taken concurrently with second semester.) (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisites: NURS 1503 and NURS 1504.

NURS 1503 Fundamentals of Nursing

(5-0) ..... 5 hours

Prepares the student to participate as a member of the health care team by providing community focused nursing care in a variety of health care settings. Identifies the five steps of systematic process, which include assessing, analyzing, planning, implementing and evaluating when performing basic nursing care. Selects nursing diagnoses from a standardized source based upon analysis of health data. Provides instruction in skills of basic nursing procedures. Includes content relevant to documentation, nutrition, legal/ethical parameters, teaching and care of clients of varied cultural backgrounds. Utilizes computer assignments to compliment theory. (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisites: BIOL 2401, BIOL 2402, MATH 1332 AND NURS 1201. Prerequisite or Corequisite: NURS 1102.

NURS 1504 Fundamentals of Nursing Practicum

(0-15) ..... 5 hours

Provides clinical experience in nursing skills in various community focused structured health care settings. Administers medications and treatments following established protocol. Explores the role of the nurse as provider of care. This clinical experience must be taken concurrently with NURS 1503 or with consent of department chair. (SCANS 1,2, 3,4,5,6,8,9,10,11) Prerequisites: BIOL 2401, BIOL 2402, MATH 1332 and NURS 1201.

NURS 1601 Transition/Validation

(4-6) ..... 6 hours

Prepares the licensed vocational nurse with major concepts basic to the curriculum and conceptual framework to determine the health status and health needs of clients and families. Introduces nursing process and critical pathways. Builds on NEAC Competencies. Administers medications and treatments following established protocols. Requires supervision while in the clinical setting. Utilizes computer assignments to compliment theory. Successful completion of course makes the student eligible to enter second year of the Career Ladder Option curriculum. (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisites: BIOL 2401, BIOL 2402, COSC 1301, MATH 1332, PSYC 2308, NURS 1201 and Texas license to practice as an LVN.

NURS 1611 Vocational Nursing I

(20-0) ..... 6 hours

This course includes anatomy and physiology I, microbiology, vocational adjustments, growth and development with nutrition throughout the life span, and nursing skills to prepare the student to perform basic nursing procedures for the comfort and safety of client with self-care limitations that include application of nursing ethics and legal responsibilities. The student participates as a member of the health care team providing nursing care for clients in structured health care settings. Using the nursing process to problem solve, the student learns to assess and analyze by reading and interpreting patient records and performing basic physical assessments; prioritize client needs to implement plans of care; and document nursing activities to communicate information for further evaluation of the client response. (SCANS 1,2,4,5,6,7,8,9) Prerequisite: None. Corequisite: NURS 1612. Lab fees required.

NURS 1612 Vocational Nursing II

(8-7) ..... 6 hours

Continues with anatomy and physiology II, growth and development, nutrition, and nursing skills. Pharmacological math as it applies to dosage calculations and medication administration is presented. The incorporation of mental health and mental illness assists in evaluating basic mental health. The communication process is included to develop teaching skills, listening skills, interpretation skills, and socialization skills with clients, families and peers. (SCANS 1,2,3,4,5,6,7,8,9,10,11) Prerequisite: None. Corequisite: NURS 1611.

NURS 1613 Vocational Nursing III
(7-13) [20 weeks] ..... 6 hours
Begins the study of reproduction and pregnancy. Using the application of the principles from the biological, physical, social and behavioral sciences with an emphasis on the nursing process, the student studies prenatal growth and development and antepartal care of the mother including common discomforts of pregnancy and possible complications during pregnancy; nursing care during the labor process and the postpartum period with potential complications; and immediate care of the newborn. Principles of pharmacology are applied throughout the course and in the clinical setting. Clinical experiences are based on application of the nursing process in the obstetrical environment with the adult and newborn including the dosage calculation and administration of medication and treatments under the direct supervision of a clinical instructor. (SCANS 1,2,3,4,5,6,7,8,9,10,11) Prerequisites: NURS 1611 and NURS 1612. Corequisite: NURS 1614.

NURS 1614 Vocational Nursing IV
(3-14) [20 weeks] ..... 6 hours
Continues the study of medical-surgical nursing of adults and children by body system including the application of the principles of pharmacology. Prepares the student to implement the plan of care with legal and ethical consideration involving communication with the client, family members, and other members of the health care team. The student provides care for the adult and pediatric medical-surgical client in structured settings using the nursing process to plan, document, and evaluate patient care, including administration of medications and treatments following established protocols. (SCANS 1,2,3,4,5,6,7,8,9,10,11) Prerequisites: NURS 1611 and 1612. Corequisite: NURS 1613.

NURS 1615 Vocational Nursing V
(5-35) ..... 6 hours
Continues the study of medical-surgical nursing of adults and children by body systems including the application of the principles of pharmacology. Clinical application includes the care of obstetrical clients and newborn infants in addition to the unstable medical-surgical clients. The student implements critical thinking through interpretation of health data in collaboration with client, families, and other health care professionals. The student begins to assume accountability and responsibility for the quality of nursing care provided to clients and families at the vocational nursing level (SCANS 1,2,3,4,5,6,7,8, 9,10,11) Prerequisites: NURS 1611, NURS 1612, NURS 1613, NURS 1614.2,3,4,6, 9,10) Prerequisite: BIOL 2401, BIOL 2402, MATH 1314 or MATH 1342, PSYC 2308, COSC 1301, NURS 1201 and consent of department chair. Texas license to practice as a LVN.

NURS 1805 Care of Adult Populations
(4-12) ..... 8 hours
Prepares the student to care for adult clients. Identifies characteristics, concepts, processes and implications related to risk factors, disease transmission, nursing care, nutrition, legal/ethical parameters, teaching, and culture for adult populations. Clinical includes care of adult clients in structured medical/surgical settings, perioperative areas and community settings. Theory includes (but is not limited to) care of adults with cardiovascular, endocrine, GI/GU, immunological, neurological, oncological, orthopedic, renal and respiratory alterations. Utilizes the nursing process in critical pathways. Administers medications and treatments following established protocols. Utilizes computer assignments to compliment theory. (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisites: NURS 1503 AND NURS 1504.

NURS 1821 Nursing Care
(4-12) [16 weeks] ..... 8 hours (long term)
(5.3-16) [12 weeks] ..... 8 hours (summer)
Prepares the student to meet the NEAC competencies at the vocational level. Includes maternity, pediatric, medical/surgical and mental health concepts. Introduces research relevant to practice, implementation of the nursing process and critical thinking. Emphasizes the concepts of managed care and personal and vocational adjustment. Utilizes computer assignments to compliment theory. (SCANS 1,2,5,6,710,11) Prerequisite: NURS 1805.

NURS 2341 Legal/Ethical Issues (Elective)
(3-0) ..... 3 hours
Identifies current legal/ethical issues in the delivery of health care. Introduces the judicial process, liability issues, individual rights and potential areas of conflict. (SCANS 1,2,5,6,7,10,11) Prerequisite: NURS 1821, be a graduate nurse, or have consent of instructor.

NURS 2342 Physical Assessment (Elective)
(3-0) ..... 3 hours
Establishes knowledge and skills concerning the overall performance of a complete physical examination. Develops expertise in obtaining a thorough client history. Uses critical thinking as a basis for decision making in nursing practice. Acquires proficiency in documenting the data collected during the history taking and assessment process for clients through the lifespan. (SCANS 1,2,4,5,6,8,9,10,11) Prerequisites: BIOL 2401, BIOL 2402 or be a graduate nurse.

NURS 2343 Rural/Home Health Nursing (Elective)
(3-0) ..... 3 hours
Identifies and makes independent clinical judgment in caring for clients and families with health care problems in the community setting. Uses critical thinking as a basis for decision making in nursing practice. Incorporates legal and ethical considerations into the provision of safe nursing care. (SCANS 1,2,3,5,6,7,9,10,11) Prerequisite: NURS 1821 or be a graduate nurse.

NURS 2344 Critical Care Nursing (Elective)
(3-0) ..... 3 hours
Establishes knowledge in advanced pathological processes. Emphasizes techniques used in hemodynamic monitoring, care of clients on ventilators, cardiac monitoring, can care of victims of trauma (including neurological aspects). Includes advanced assessment skills and psychosocial adaptation to critical care. (SCANS 1,2,3,5,6,7,8,9,10,11) Prerequisites: NURS 2808 or consent of instructor. Open to registered nurses.

NURS 2807 Nursing Care of Select Populations
(4-12) ..... 8 hours
Prepares the student for learning opportunities in family-centered nursing including pregnancy, labor and delivery, care of the newborn and pediatrics. Theory related to community health, nutrition and teaching included. Clinical includes care of clients in structured hospital and community settings. Utilizes the nursing process in critical paths. Administers medications and treatments following established protocols. Utilizes computer assignments to complement theory. (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisite: NURS 1805.

NURS 2808 Nursing Care of Select Populations II
(4-12) ..... 8 hours
Prepares the student to care for pediatric and adult clients in mental health and critical care settings. Provides theory and clinical experiences in community focused health care. Includes an emphasis on nutrition and teaching. Prepares the student for entrance into the work force by focusing on relationships with clients and health care professionals. Legal/ethical parameters, managed care, staffing and resume writing is included. Emphasizes implementation of the nursing process in critical paths. Administers medications and treatments following established protocols. Utilizes computer assignments to compliment theory. (SCANS 1,2,3,4,5,6,8,9,10,11) Prerequisite: NURS 2807.

Occupational Safety and Health Technology

This program is pending Texas Higher Education Coordinating Board approval.

Faculty: J.D. Roberts, chair; Lynn Reese.

The occupational safety and health technology degree is designed for people entering the safety and/or environmental department within their company or for those who seek employment in this demanding field. The two-year program is designed to equip the safety/environmental professional with the tools needed to keep his/her company in compliance with current regulatory agencies and to create a safe and healthy work environment for all employees.

Course of Study for Associate in Applied Science Degree

Occupational Safety and Health Technology

	Semester Hours
General Education Requirements	**23**
BIOL 2306 General Ecology OR GEOL 1403 Physical Geology	3
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR MATH 1371 College Algebra for Business OR MATH 1372 Technical College Algebra	3
PSYC 2302 Applied Psychology	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Major Requirements	**36**
OSHA 1300 Industry Overview	3
OSHA 1305 Introduction to Safety and Health	3
OSHA 1310 Instrumentation and Analysis	3
OSHA 1315 Process Safety Management	3
OSHA 1320 Industrial Hygiene	3
OSHA 2377 Cooperative Work Experience	3
OSHA 2390 Environmental Regulations	3
OSHA 2393 Safety Assessment	3
OSHA 2395 Industrial Safety	3
OSHA 2396 Hazardous Waste and Emergency Response	3
OSHA 2398 Environmental Issues	3
*OSHA or PETR Elective (any OSHA or PETR course not required)	3
Related Requirements	**8**
EMED 1501 Emergency Care of the Sick and Injured	5
PETR 1380 Computers for Petroleum	3
Total Semester Hours	**67**

**Students will choose from the following pool of courses depending on their individual and local industry needs: PETR 1301 Basic Oilfield Hydraulics, PETR 1302 Rotary Drilling Rig Equipment, PETR 1370 Petroleum Instrumentation, PETR 2331 Natural Gas Processing, PETR 2340 Refining Methods, PETR 2350 Pipelining, PETR 2382 Well Stimulation Methods, PETR 2383 Chemical Treating in Production Operations, PETR 2388 Artificial Lift and PETR 2389 Gas and Liquid Measurement.*

Course of Study for Certificate of Technology

Occupational Safety and Health Technology

	Semester Hours
General Education Requirements	**6**
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Major Requirements	**21**
OSHA 1300 Industry Overview	3
OSHA 1305 Introduction to Safety and Health	3
OSHA 1310 Instrumentation and Analysis	3
OSHA 2377 Cooperative Work Experience	3
OSHA 2395 Industrial Safety	3
OSHA 2396 Hazardous Waste and Emergency Response	3
OSHA 2398 Environmental Issues	3
Related Requirements	**3**
PETR 1380 Computers for Petroleum	3
Total Semester Hours	**30**

Occupational and Safety and Health Technology Courses

OSHA 1300 Industrial Overview
(3-0) ..... 3 hours
Competencies include information and skills regarding overall intent and proper procedures in a variety of different industry technologies: exploration, drilling, production, transportation, marketing and refining. The student will be able to apply skills to prioritize activities and reason the relationship between finding oil and gas and transporting it to the refinery. Students will be responsible for reading and analyzing charts and diagrams and calculating downhole volumes, displacements and pressures. (SCANS 1,3,4,6,8,9) Prerequisite: None.

OSHA 1305 Introduction to Safety and Health
(3-0) ..... 3 hours
Competencies include safety and health considerations in the workplace. The student will read accident forms, evaluate and recognize accident causes, effects and safeguards. Students will be required to exhibit problem-solving, self-management and communication skills while working within a safety and health group. Within this group, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 1,4,5,6,9,10,11) Prerequisite: None.

OSHA 1310 Instrumentation and Analysis
(3-0) ..... 3 hours
Competencies include performing and interpreting basic theories, functions, application and analysis of those instruments used in air, water and soil monitoring. The students will be able to prepare a report on the impurities and pollutants in the environment. (SCANS 1,2,3,6,8,9) Prerequisite: OSHA 1305 or consent of the department chair.

OSHA 1315 Process Safety Management
(3-0) ..... 3 hours
Student will compile a list of written process safety information for employees involved with highly hazardous chemicals and recommend the purchasing of safety equipment. Students will be required to exhibit problem-solving, self-management and communication skills while working in a safety analysis group. Within this group, students will be responsible for organizing and evaluating safe use, storing, manufacturing, handling or moving hazardous chemicals at the job site or any combination of these activities. (SCANS 1,4,5,6,9,10,11) Prerequisite: OSHA 1305 or consent of the department chair.

OSHA 1320 Industrial Hygiene
(3-0) ..... 3 hours
Students learn to anticipate, recognize, evaluate and control environmental factors or stresses arising in or from the workplace. Students will prepare written reports and recommend actions as a team effort on the results of their findings from workplace samplings. Topics to include: workplace noise, ergonomics, toxicology, ventilation and air sampling instrumentation. (SCANS 1,2,5,7,8,9,10) Prerequisite: OSHA 1305 or consent of the department chair.

OSHA 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry work experiences. Under supervision of college faculty and a workplace supervisor (petroleum-related), the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Consent of the department chair.

OSHA 2390 Environmental Regulations
(3-0) ..... 3 hours
Covers all pertinent requirements and strictures affixed to industry by agencies such as the RRC, DOT, FERC, DOE and OSHA. The student will read, interpret and analyze the effects of such rulings and prepare the proper responses. (SCANS 1,2,6,9) Prerequisite: PETR 1300 or consent of the department chair.

OSHA 2393 Safety Assessment
(3-0) ..... 3 hours
Competencies enable student to read and evaluate the effects of the statistical analysis of safety assessment. Students will be required to exhibit problem-solving, self-management and communication skills while working within a safety assessment group. Within this group, students will be responsible for effective measurement of safety performance, unsafe conditions and contributing factors. Students will be required to calculate using various models, probabilities and accident rates. (SCANS 1,3,4,5,6,9,10,11) Prerequisite: OSHA 1305 or consent of the department chair.

OSHA 2395 Industrial Safety
(3-0) ..... 3 hours
Designed for industrial, manufacturing and technical workers where state/federal regulations require industrial safety training. Course competencies meet 29-CFR-1910 and 1926. Course includes hazard communication, lock-out/tag-out, emergency action, confined space entry and other industry-related subjects. Major emphasis will be placed on written programs, training requirements and implementation of the programs to withstand OSHA inspection and civil litigation. Students will be required to exhibit problem-solving, self-management and communication skills while working within a safety environmental team. Within this team environment, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 4,5,6,7,8,9,10,11) Prerequisite: None.

OSHA 2396 Hazardous Waste and Emergency Response
(3-0) ..... 3 hours
Designed for industrial, manufacturing and technical workers where state/federal regulations require industrial safety training. Course competencies meet 29-CFR-1910.120 a-q requirements. Course completers will be certified as a hazardous waste operations emergency response technician (HAZWOPER). Students will be required to exhibit problem-solving, self-management and communication skills while working within a safety environmental team. Within this team environment, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 4,5,6,7,8,9,10,11) Prerequisite: None.

OSHA 2398 Environmental Issues
(3-0) ..... 3 hours

Designed for industrial, manufacturing and technical workers where state/federal regulations require industrial safety training. Course competencies include critical safety and environmental issues in business and industry as well as related regulations and proper responses. Course covers RRC and SWR, related to drilling, production, waste prevention, pollution and public safety. Students will be required to exhibit problem-solving, self-management and communication skills while working within a safety environmental team. Within this team environment, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 4,5,6,7,8,9,10,11) Prerequisite: None.

Office Systems Technology

Faculty: Nancy Stewart, chair; Tambi Arnold, Billie Duncan.

The office systems technology program is designed to provide students with an intensive training in up-to-date technological skills for immediate employment in the business or medical office. The program also offers students the opportunity to upgrade their skills in the most recent software in order to obtain better employment.

The office systems technology associate in applied science degree is offered with an emphasis in office systems technology or medical. This degree provides students with a broad knowledge of office procedures and applications in the computer and other automated equipment.

Course of Study for Associate in Applied Science Degree

Office Systems Technology

Students not graduating under the tech-prep high school graduation plan must take the 14 semester hours marked with an (*) as part of the office systems technology curriculum—articulation, advanced standing exam, approval of department chair, or regular enrollment at OC.

	Semester Hrs
General Education Requirements	**14**
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government OR	
GOVT 2302 American National Government	3
MATH 1314 College Algebra OR	
MATH 1324 Mathematical Analysis for Business OR	
MATH 1371 College Algebra for Business OR	
MATH 1372 Technical College Algebra	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR 1321 Business and Professional Speech	3
Major Requirements	**44**
OFST 1321 Beginning Keyboarding OR OFST 1322 Intermediate Keyboarding	3
OFST 1322 Intermediate Keyboarding OR OFST 2304 Advanced Keyboarding	3
OFST 1401 Data Entry/Business Calculations	4
OFST 1402 Business Language Skills	4
*OFST 1404 Beginning Word Processing	4
OFST 1406 Basic Spreadsheet	4
*OFST 1424 Office Bookkeeping	4
OFST 2377 Cooperative Work Experience	3
OFST 2304 Advanced Keyboarding OR OFST 2402 Information Processing	3
OFST 2401 Advanced Word Processing	4
OFST 2420 Business Communication	4
OFST 2421 Office Procedures	4

OFST 2421 Office Procedures 4
Related Requirements **9**
BUSI 1301 Introduction to Business 3
*COSC 1301 Introduction to Computer Systems 3
MGMT 2304 Personnel and Human Relations 3

Total Semester Hours **67**

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

Course of Study for Certificate of Technology

Level I certificates are TASP-waived.

Level I - Office Clerk

Semester Hrs

Major Requirements **15**
*OFST 1321 Beginning Keyboarding OR OFST 1322 Intermediate Keyboarding ... 3
OFST 1401 Data Entry/Business Calculations 4
*OFST 1404 Beginning Word Processing 4
(If taking OFST 1321, delay until second semester and take OFST 1402))
*OFST 1424 Office Bookkeeping 4

Related Requirements **3**
COSC 1301 Introduction to Computer Systems 3

Total semester hours **18**

A total of 18 semester hours and a grade point average of 2.0 are required for a level I certificate.

**Indicates courses which may be articulated by agreement with high school.*

Level II - Office Assistant

The 18 semester hours specified in level I certificate plus the following courses:

Semester Hrs

Major Requirements **44**
OFST 1322 Intermediate Keyboarding OR OFST 2304 Advanced Keyboarding 3
OFST 1402 Business Language Skills 4
OFST 1406 Basic Spreadsheet 4
OFST 2401 Advanced Word Processing 4
OFST 2304 Advanced Keyboarding OR OFST 2402 Information Processing 4
OFST 2420 Business Communications 4
OFST 2421 Office Procedures 4

Related Requirements **6**
SPCH 1315 Public Speaking OR 1321 Business and Professional Speech 3
TMTH 1370 Technical College Mathematics or higher level math 3

Total Semester Hours **50-51**

A total of 50-51 semester hours and a grade point average of 2.0 are required for a level II certificate.

Level III (Advanced Skills Certificate) Office Technology Specialist

Students may earn a level III certificate—advanced skills certificate—office technology specialist by completing the following requirements.

Semester Hrs

Major Requirements **8**
OFST 2402 Information Processing OR OFST 2404 Desktop Publishing 4

Related Requirements **3**
BUSI 1301 Introduction to Business OR
MGMT 1301 Introduction to Management OR
MGMT 2301 Management Skills Development 3

Total Semester Hours **11**

A total of 11 semester hours and a grade point average of 2.0 are required for a level III certificate—advanced skills certificate—office technology specialist.

NOTE: Completion of level II and III certificates will require passage of TASP exam.

Course of Study for Associate in Applied Science Degree

Medical Emphasis

Students not graduating under the tech-prep high school graduation plan must take the 14 semester hours marked with an (*) as part of the office systems technology curriculum—articulation, advanced standing exam, approval of department chair, or regular enrollment at OC.

Semester Hrs

General Education Requirements **14**
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing 3
GOVT 2301 U.S. and Texas Government OR
GOVT 2302 American National Government 3
MATH 1314 College Algebra OR
MATH 1324 Mathematical Analysis for Business OR
MATH 1371 College Algebra for Business OR
MATH 1372 Technical Algebra for Business 3
**PHED (any two one-hour activity courses) 2
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech 3

Major Requirements **48**
OFST 1101 Computerized Medical Recordkeeping (4 weeks) 1
OFST 1207 Medical Terminology (8 weeks) 2
OFST 1208 Medical Coding (8 weeks) 2
OFST 1217 Beginning Medical Transcription (8 weeks) 2
*OFST 1321 Beginning Keyboarding OR OFST 1322 Intermediate Keyboarding ... 3
OFST 1322 Intermediate Keyboarding OR OFST 2304 Advanced Keyboarding 3
OFST 1401 Data Entry/Business Calculations 4
OFST 1402 Business Language Skills 4
*OFST 1404 Beginning Word Processing 4
(If taking OFST 1321, delay until second semester)
OFST 1406 Basic Spreadsheet 4
*OFST 1424 Office Bookkeeping 4
OFST 2377 Cooperative Work Experience 3
OFST 2401 Advanced Word Processing 4
OFST 2420 Business Communication 4
OFST 2421 Office Procedures 4

Related Requirements **6**
Six hours or more selected from the following:
BIOL 1170 Medical Terminology 1
BIOL 2404 Human Anatomy and Physiology (16 weeks) 4
*COSC 1301 Introduction to Computer Systems 3
MGMT 2304 Personnel and Human Relations 3

Total Semester Hours **68**

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

A total of 68 semester hours and a grade point average of 2.0 are required for associate in applied science degree.

**Indicates courses which may be articulated by agreement with high school.*

**Indicates courses which may be articulated by agreement with high school.*

Course of Study for Certificate of Technology Options

Level I certificates are TASP-waived.

Level I - Medical Office Clerk

	Semester Hrs
Major Requirements	**15**
OFST 1321 Beginning Keyboarding or OFST 1322 Intermediate Keyboarding	3
OFST 1401 Data Entry/Business Calculations	4
*OFST 1404 Beginning Word Processing	4
(If taking OFST 1321, delay until second semester and take OFST 1402)	
*OFST 1424 Office Bookkeeping	4
Related Requirements	**3**
*COSC 1301 Introduction to Computer Systems	3
Total Semester Hours	**18**

A total of 18 semester hours and a grade point average of 2.0 are required for a level I certificate—medical office clerk.

**Indicates courses which may be articulated by agreement with high school.*

Level II - Medical Office Assistant

The 18 semester hours specified in level I certificate plus the following courses:

	Semester Hrs
Major Requirements	**30**
OFST 1101 Computerized Medical Recordkeeping (4 weeks)	1
OFST 1207 Medical Terminology (8 weeks)	2
OFST 1208 Medical Insurance Coding (8 weeks)	2
OFST 1217 Beginning Medical Transcription (8 weeks)	2
OFST 1322 Intermediate Keyboarding OR	
OFST 2304 Advanced Keyboarding OR	
OFST 2417 Advanced Medical Transcription	3
OFST 1402 Business Language Skills	4
OFST 1406 Basic Spreadsheet	4
OFST 2401 Advanced Word Processing	4
OFST 2420 Business Communication	4
OFST 2421 Office Procedures	4
Related Requirements	**6**
SPCH 1315 Public Speaking OR	
SPCH 1321 Business and Professional Speech	3
TMTH 1370 Technical College Mathematics or higher level math	3
Total Semester Hours	**54**

A total of 54 semester hours and a grade point average of 2.0 are required for a certificate of technology—medical office technology specialist.

Level III (Advanced Skills Certificate) Medical Office Technology Specialist

OFST 2232 Medical Office Procedures/Records (8 weeks)	2
OFST 2417 Advanced Medical Transcription	4
OFST 2402 Information Processing	4
Total Semester Hours	**10**

A total of 10 semester hours and grade point average of 2.0 are required for level III—advanced skills certificate—medical office technology specialist.

Office Systems Technology Courses

OFST 1100 Basic Keyboarding Skills
(1-2) [7 weeks] ..... 1 hour
Student will develop a functional skill in touch-method keyboarding on alphanumeric keyboard, including numbers and symbols. Designed for student desiring minimal keyboard skills (approximately 20 wpm) or wanting keyboard review. Will develop skills in reading instructions and accessing keyboarding programs. (SCANS 1,4,10) Lab fee required. Prerequisite: None.

OFST 1101 Computerized Medical Recordkeeping
(1-5) [4 weeks] ..... 1 hour
Student will develop ability to operate a computer system in a medical/dental office. Hands-on experience to demonstrate competency using basic calculations to determine patient billing and to demonstrate ability to follow instructions/procedures for patient billing and patient recordkeeping will be provided. (SCANS 1,3,9,11) Prerequisite: None.

OFST 1207 Medical Terminology
(5-0) [8 weeks] ..... 2 hours
Student will demonstrate the acquisition of a basic medical vocabulary, develop listening and learning skills, and will prepare and interpret basic reports used in a typical hospital or medical office. (SCANS 1,2,6,9,11) Prerequisite: None.

OFST 1208 Medical Insurance Coding
(5-0) [8 weeks] ..... 2 hours
Student will demonstrate the ability to code medical forms, including patient chart, diagnoses, and office procedures. Will combine coding skills with organizing, analyzing, evaluating health data for completeness and accuracy; answering legal, governmental and insurance company inquiries; and communicating with patients. (SCANS 1,2,4,5,6,9,10) Prerequisite: OFST 1207 or equivalent.

OFST 1217 Beginning Medical Transcription
(3-3) [8 weeks] ..... 2 hours
Student will demonstrate skill in transcribing some basic reports used in a typical hospital or medical office. Provides transcription of actual dictation by doctors. Lab fee required. (SCANS 1,6,8,9,11) Prerequisite: OFST 1207, OFST 1322 or equivalent, type 50 wpm, some word processing background or consent of department chairperson.

OFST 1321 Beginning Keyboarding
(2-3) ..... 3 hours
Student will demonstrate touch-method skills on an electronic typewriter and a computer including numbers, symbols, and service mechanisms. Demonstrate competency to produce business letters, reports, tabulations, and other business documents. Designed for beginning typists or students with minimal typing skills. Lab fee required. (SCANS 1,6,8) Prerequisite: None.

OFST 1322 Intermediate Keyboarding
(2-3) ..... 3 hours
Student will develop additional keyboarding skills including composing and processing documents—business letters, reports, and tabulation materials—on the computer and the electronic typewriter. Student will demonstrate responsibility in following instructions and in practicing time management. Lab fee required. (SCANS 1,2,3,6,8,10) Prerequisite: OFST 1321 or equivalent.

OFST 1401 Data Entry/Business Calculations
(3-2) ..... 4 hours
Student will develop skill and accuracy using speed drills on the electronic calculator (10-key approach) and the computer. Student will demonstrate skill in percents, equations, discounts, net value and other business calculations using a variety of techniques. Will demonstrate ability to work with speed and accuracy while problem solving and doing data entry. (SCANS 1,3,4,8,9) Prerequisite: None.

OFST 1402 Business Language Skills
(3-2) ..... 4 hours
Student will develop competency in communicating written thoughts and ideas by creative thinking and creating documents with special emphasis on business. Includes grammar, sentence structure, paragraphing, proofreading, style, and composition activities. (SCANS 1,2,9,11) Prerequisite: None.

OFST 1404 Beginning Word Processing
(3-2) ..... 4 hours
Student will develop skill in reading/following instructions, accessing WP program, and problem solving. Includes application of basic word processing skills: create, save, edit, format, print, and merge. Demonstrate ability to explain procedures and principles to instructor or other students. Lab fee required. (SCANS 1,2,6,8,9,10) Prerequisite: OFST 1321 or equivalent.

OFST 1406 Basic Spreadsheet
(3-2) ..... 4 hours
Student will demonstrate competency in recording transactions and manipulating data in spreadsheet and database formats. Will perform mathematical applications while keyboarding, editing, formatting, printing, creating graphics, and executing macros using the computer. (SCANS 1,2,3,6,9) Corequisite: OFST 1401 or approval of instructor. Prerequisite: OFST 1321 or approval of instructor.

OFST 1424 Office Bookkeeping
(3-2) ..... 4 hours
Student will demonstrate the ability to perform elementary bookkeeping skills in bookkeeping cycle, journalizing, posting, preparing a trial balance, and completing income statements and balance sheets for small business firms. Demonstrate an understanding of fundamental principles, procedures, and forms in bookkeeping as applied to records for both service and merchandising businesses. Computers will be used to process information. (SCANS 3,6,8,9,10) Prerequisite: None.

OFST 2232 Medical Office Procedures/Records
(3-2) [8 weeks] ..... 2 hours
Student will develop skill in analysis and use of medical records as it relates to the patient, physician and hospital. Student will develop skill in completing medical forms and using medical filing methods, storage, record retention and destruction of records. Will develop skill using problem solving exercises in office etiquette, medical/legal ethics and communication. (SCANS 1,2,4,6,9) Prerequisite: OFST 1207 or equivalent, OFST 1208, OFST 1402 or equivalent.

OFST 2304 Advanced Keyboarding
(2-3) ..... 3 hours
Student will increase speed and accuracy using speed drills. Will develop skill in machine transcription, proofreading, and in producing mailable documents from unarranged material. Simulations in medical, legal, or general office provide decision making skills. Lab fee required. (SCANS 1,2,3,6,8,10) Prerequisite: OFST 1322 and OFST 2401 (may be taken concurrently).

OFST 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to integrate academic and technical course lectures and labs with on-the-job business/computer problems, modern business practices, human relations, and job-finding techniques. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5,7,9,10,11) Prerequisite: Sophomore standing and consent of the department chair.

OFST 2401 Advanced Word Processing

(3-2) .....4 hours

Student will develop skill using advanced word processing applications including advanced formatting, macros, styles, using word processing with other programs, outlining, master documents, graphics, and using reference manual. Exercises are designed to help students organize and maintain information and to make responsible decisions regarding assignments and time management. Lab fee required. (SCANS 1,2,3,4,6,9,10) Prerequisite: OFST 1404 (OFST 1322 may be taken concurrently).

OFST 2402 Information Processing

(3-2) .....4 hours

Student will develop skill in integrating word processing, data base, and spreadsheet using a Windows environment. Includes applications for problem solving and decision making. Lab fee required. (SCANS 1,2,3,4,6,9,10) Prerequisite: OFST 2401, (OFST 2304 may be taken concurrently).

OFST 2404 Desktop Publishing

(3-2) .....4 hours

Student will develop skill in using word processing and graphics to compose desktop publishing documents. Will create, store, edit, retrieve, and print business documents. Lab fee required. (SCANS 1,2,3,4,6,9,10) Prerequisite: OFST 2401, (OFST 2304 may be taken concurrently).

OFST 2417 Advanced Medical Terminology and Transcription

(3-3) .....4 hours

Student will demonstrate a mastery of extensive list of standard and contemporary terms and increase skill in transcribing different types of medical reports in 15 medical specialties. Lab fee required. (SCANS 1,2,4,6,9) Prerequisite: OFST 1207, OFST 1217, OFST 1402 or equivalent, type 50 wpm, some word processing experience will be needed for some reports.

OFST 2420 Business Communication

(3-2) .....4 hours

Student will demonstrate the ability to compose and edit various types of business communications—letters, memos, reports—using various word processing technologies. Develop skill in the interview process and composition of resumes. Activities in oral and written communication and teamwork will be provided. (SCANS 1,2,4,5,6,8,9,10,11) Prerequisite: OFST 1402, OFST 1322 (OFST 2401 or OFST 2402 may be taken concurrently).

OFST 2421 Office Procedures

(3-2) .....4 hours

Student will study modern office procedures which affect the office worker. Will demonstrate proper procedures required for written and oral communication, time management, filing, proofreading, telephone techniques, human relations in diversity, and applying proper technology for tasks using the computer. (SCANS 1,2,4,5,6,8,9,10) Prerequisite: OFST 1402, OFST 1404, OFST 1321, OFST 1406 (OFST 1322 and OFST 2401 may be taken concurrently).

OFST 2430 Computerized Bookkeeping

(3-2) .....4 hours

Student will study advanced bookkeeping theory as a continuation of OFST 1424. Student will computerize entries involving general and special journals, bookkeeping cycle, payroll, advanced accounts receivable and accounts payable, transactions and financial statements of partnerships and corporations, and analysis of financial statements. Various computerized programs will be used including spreadsheet and bookkeeping programs used by businesses. (SCANS 3,6,8,9) Prerequisite: OFST 1406, OFST 1321 or equivalent, OFST 1424.

Orientation

Faculty: Terri Pease, lead counselor; Rodney Hernandez, LaRae Phillips, Mike Tincher, Rena Ventura-Jackson.

Orientation to Odessa College (ORIE 1100) is designed to assist those new to college in gaining the knowledge necessary to function effectively in a college environment. It covers the policies, rules, regulations and services provided to students as well as the state-mandated TASP requirement. First-time students who enroll in nine or more semester hours during their first semester at Odessa College are required to enroll in ORIE 1100.

ORIE 1100 Orientation (24.0102.5140)
(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 and standards of progress. Required of all first-time students who enroll in nine or more semester hours during their first semester of attendance. (SCANS 4,5,6,7,10).

Petroleum Technology

Faculty: J. D. Roberts, chair; Lynn Reese.

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. New students are encouraged to meet with the department chair prior to registration.

Course of Study for Associate in Applied Science Degree

Petroleum Technology

	Semester Hrs
General Education Requirements	**17**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric OR ENGL 1312 Report Writing	3
GOVT 2301 U.S. and Texas Government	3
MATH 1314 College Algebra OR	
MATH 1372 Technical College Algebra OR	
MATH 1371 College Algebra for Business	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Major Requirements	**30**
PETR 1300 Petroleum Overview	3
PETR 1310 Rotary Drilling Fluids	3
PETR 1311 Well Completion Methods	3
PETR 1320 Production Methods	3
PETR 1380 Computers for Petroleum	3
PETR 2310 Drilling Methods	3
PETR 2325 Well Workover Methods	3
PETR 2360 Corrosion	3
PETR 2377 Cooperative Work Experience	3
PETR 2390 Petroleum Regulations	3
***Petroleum Electives (Any PETR course not required)**	**9**

Related Requirements **9**
- OSHA 2395 Industrial Safety 3
- OSHA 2396 Hazardous Waste and Emergency Response 3
- OSHA 2398 Environmental Issues 3

Total Semester Hours **65**

**Students may choose from the following pool of courses depending on their individual needs: PETR 1301 Basic Oilfield Hydraulics, PETR 1302 Rotary Drilling Rig Equipment, PETR 2350 Pipelining), PETR 2382 Well Stimulation, PETR 2383 Chemical Treating in Production Operations and PETR 2388 Artificial Lift.*

Certificates of technology are available in the following job-specific fields. See the program chair for course requirements and Permian Basin job opportunities.

Certificate of Technology Options

Level I certificates are TASP-waived.

Level I - Well Head Pumper

Semester Hrs

Major Requirements
- ENGL 1312 Report Writing 3
- PETR 1300 Petroleum Overview 3
- PETR 1320 Production Methods 3
- PETR 1380 Computers for Petroleum 3
- PETR 2325 Well Workover Methods 3
- PETR 2360 Corrosion 3
- PETR 2388 Artificial Lift 3
- TMTH 1370 Technical College Mathematics OR higher level math 3

Total Semester Hours **24**

Level I - Gas Compressor Operator

Semester Hrs

Major Requirements
- ENGL 1312 Report Writing 3
- PETR 1300 Petroleum Overview 3
- PETR 1380 Computers for Petroleum 3
- PETR 2331 Natural Gas Processing 3
- PETR 2389 Gas and Liquid Measurement 3
- OSHA 2398 Environmental Issues 3
- TMTH 1370 Technical College Mathematics OR higher level math 3

Total Semester Hours **21**

Level I - Gas Plant Operator

Semester Hrs

Major Requirements
- PETR 1300 Petroleum Overview 3
- PETR 1380 Computers for Petroleum 3
- PETR 2331 Natural Gas Processing 3
- PETR 2360 Corrosion 3
- PETR 2389 Gas and Liquid Measurement 3
- OSHA 2398 Environmental Issues 3
- ENGL 1312 Report Writing 3
- TMTH 1370 Technical College Mathematics OR higher level math 3

Total Semester Hours **24**

Level I - Refinery Panel Operator

Semester Hrs

Major Requirements

ENGL 1312 Report Writing	3
OSHA 2398 Environmental Issues	3
PETR 1300 Petroleum Overview	3
PETR 1370 Petroleum Instrumentation	3
PETR 1380 Computers for Petroleum	3
PETR 2340 Refining Methods	3
TMTH 1370 Technical College Mathematics or higher level math	3
Total Semester Hours	**21**

Petroleum Technology Courses

PETR 1300 Petroleum Overview
(3-0) ..... 3 hours
Provides the student with ability to understand overall intent and proper procedures in a variety of different petroleum technologies: exploration, drilling, production, transportation, marketing and refining. The student will be able to prioritize activities and reason the relationship between finding oil and gas and transporting it to the refinery. Students will be responsible for reading and analyzing charts and diagrams and calculating downhole displacements and pressures. (SCANS 4,6,8,9) Prerequisite: None.

PETR 1301 Basic Oilfield Hydraulics
(3-0) ..... 3 hours
Introduces oilfield hydraulics applicable to drilling, completion and production. Competencies include calculating and evaluating the characteristics of flowing and static fluids. Interpreting velocity, fluid types, and pressure losses in various tubular systems. (SCANS 3,6) Prerequisite: PETR 1300 or consent of the department chair.

PETR 1302 Rotary Drilling Rig Equipment
(3-0) ..... 3 hours
Emphasizes the technical competencies involved with the selection and purpose of equipment used to drill an oil and gas well. The student will perform calculations and make decisions as to the limitations of the equipment based on design criteria. (SCANS 3,4,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 1310 Rotary Drilling Fluids
(3-0) ..... 3 hours
Introduces oilfield hydraulics applicable to drilling, completion and production. Competencies include calculating and evaluating the characteristics of flowing and static fluids. Interpreting velocity, fluid types, and pressure losses in various tubular systems. (SCANS 3,6) Prerequisite: PETR 1300 or consent of the department chair.

PETR 1311 Well Completion Methods
(3-0) ..... 3 hours
Competencies enable student to read and evaluate the effects of drilling through the production formation and choosing the tools and procedures for logging, drill stem testing, running pipe, cementing, perforating, completion techniques and formation stimulation. The student will participate as a team member in recognizing problems and implementing a correct plan of action in completing an oil or gas well. (SCANS 1,2,5,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 1320 Production Methods
(3-0) ..... 3 hours
Introduces petroleum production. Competencies include the effects of decisions made in well completion techniques upon production, artificial lift, natural flow, lease layouts, lease equipment and basic problems and solutions. The student will perform basic calculations, interpret graphical results and evaluate information for a given oil or gas well. (SCANS 1,3,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 1370 Petroleum Instrumentation
(3-0) ..... 3 hours
Surveys instrumentation, measurement and control devices used within major aspects of the petroleum industry. Competencies include application, installation and operation of each. (SCANS 6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 1380 Computers for Petroleum
(3-0) ..... 3 hours
Designed for the student in the petroleum technology program. Competencies emphasize use rather than programming. Presents history, fundamentals, terminology and software programs used in the petroleum industry as well as other industries. Examples such as word processors, data base, spread sheet, windows, graphics, etc. are used. Classroom exercises allow students to solve problems, make decisions, and project income from a producing oil an gas well. Lab fee required. (SCANS 2,6,8,9) Prerequisite: None.

PETR 2310 Drilling Methods
(3-0) ..... 3 hours
Emphasizes the actual drillsite competencies necessary to drill an oil or gas well. Students learn to analyze problems such as downhole formation pressures. Volume calculations, downhole computer processing, and understanding the proper procedures and equipment to successfully drill a well are covered. (SCANS 3,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2325 Well Workover Methods
(3-0) ..... 3 hours
Presents basic competencies of oil and gas well servicing, workover, plugging, reentry, equipment needs and maintenance programs. Student will perform basic calculations, interpret wellbore schematics, prepare a schedule and select procedures, organize and evaluate information, and decide an economical plan for working over an oil and or gas well. (SCANS 1,3,4,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2331 Natural Gas Processing
(3-0) ..... 3 hours
Competencies include 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. (SCANS 8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2340 Refining Methods
(3-0) ..... 3 hours
Basic competencies of petroleum refining techniques, process, equipment and support personnel. (SCANS 8) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2350 Pipelining
(3-0) ..... 3 hours
Competencies include the construction, repair and maintenance on product, oil, natural gas, salt water and fresh water systems. The student will be able to make calculations and decisions on appropriate lines for size, pressure and type (steel, PVC, etc.). (SCANS 3,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2360 Corrosion
(3-0) ..... 3 hours
A problems-based course to provide competencies in the corrosive effects on surface and downhole equipment, pipelines, and other oilfield situations. Emphasizes terminology and techniques. Students will analyze basic causes and recommend the most reliable solutions. (SCANS 1,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry and work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal and problem solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate (SCANS 5,7,9,10,11) Prerequisite: Consent of the department chair.

PETR 2382 Well Stimulation Methods
(3-0) ..... 3 hours
Presents detailed competencies of well stimulation. Student will make necessary calculations and decisions to acidize or fracture a formation. Emphasis will be on the Permian Basin. (SCANS 3,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2383 Chemical Treating in Production Operations
(3-0) ..... 3 hours
Student will learn the competencies necessary to treat all areas of production. Demonstrations in the laboratory using chemicals will help student to determine which treatment will best suit a particular application. (SCANS 3,6,8,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 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. Competencies stress 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. (SCANS 6,7,8) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2389 Gas and Liquid Measurement
(3-0) ..... 3 hours
Competencies include 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. (SCANS 3,6,9) Prerequisite: PETR 1300 or consent of the department chair.

PETR 2390 Petroleum Regulations
(3-0) ..... 3 hours
Covers all pertinent regulatory requirements and strictures affixed to the petroleum industry by agencies such as the RRC, DOT, FERC, DOE, and OSHA. The student will interpret and analyze the effects of such rulings and prepare the proper responses. (SCANS 1,2,6,9) Prerequisite: PETR 1300 or consent of the department chair.

Photography

Faculty: Steve Goff, chair.

Odessa College's photography program provides quality photo education for all members of the community. Photo students explore professional and artistic aspects of this visual medium by training in the basics of photography as a subject, a profession and a technology. A variety of courses are offered, including development of black and white, commercial technique, professional portraiture, color, the history of photography and areas of independent study. Opportunities are provided for students to exercise their creative talents. Upon completion of the photo curriculum, students will be prepared for continued studies at a university or entry-level positions in the photographic industry. While limited equipment and some scholarships are available for those considering photography as a major, the department welcomes all students.

Course of Study for Associate in Applied Science Degree

Photography

	Semester Hrs
General Education Requirements	**26**
ACCT 1370 Elementary Accounting	3
ARTS 1311 Design I	3
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
GOVT 2301 U.S. and Texas Government OR GOVT 2302 American National Government	3
MATH 1332 Structures of College Mathematics OR higher level math	3
*PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**35**
**COMM 1307 Introduction to Mass Communication	3
**COMM 1318 Basic Photography I	3
**COMM 1319 Basic Photography II	3
PHOT 1361 Photo Lab Technique I	3
PHOT 1362 Photo Lab Technique II	3
PHOT 2200 Print Finishing & Negative Retouching OR PHOT 2390 Graphics	2
PHOT 2360 Expressive Photography	3
PHOT 2370 History of Photography	3
PHOT 2371 Color Photography I	3
PHOT 2372 Color Photography II	3
PHOT 2377 Cooperative Work Experience	3
PHOT 2380 Photographic Problems	3
Total Semester Hours	**64**

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

*** Courses listed with COMM prefix may be found in the Mass Communication section of the catalog.*

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I - Photo Lab Assistant

	Semester Hrs
General Education Requirements	**6**
COSC 1301 Introduction to Computer Systems	3
PSYC 2302 Applied Psychology	3
Major Requirements	**12**
**COMM 1318 Basic Photography I	3
**COMM 1319 Basic Photography II	3
PHOT 1361 Photo Lab Technique I	3
PHOT 1362 Photo Lab Technique II	3
Total Semester Hours	**18**

Level I - Commercial Studio Assistant

	Semester Hrs
General Education Requirements	**12**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
PSYC 2302 Applied Psychology	3
SPCH 1321 Business and Professional Speech	3
Related Requirements	**3**
ARTS 1311 Design I	3
Major Requirements	**12**
**COMM 1318 Basic Photography I	3
**COMM 1319 Basic Photography II	3
PHOT 2311 Commercial Photography I	3
PHOT 2312 Commercial Photography II	3
Total Semester Hours	**27**

Level I - Portrait Studio Assistant

	Semester Hrs
General Education Requirements	**12**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
PSYC 2302 Applied Psychology	3
SPCH 1321 Business and Professional Speech	3
Related Requirements	**3**
ARTS 1311 Design I	3
Major Requirements	**12**
**COMM 1318 Basic Photography I	3
**COMM 1319 Basic Photography II	3
PHOT 2331 Portrait Photography I	3
PHOT 2332 Portrait Photography II	3
Total Semester Hours	**27**

*** Courses listed with COMM prefix may be found in the Mass Communication section of the catalog.*

Photography Courses

PHOT 1361 Photo Lab Technique I
(2-4) ..... 3 hours
Designed to give advanced experience in darkroom printing and developing procedures. The course allows students to acquire and evaluate numerous films and papers for various photographic situations. Students will select appropriate photo supplies and equipment for shooting assignments. Includes projection printing, contact printing, black and white print finishing, toning and mixing photographic chemistry. Successful completion qualifies student to work as a black and white lab technician in the photographic industry. (SCANS 4,6,8) Lab fee required. Prerequisites: COMM 1318; Basic Photography I, TASP competency in reading, writing and math or consent of instructor.

PHOT 1362 Photo Lab Technique II
(2-4) ..... 3 hours
A continuation of PHOT 1361. Designed to give advanced experience in darkroom printing and developing procedures. The course allows students to acquire and evaluate numerous films and papers for various photographic situations. Students will select appropriate photo supplies and equipment for shooting assignments. Includes projection printing, contact printing, black and white print finishing, toning and mixing photographic chemistry. Successful completion qualifies student to work as a black and white lab technician in the photographic industry. (SCANS 4,6,8) Lab fee required. Prerequisites: PHOT 1361; TASP competency in reading, writing and math or consent of instructor.

PHOT 2200 Print Finishing and Negative Retouching
(1-2) ..... 2 hours
Emphasizes black and white and color retouching of prints and negatives and copying and reproduction of photographs. Students learn to select and utilize a variety of retouching tools and copying equipment. (SCANS 4,8) Lab fee required. Prerequisite: TASP competency in reading, writing and math or consent of instructor.

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. Students will learn how to organize and maintain equipment and materials in a photographic studio and select proper lighting for a variety of photographic studio situations. Includes such photographic problems as magazine article illustration, product photography, fashion, architectural studies and window displays. (SCANS 4,6,8) Lab fee required. Prerequisites: COMM 1319 and PHOT 1362; TASP competency in reading, writing and math or consent of instructor.

PHOT 2312 Commercial Photography II
(2-6) ..... 3 hours
A continuation of PHOT 2311. Gives the student working knowledge in specialized field of commercial photography. Emphasizes use of large negative format and the view camera. Students will learn how to organize and maintain equipment and materials in a photographic studio and select proper lighting for a variety of photographic studio situations. Includes such photographic problems as magazine article illustration, product photography, fashion, architectural studies and window displays. Provides additional experience in the commercial field. (SCANS 6,8) Lab fee required. Prerequisites: PHOT 2311; TASP competency in reading, writing, and math or consent of the instructor.

PHOT 2331 Portrait Photography I
(2-4) ..... 3 hours
Introduces skills to produce professional studio portraiture. Practice gained by making photographs through actual work with adult and child models. Students will learn to assume leadership roles by directing posing techniques of models and selecting proper camera lenses and backgrounds during portrait sessions. (SCANS 5,8) Lab fee required. Prerequisite: COMM 1319; TASP competency in reading, writing, and math or consent of instructor.

PHOT 2332 Portrait Photography II
(2-4) ..... 3 hours
A continuation of PHOT 2331. Introduces skills to produce professional studio portraiture. Practice gained by making photographs through actual work with adult and child models. Students will learn to assume leadership roles by directing posing techniques of models and selecting proper camera lenses and backgrounds during portrait sessions. Offers additional experience in field of studio portraiture. Emphasizes outdoor portraiture. (SCANS 5,8) Lab fee required. Prerequisite: PHOT 2332; TASP competency in reading, writing, and math or consent of instructor.

PHOT 2360 Expressive Photography
(2-4) ..... 3 hours
Offers the student an opportunity to explore formal, professional and individual uses of photography by applying photographic technology to personalized needs. The course encourages creative visual thinking and problem solving. Aims at the goal of the personal development of the art of seeing. (SCANS 8,9) Lab fee required. Prerequisite: COMM 1319; TASP competency in reading, writing, and math or consent of instructor.

PHOT 2370 History of Photography
(3-0) ..... 3 hours
A survey course that organizes and interprets in a chronological sequence the technical and authentic developments of photography in a historical perspective. Includes the beginnings of the medium, inventors, development of photographic equipment, styles of the creative masters, aesthetic trends and the social impact of photography. (SCANS 6) Prerequisite: TASP competency in reading, writing, and math or consent of instructor.

PHOT 2371 Color Photography I
(2-4) ..... 3 hours
Introduces basic color theory and processes. Students will learn how to select color films and filters for various photographic lighting conditions. Emphasis is on printing from color negatives with assignments designed to help the student identify the intricacies of seeing and photographing in color. (SCANS 4,8) Lab fee required. Prerequisite: COMM 1319; TASP competency in reading, writing, and math or consent of instructor.

PHOT 2372 Color Photography II
(2-4) ..... 3 hours
A continuation of PHOT 2371. Introduces basic color theory and processes. Students will learn how to select color films and filters for various photographic lighting conditions. Emphasis is on printing from color negatives with assignments designed to help the student identify the intricacies of seeing and photographing in color. (SCANS 4,8) Lab fee required. Prerequisites: PHOT 2371; TASP competency in reading, writing, and math or consent of instructor.

PHOT 2377 Cooperative Work Experience
(1-20) ..... 3 hours
A capstone course designed to interrelate academic and vocational course lectures and labs with business and industry and work experiences. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal and problem solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate (SCANS 5,7,9,10,11) Prerequisite: Consent of the department chair.

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. Students will identify and work within specific photographic genres to produce challenging and creative bodies of work. Students required to prioritize time and activities in weekly progress reports. Offered alternately with PHOT 2360. (SCANS 4,8,9) Lab fee required. Prerequisite: COMM 1319 and PHOT 1362; TASP competency in reading, writing, and math or consent of instructor.

PHOT 2390 Graphics
(2-4) .....3 hours
The course applies the principles of planning design and layout of photographic images used in photo conversions for graphic arts. Students will select and choose a variety of image-capture devices including both digital and traditional methods. Computer scanning techniques include image control, manipulation and enhancement of photographs and line art plus the importing and exporting of text and graphics from multiple sources. (SCANS 4,8) Lab fee required. Prerequisites: COMM 1319; TASP competency in reading, writing, and math or consent of instructor.

Physical and Health Education

Faculty: Betty Hudson, chair; Jim Carlson, Karin Carlson, Tommy Darland, Kenneth Hines, Pat Hodges, Scott Walkinshaw, 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 34 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 two options for the associate degree.

Course of Study for Associate in Science Degree

Exercise and Sport Science Option

	Semester Hrs
General Education Requirements	**44**
**BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra OR higher level math	3
MATH 1342 Mathematical Statistics OR higher level math	3
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**10**
*PHED (any four one-hour activity courses)	4
PHED 1301 Orientation in Health, Physical Education and Recreation	3
PHED 2376 Prevention and Care of Athletic Injuries	3
***Approved Electives**	**9**
Total Semester Hours	**66**

***CHEM 1311, CHEM 1312, plus CHEM 1111 and CHEM 1112, may be substituted for BIOL 1406 and BIOL 1407.*

****Electives will be selected from the following three-hour classes based on senior institution requirements: PHED 1238, PHED 2278, PHED 1304, PHED 1306, PHED 1308, PHED 1309, PHED 1321, PHED 1322, PHED 1331, PSYC 2301 and SOCI 1301.*

Students majoring in exercise and sport science in preparation for a teaching career are required to take four activity classes selected from the following areas:

- One class from Fitness Activities
- One class from Lifetime Activities
- One class from Team Sports
- One class from Aquatics

It is suggested that PHED 1100 be the first course taken in physical education. Competitive athletics courses will not be counted toward the four-activity requirement for exercise and sport science majors.

In addition, it is also 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 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	**43**
COSC 1301 Introduction to Computer Systems	3
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (Sophomore Level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra or higher level math	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking OR SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**13**
PHED 1171 Athletic Training Clinical Practicum I	1
PHED 1304 Personal and Community Health	3
PHED 1306 First Aid	3
PHED 2171 Athletic Training Clinical Practicum II	1
PHED 2278 Nutrition in Exercise and Sport	2
PHED 2376 Prevention and Care of Athletic Injuries	3
****Approved Electives**	**6**
Total Semester Hours	**65**

**PHED 1100 should be the first course taken in physical education.*
*** Approved Electives: CHEM 1311, CHEM 1312, BCIS 1401, PHED 1238, PHED 1301, PHED 1331, PSYC 2301 and SOCI 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.

Fitness Activities

PHED 1100 Lifestyle Assessment and Modification (31.0501.5128)
(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, stress and blood pressure. Students will select and participate in physical activities which will produce desired physical results. This course culminates with an individualized lifelong wellness plan. Lab fee required. (SCANS 3,4,9,10) Prerequisite: None.

PHED 1101 Aerobic Dance (36.0108.5128)
(0-3) ..... 1 hour
A total body conditioning program emphasizing cardiovascular endurance, muscular strength and endurance, flexibility, coordination, and muscle tone. Students will perform basic calculations to determine appropriate target heart rate zones, establish fitness goals, and select appropriate activities to attain those goals. Students will participate in a group project. An exercise log will be kept by class participants detailing time spent in aerobic activities. Students will analyze postural and nutritional habits and be encouraged to initiate healthful lifestyle changes when needed. Includes a preliminary one time, two-hour orientation. Lab fee required. (SCANS 3,4,5,9,10) Prerequisite: None.

PHED 1102 Cycling (36.0108.5128)
(0-3) ..... 1 hour
Designed to give basic understanding of principles of cycling; includes pedal cadence, shifting, gear ratio, training safety and maintenance. Students will be required to set personal fitness goals and to monitor their progress during the course. Requires special fee. (SCANS 9,10) Prerequisite: None.

PHED 1103 Defensive Tactics (36.0108.5128)
(0-3) ..... 1 hour
Includes lectures, demonstrations and practice in basic skills and techniques of a variety of defensive movements and protection methods. Students will learn vulnerable areas of the human body that will enable students to defend themselves against an attacker. Self-confidence and self-management will be enhanced by class participation. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1104 Advanced Defensive Tactics (36.0108.5128)
(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. Self-confidence and self-management will be enhanced by class participation. Lab fee required. (SCANS 9,10) Prerequisite: PHED 1103.

PHED 1105 Gymnastics (36.0108.5128)
(0-3) ..... 1 hour
Includes instruction in performance of various gymnastics skills on all apparatus. Instruction includes flexibility and strength training as well as spotting techniques. Student will use efficient learning techniques to acquire and apply new knowledge and skills. Each student will develop self-esteem and self-management skills through participation in this class. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1106 Jogging/Walking (36.0108.5128)
(0-3) ..... 1 hour
A computer-monitored, instructor-guided program to enhance cardiovascular fitness through jogging and/or walking. Students will perform basic calculations to determine appropriate target heart rate zones. Students will establish fitness goals and select appropriate activities to attain these goals. Pre- and post-assessments will allow students to monitor progress toward their fitness goals. Includes a preliminary one time, two-hour orientation. Lab fee required. (SCANS 3,4,9,10) Prerequisite: None.

PHED 1107 Judo/Karate (36.0108.5128)
(0-3) ..... 1 hour
Emphasizes basic skills and techniques of American karate. Students will learn vulnerable areas of the human body and be instructed in defensive and offensive techniques to protect oneself. Students will work in small groups and partner situations in which personal qualities will be secondary benefit of this class. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1108 Physical Conditioning, Aerobic Super Circuit (36.0108.5128)
(0-3) ..... 1 hour
Combines weightlifting with aerobic activities in a structured, formatted conditioning program that trains the whole body. Orientation and physical assessments enable students to personalize their workouts and help them attain their fitness goals. Workouts are computer-monitored and instructor-enhanced. Includes a preliminary one-time, two-hour orientation. Requires special fee. (SCANS 4,9,10) Prerequisite: None. (Must be at least 16 years old.)

PHED 1109 Physical Conditioning, Aerobic Super Circuit—Advanced (36.0108.5128)
(0-3) ..... 1 hour
Combines weightlifting with aerobic activities in a structured, formatted conditioning program that trains the whole body. Orientation and physical assessments enable students to personalize their workouts and help them attain their fitness goals. Workouts are computer-monitored and instructor-enhanced. Also includes instruction in the proper techniques of training specific body areas. Includes a preliminary one-time, two-hour orientation. Requires special fee. (SCANS 3,4,9,10) Prerequisite: PHED 1108 or consent of the instructor. (Must be at least 16 years old.)

PHED 1110 Trampoline (36.0108.5128)
(0-3) ..... 1 hour
A gymnastics class specializing in acquisition of various trampoline skills, including flexibility and spotting. Uses efficient learning techniques to acquire and apply new knowledge and skills. Sociability and self-control will be secondary benefits of class participation. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1111 Weight Training (36.0108.5128)
(0-3) ..... 1 hour
Emphasizes increasing strength through proper techniques of lifting and weight training. Orientation and physical assessments enable students to personalize their workouts and help them attain their fitness goals. Students will perform basic calculations to determine appropriate workload, volume, sets, repetitions, intensity, progression and recovery to meet their fitness goals. Includes a preliminary one-time, two-hour orientation. Lab fee required. (SCANS 3,4,9,10) Prerequisite: Must be at least 16 years old.

PHED 1112 Adaptive Personalized Fitness (36.0108.5128)
(0-3) ..... 1 hour
This course consists of three major components, (1) cardiovascular conditioning, (2) strengthening exercises, (3) range of motion stretching and relaxation techniques. This class is designed to introduce physically challenged P.C.S. students to a variety of physical activities including; rhythmical movement, aquatics, hydro-fitness (resistance training), walking/jogging. P.C.S. students are defined as students with temporary injuries, severely obese individuals (over 40%) body fat percentage) and permanently disabled students. These individuals will be assessed and given an individualized exercise program. May be repeated for credit. (SCANS 5,9,10,) Prerequisite: Approval by the department chair.

Lifetime Activities

PHED 1116 Badminton (36.0108.5128)
(0-3) ..... 1 hour
Instruction and skill development of the basic skills of badminton: Serve, clear, smash, drop and net shots. Knowledge of the history, rules and basic strategy for singles and doubles will be acquired. Lab fee required. (SCANS 10) Prerequisite: None.

PHED 1117 Bowling (36.0108.5128)
(0-3) ..... 1 hour
The student will learn the mechanics of the approach, release and execution of three different styles of bowling. The course will also cover scorekeeping (automated and manual) pin and spot bowling, point of aim, rules, etiquette, and fun competitive games. Requires special fee. (SCANS 3,10) Prerequisite: None.

PHED 1118 Social Dance (36.0114.5130)
(0-3) ..... 1 hour
Includes instruction in basic dance skills, positions, rhythms, steps and formation, i.e. country western (cotton-eyed Joe, two-step, waltz, polka, and schottishe), line dancing, and conventional ballroom as well as most current and most popular dances. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

PHED 1119 Golf (36.0108.5128)
(0-3) ..... 1 hour
The student will learn the basic fundamentals of golf including grip, putting, chipping, and full swing. The course will cover a basic understanding of rules, etiquette, and types of competitive play available to the golfer. Requires special fee. (SCANS 3,9,10) Prerequisite: None.

PHED 1121 Racquetball (36.0108.5128)
(0-3) ..... 1 hour
Instruction in and development of fundamental skills such as basic strokes, basic shots, serve, court positioning, rules and variations of the game. Lab fee required. (SCANS 10) Prerequisite: None.

PHED 1122 Recreational Sports (36.0108.5128)
(0-3) ..... 1 hour
Presents skills and rules for pool, ping-pong and a variety of board games. Emphasis will be on the aspects of participation in these activities, as well as the cognitive and affective nature of rules, history, skills and etiquette of the sport/games. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1123 Skiing (36.0108.5128)
(0-3) ..... 1 hour
This course is designed to prepare the student for efficient skiing techniques to apply to different types of terrain/snow conditions encountered on the required ski trips during the midwinter and/or spring sessions. Students should check with senior institution regarding course transferability. Special fee required. (SCANS 9,10) Prerequisite: None.

PHED 1124 Tennis, Beginning (36.0108.5128)
(0-3) ..... 1 hour
Emphasizes beginning skills in execution of forehand and background strokes, the serve and the volley. Includes rules, strategies and etiquette in both singles and doubles. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1125 Tennis, Advanced (36.0108.5128)
(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. (SCANS 9,10) Prerequisite: PHED 1124 or consent of the instructor.

Team Sports

PHED 1128 Basketball, Men's (36.0108.5128)
(0-3) ..... 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific basketball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

PHED 1129 Basketball, Women's (36.0108.5128)
(0-3) ..... 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific basketball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

PHED 1130 Cheerleading (36.0108.5128)
(0-3) ..... 1 hour
Introduces basic skills and techniques of cheerleading such as partner stunts, incorporation of pyramids, safety techniques and jumps. By participating as a team, individuals learn how to cooperate with other team members in solving problems and in motivating a crowd. Performing at athletic events permits the individuals an opportunity to exhibit responsibility as well as to build self-esteem. Lab fee required. (SCANS 5,9.10) Prerequisite: Consent of the instructor.

PHED 1131 Football, Touch (36.0108.5128)
(0-3) ..... 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific football problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

PHED 1132 Rodeo (36.0108.5128)
(0-3) ..... 1 hour
Presents rules of the sport while instructing individuals on the fundamentals of all rodeo events, both men's and women's individual and team. The class teaches individuals how to contribute to a group effort while encouraging individuals to excel in one specialized rodeo area. Participants are taught how to recognize and solve specific rodeo event problems. Students are also encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 1133 Softball (36.0108.5128)
(0-3) ..... 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific softball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

PHED 1134 Volleyball (36.0108.5128)
(0-3) ..... 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific volleyball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

Aquatics

PHED 1146 Red Cross Life Saving (Life Guarding) (36.0108.5128)
(0-3) ..... 1 hour
An advanced aquatic course that prepares the individual to deal with life threatening situations in various aquatic environments. Skills areas include assists, carries, defenses, releases, equipment rescues, facility safety and others. NRC lifeguard certification is offered upon successful completion. Lab fee required. Prerequisite: Advanced swimming skills. Lab fee required. (SCANS 5,9,10) Prerequisite: None.

PHED 1147 Swimming, Beginning (36.0108.5128)
(0-3) ..... 1 hour
This course in basic water safety is designed to make adults reasonably safe while in or near water. Topics include: physical and mental adjustment to water, buoyancy and body positioning, propulsion and coordinated stroking, and personal safety. Fundamentals of swimming and fitness will be stressed. Lab fee required. (SCANS 9,10) Prerequisite: None.

PHED 1148 Swimming and Diving, Advanced (36.0108.5328)
(0-3) ..... 1 hour
This course is designed for the swimmer possessing sufficient skills in aquatics to allow for an understanding of the hydrodynamic principles associated with six strokes. The course will enable the individual to increase physical conditioning by designing individualized programs incorporating distance and interval training techniques into daily swim routines. Lab fee required. (SCANS 9,10) Prerequisite: PHED 1147 or consent of the instructor.

PHED 1149 Water Sports/Games (36.0108.5128)
(0-3) ..... 1 hour
A water conditioning program emphasizing muscle tone, strength, flexibility, coordination and cardiovascular endurance. This will be accomplished through participation in several water sports activities (water polo, volleyball and basketball). Emphasis will be on basic skills, rules, and strategies of each activity. Both individual and team effort will be stressed. Lab fee required. (SCANS 5,9,10) Prerequisite: PHED 1147 or consent of the instructor.

PHED 1150 Water Aerobics (36.0108.5128)
(0-3) ..... 1 hour
Personal instruction, in an aquatic environment, which emphasizes muscle tone, strength, flexibility and cardiovascular endurance. Emphasis is placed on learning exercises, calculation individual target heart rates and in developing a routine. Each student will design and lead the class in the routine he or she has developed. Includes a preliminary one-time orientation. Lab fee required. Prerequisite: None.

PHED 1152 Scuba Diving (36.0108.5328)
(0-3) ..... 1 hour
The course includes instruction in the proper use of equipment, safety, physiology and open water diving. Drills are performed under water as to how divers can work together in assisting one another in dangerous situations. Students completing course requirements will receive certification. Requires special fee. Prerequisite: PHED 1147 or consent of the instructor.

Competitive Athletics

PHED 1136 Varsity Baseball (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced baseball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 1137 Basketball, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced basketball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 1138 Golf, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced golfers competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 1139 Rodeo, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced participants in rodeo competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 1141 Track and Field, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced participants in track and field competing on the collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 1171 Athletic Training Clinical Practicum I
(1-20) ..... 1 hour
Designed to satisfy the first-year practical experience of the athletic training student. Students will be instructed in documentation preparation, record keeping, and evaluation in the athletic training room. Students will experience individual and team "hands on" preparation in the areas of competition/practice preparation, competition/ practice, and therapeutic settings. Students will be taught to recognize problems and design a plan of action for services such as, but not limited to, taping, bandaging, illness/injury evaluation, first aid emergency care, rehabilitation and related services. An ethical course of action will be stressed throughout the course. This course is under the supervision of a NATA-certified and state of Texas-licensed athletic trainer. (SCANS 2,4,5,6,9,10) Prerequisite: Admission to the student athletic training program and consent of the instructor.

PHED 2136 Varsity Baseball (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced baseball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 2137 Basketball, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced basketball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 2138 Golf, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced golfers competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 2139 Rodeo, Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced participants in rodeo competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 2141 Track and Field Varsity (36.0108.5128)
(0-3) ..... 1 hour
Designed for advanced participants in track and field competing on the collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5,9,10) Prerequisite: Consent of the instructor.

PHED 2171 Athletic Training Clinical Practicum II
(1-20) ..... 1 hour
Continuation of PHED 1171 for the second year athletic training student. Includes practice experience in athletic training room management, medical referral and disposition of athletic injuries. Students will be instructed in how to set up a plan of action for injury administration and related services using both an individual and team approach. This course will also include instruction in documentation procedures and record keeping. An ethical course of action will be stressed. (SCANS 2,4,5,6,9,10) Prerequisite: PHED 1171 and/or consent of the instructor.

Physical and Health Education Lecture Courses

PHED 1238 Personal Health Assessment and Strategies (31.0501.5128)
(2-0) ..... 2 hours
Provides instruction in lifestyle assessment and behavior change strategies in areas of physical fitness, nutrition and stress management. Emphasis is placed on the analysis of these components to enable the student to calculate body fat percentage, recognize deficiencies in diet and nutrition, reinforce positive health behaviors conducive to longevity and fitness, and select relevant activities leading to the improvement of personal health. (SCANS 3,4,7,9,10) Prerequisite: None.

PHED 1301 Orientation in Health, Physical Education and Recreation (31.0501.5228)
(3-0) ..... 3 hours
Provides instruction in the historical and philosophical basis of physical and health education and recreation. Emphasis is placed on understanding the foundations and objectives of curricula development; identifying activities and skills relevant to program development in physical and health education and recreation; demonstrating leadership skills in group discussions and activities pertinent to organization of educational principles of program development consistent with the goal of new curricula design, sociological and biological aspects of physical and health education and recreation; and reinforcing positive personal characteristics consistent with ethical and social aspects of physical and health education and recreation. (SCANS 4,5,6,7,9,10) Prerequisite: None.

PHED 1304 Personal and Community Health (51.0501.5128)
(3-0) ..... 3 hours
Provides instruction in the study of body organs and systems and health concepts and problems. Emphasis is placed on understanding the basic structure and functions of the human body, organizing and evaluating social systems for personal and community health, participating actively in projects with local public and community health systems demonstrating decision-making and problem- solving skills pertinent to delivery of social health services, and utilizing positive social characteristics when dealing with personal, public, and community health concerns. (SCANS 4,5,6,9,10) Prerequisite: None.

PHED 1306 First Aid (51.0301.5328)
(3-0) .....3 hours
Provides multimedia instruction in American Red Cross standard first aid and CPR. Covers techniques for injury assessment, bandaging and splinting, and safe transportation of injured. Emphasis is placed on individual and group skills for responsible action, decision making, and problem solving when faced with an emergency or nonemergency situation; utilization of knowledge necessary for specific injury conditions; maintenance of standards of ethical care for first aid care. Certification may be obtained in basic adult and infant/child CPR. Special fee required. (SCANS 5,9,10,11) Prerequisite: None.

PHED 1308 Techniques of Officiating Sports I (12.1204.5128)
(2-2) .....3 hours
Provides instruction in effective officiating methods and techniques for sports such as baseball, basketball and track. Emphasis is placed on rules interpretation and the positive communication of that interpretation to others, organization of rules information relative to game and tournament play and protest procedures, utilization of problem-solving techniques relevant to officiating contests, and maintenance of a positive self-image and sociability in group contest environments. Lab fee required. (SCANS 5,6,9,10) Prerequisite: Consent of the instructor.

PHED 1309 Techniques of Officiating Sports II (12.0204.5128)
(2-2) .....3 hours
Continues instruction in effective officiating methods and techniques for sports such as baseball, basketball and track. Emphasis is placed on rules interpretation and the positive communication of that interpretation to others, organization of rules information relative to game and tournament play and protest procedures, utilization of problem-solving techniques relevant to officiating contests, and maintenance of a positive self-image and sociability in group contest environments. Lab fee required. (SCANS 5,6,9,10) Prerequisite: Consent of the instructor.

PHED 1321 Techniques of Coaching Sports I (31.0506.5128)
(2-2) .....3 hours
Provides instruction in fundamental skills of coaching, individual and team play, organization of practices, and the handling of teams during the competitive seasons of sports such as baseball, basketball and track. Emphasis is placed on the ability of the coach to teach, exercise leadership, negotiate internal team problems, organize and communicate necessary information pertinent to team success, monitor team progress, utilize problem solving and decision making skills, maintain ethical standards and responsibility for team actions, and clearly demonstrate skills necessary for effective communication and motivation of the team. Lab fee required. (SCANS 5,6,7,9,10,11) Prerequisite: Consent of the instructor.

PHED 1322 Techniques of Coaching Sports II (31.0506.5128)
(2-2) .....3 hours
Continues fundamental skills, individual and team play, organization of practices and handling of teams during the competitive season for sports such as baseball, basketball and track. Lab fee required. Prerequisite: Consent of the instructor.

PHED 1331 Movement and Recreation (31.0101.5128)
(2-2) .....3 hours
Provides instruction in recreational activity training in basic movement skills. Emphasis is placed on the exploration and development of these skills through the utilization of simple games and activities, teaching and diversification of perceptual motor experiences to a broad population, organization and evaluation of information pertinent to the acquisition of movement skills, maintenance of responsible and ethical guidelines persistent with a target population, and development of communication skills necessary for the educational process. Lab fee required. (SCANS) 4,5,6,9,10,11) Prerequisite: None.

PHED 1346 Drug Use and Abuse (13.1307.5428)
(3-0) .....3 hours
Provides instruction in the current use and abuse of drugs in today's society. Emphasis is placed on physiological, sociological and psychological factors involved in the use and abuse of drugs. This course also will include instruction in the personal, legal and societal consequences of substance abuse. (SCANS 5,6,7,9,10) Prerequisite: None.

PHED 2278 Nutrition in Exercise and Sport (31.0501.5228)
(2-0) .....2 hours
Provides instruction in the importance of proper nutrition in regard to physical activity and specifically sports participation. Emphasis is placed on basic nutritional concepts, demonstration of basic mathematical calculations in determining caloric intake and expenditure, decision making skills necessary for determining optimal weight and proper hydration, and demonstration of ethics and personal integrity in regards to ergogenic aids to athletic performance. (SCANS 3,9,10) Prerequisite: None.

PHED 2376 Prevention and Care of Athletic Injuries (51.0301.5328)
(3-0) .....3 hours
Provides instruction in the study of the athletic training room and its problems, including massage, taping, bandaging, and care of sprains, strains, and wounds common to athletic participation. Emphasis is placed on basic administrative procedures and written record-keeping skills, management of time and materials necessary for the proper function of the training room, participation and service to clients served by the athletic trainer, acquisition and evaluation of information relative to injury assessment and prevention of athletic injury, proper communication of care and rehabilitation of athletic injuries, demonstration of problem-solving and decision- making skills relative to injury care and management, and maintenance of responsibility, ethical behavior, and self limitation in the treatment of athletic injuries. (SCANS 2,4,5,6,9,10) Prerequisite: None.

Physical Therapist Assistant

Faculty: S. Lynn Dammann, chair; Peggy Manning.

The physical therapist assistant program leads to an associate in applied science degree and encompasses a two-year course of study. The program is designed to prepare educated 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 that involve the therapeutic use of heat, cold, electromagnetic radiations, water, massage, ultrasound and therapeutic exercise and assists the physical therapist with evaluative procedures.

The curriculum balances general educational and technical courses and includes supervised practicum work at 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, achieve a satisfactory score on selected entrance examinations, have good character references, complete a specified number of volunteer or observation hours in a P.T. clinic, and be approved by the program admissions committee. After being accepted, students must maintain a grade of "C" in all physical therapist assistant courses, BIOL 1170, BIOL 2401, and BIOL 2402. An average of "C" or better must be maintained in all other courses. Students failing to meet these scholastic requirements will be dropped from the program. All physical therapist assistant students are required to have health and accident insurance. Liability insurance is also required and is a part of the regular college fee schedule. The physical therapist assistant program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Applicants or other interested persons seeking additional information should contact the counseling center at Odessa College. Testing deadline is February 28 and application deadline is March 31.

Course of Study for Associate in Applied Science Degree

Physical Therapist Assistant

Summer Session II

	Semester Hrs
ENGL 1301 Composition and Rhetoric	3
MATH 1332 Structures of College Mathematics I or higher level math	3

First Year

First Semester

BIOL 1170 Medical Terminology	1
BIOL 2401 Anatomy and Physiology I	4
PSYC 2301 Introduction to Psychology	3
PTAP 1301 Clinical Pathophysiology	3
PTAP 1401 Introduction to Physical Therapy	4

Second Semester

BIOL 2402 Anatomy and Physiology II	4
GOVT 2301 U.S. and Texas Government OR	
GOVT 2302 American National Government	3
PTAP 1302 Topics in Communication and Human Development	3
PTAP 1502 Fundamentals of Physical Therapy	5

Summer Session I

SPCH 1321 Business and Professional Speech	3
COSC 1301 Introduction to Computer Systems	3

Summer Session II

PTAP 1441 Clinical Practicum I	4

Second Year

First Semester

*PHED one-hour activity course	1
PTAP 2342 Clinical Practicum II	3
PTAP 2401 Kinesiology	4
PTAP 2601 Principles of Therapeutic Exercise	6

Second Semester

PHED one-hour activity course	1
PTAP 2443 Clinical Practicum III	4
PTAP 2702 Topics in Rehabilitation	7
Total Hours	**72**

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

Physical Therapy Courses

PTAP 1301 Clinical Pathophysiology
(3-0) ..... 3 hours
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. The ability to acquire information specific to diagnoses that affect the physical therapy treatment setting, diseases and injuries involving the musculoskeletal and neuromuscular systems, and the need for physical therapy intervention are stressed. (SCANS 6) Corequisite: PTAP 1401.

PTAP 1302 Topics in Communication and Human Development

(3-0) ..... 3 hours

Designed to enable students to understand systems of interaction in the health care setting. Encompasses psychosocial aspects of health care; verbal, non-verbal and written communication skills; patient-practitioner interaction, including working with diverse patient care situations; concepts of the practitioner's self-esteem and self-management and their impact on the health care setting; and human development from birth to death with special emphasis on normal sensorimotor development and aging. (SCANS 2,5,6,7,10,11) Corequisites: PTAP 1502. Prerequisites: PTAP 1301 and 1401.

PTAP 1401 Introduction to Physical Therapy

(3-3) ..... 4 hours

Designed to orient first-year students to the profession of physical therapy and the role of the physical therapist assistant. Historical background, legal aspects and ethical concepts that help prepare the student to participate as a member of the health care team, terminology used in the profession, body mechanics, transfers, activities of daily living, gait, vital signs, medical asepsis and bandaging are introduced. (SCANS 5) Corequisite: PTAP 1301.

PTAP 1441 Clinical Practicum I

(0-40) [6 weeks] ..... 4 hours

Provides the initial exposure to the clinical environment. Students observe and utilize skills obtained in the classroom and laboratory. Provides opportunities for selecting and applying procedures and equipment, improving decision-making, problem-solving and reasoning abilities. Consists of approximately six weeks full-time experience under close supervision of a licensed physical therapist or licensed physical therapist assistant. (SCANS 8,9) Prerequisites: PTAP 1301, 1401, 1302 AND 1502.

PTAP 1502 Fundamentals of Physical Therapy

(4-3) ..... 5 hours

Designed to instruct students in application of therapeutic modalities and massage. Emphasizes application of equipment, indications and contraindications, medical efficacy and physiological effects pertinent to the various physical agents. (SCANS 8) Corequisites: PTAP 1302. Prerequisites: PTAP 1301 and 1401.

PTAP 2342 Clinical Practicum II

(0-16) [12 weeks] ..... 3 hours

Provides continued exposure to the clinical environment. Students observe and utilize skills obtained in the classroom and laboratory. Provides opportunities for selecting and applying procedures and equipment, and improving decision-making, problem-solving and reasoning abilities. Close supervision by a licensed physical therapist or licensed physical therapist assistant is required. (SCANS 8,9) Corequisites: PTAP 2401 AND 2601. Prerequisites: PTAP 1301,1401, 1302, 1502, and 1441.

PTAP 2401 Kinesiology

(3-3) ..... 4 hours

Designed to provide the student with a working knowledge of the human musculoskeletal and neuromuscular systems, and an understanding of how these systems interact to produce efficient human movement. The acquisition of muscle function and gait information by use of manual muscle testing and rudimentary gait analysis is included. (SCANS 6,7) Corequisites: PTAP 2342 and 2601. Prerequisites: PTAP 1301, 1401, 1302, 1502 and 1441.

PTAP 2443 Clinical Practicum III
(0-40) [6 weeks] ..... 4 hours
Provides the final supervised clinical experience. Consists of an approximate six-week, full-time affiliation designed to simulate an actual working experience. Students observe and utilize skills obtained in the classroom and laboratory. Provides opportunities for selecting and applying procedures and equipment, and improving decision-making, problem-solving and reasoning abilities. The student will be able to improve upon the skills already learned and add additional techniques specific to individual facilities. Close supervision by a licensed physical therapist or licensed physical therapist assistant is required. (SCANS 8,9) Corequisite: PTAP 2702. Prerequisites: PTAP 1301, 1401, 1441, 1302, 1502, 2401, 2601 and 2342.

PTAP 2601 Principles of Therapeutic Exercise
(5-3) ..... 6 hours
Provides a study of basic theories and therapeutic application of exercise with emphasis on the neurophysiological elements of normal and abnormal function; facilitation of responses desired in the performance of exercise; applications for various pathological and orthopedic conditions; acquisition of joint range of motion information by use of goniometry; monitoring and correcting patient performance; decision-making, problem-solving and reasoning skills as they relate to therapeutic exercise. (SCANS 6,7,9) Corequisites: PTAP 2401 and 2342. Prerequisites: PTAP 1301, 1401, 1302, 1502 and 1441.

PTAP 2702 Topics in Rehabilitation
(5-6) ..... 7 hours
Integrates previously learned skills and techniques into the rehabilitation effort. Time management, creative thinking, decision-making, problem-solving, and reasoning ability as they relate to progressing the plan of treatment are emphasized. Sections of study will include long-term disability, prosthetics, orthotics, cardiac rehabilitation, respiratory care, sports medicine, work hardening, burn care, and pediatrics. The course is completed during the first nine weeks of the semester to allow for the final full-time clinical practicum. (SCANS 4,9) Corequisite: PTAP 2443. Prerequisites: PTAP 1301, 1401, 1302, 1502, 1441, 2401, 2601 and 2342.

Physics

Faculty: Dr. E. Don Taylor, chair; Dr. Ashok Khosla.

The principal objective of the physics department 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

Physics

	Semester Hrs
General Education Requirements	**56**
COSC 1415 Introduction to Computer Science	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
Foreign language sequence 1411, 1412, 2311, 2312	14
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U. S. History to 1877	3
HIST 1302 U. S. History from 1877	3
*MATH 2313 Calculus I	3

MATH 2314 Calculus II 3
MATH 2315 Calculus III 3
MATH 2320 Differential Equations 3
**PHED (any two one-hour activity courses) 2
SPCH 1315 Public Speaking 3

Major Requirements **8**
PHYS 2425 Engineering Physics I 4
PHYS 2426 Engineering Physics II 4

Total Semester Hours **64**

**Prerequisite to MATH 2313 should be taken during the summer prior to freshman enrollment. Students with strong mathematics background should consider advanced standing examinations.*
***PHED 1100 should be the first course taken in physical education.*

PHYS 1401 College Physics I (40.0801.5339)
(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. The student will be involved in reading information or problems and using critical-thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1,3,6,9) Prerequisite: Passed all sections of the TASP exam and have a working knowledge of algebra and trigonometry.

PHYS 1402 College Physics II (40.0801.5339)
(3-3) ..... 4 hours
A study of classical electricity, magnetism, mechanical wave motion, optics, and practical aspects of modern physics. The student will be involved in reading information or problems and using critical-thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1,3,6,9) Prerequisite: PHYS 1401.

PHYS 2425 Engineering Physics I (40.0801.5439)
(3-3) ..... 4 hours
A study of classical mechanics, and thermodynamics for students aspiring to professional academic degrees in the fields of physical science, various engineering specialties, and mathematics. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1,3,6,9) Prerequisite or corequisite: MATH 2313.

PHYS 2426 Engineering Physics II (40.0801.5439)
(3-3) ..... 4 hours
A study of classical electricity, magnetism, waves, and optics from a theoretical and engineering application viewpoint. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1,3,6,9) Prerequisite: PHYS 2425. Prerequisite or corequisite: MATH 2314.

PHYS 2427 Engineering Physics III (40.0801.5439)
(3-3) ..... 4 hours
A study of modern physics including atomic and nuclear phenomena, relativity, and quantum effects. The student will be involved in reading information or problems and using critical-thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1,3,6,9) Prerequisite: PHYS 2426.

Psychology and Sociology

Faculty: Don Jacobs, chair; Jane Hellinghausen, Carla Wells.

The psychology/sociology department offers freshman- and sophomore-level courses in psychology and sociology with a wide selection for both disciplines. The science of psychology studies human development and behavior, learning, thinking and mood states, gender differences, and relationships. Students are introduced to methodology, critical thinking, and application of psychological principles to every day life. Career paths offer students a wide selection of occupations including neuropsychology, clinical practice, research, teaching, industrial/organizational psychology, government, communications, medical and psychiatric.

The science of sociology studies the multitude of social and cultural influences that are significant to the development of the individual over his/her lifetime. Group dynamics, marriage and family living, juvenile delinquency, race and ethnicity, relationship dynamics and human sexuality empower the student with a wide application of sociological methodology. Career paths offer students many opportunities in government, business, academia, law enforcement, communications, public and/or private research, medical and gerontological occupations.

Psychology/sociology majors are encouraged to organize their degree plans with the assistance and advice of the department chair and academic counselors. It is the responsibility of the student to forecast the transferability of his/her degree plan to the university setting.

Course of Study for Associate in Arts Degree

Psychology or Sociology

	Semester Hrs
General Education Requirements	**53**
COSC 1415 Introduction to Computer Science	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
*General Education Elective	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
Lab Sequence in BIOL, CHEM, or PHYS	8
MATH 1332 Structures of College Mathematics I	3
MATH 1333 Structures of College Mathematics II	3
**PHED (any two one-hour activity courses)	2
PHIL 2306 Introduction to Philosophy II	3
SPCH 1315 Public Speaking	3

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

In addition to the 53 hours listed above, the student must choose one of the following options.

Psychology Option

	Semester Hrs
Major Requirements	**12**
PSYC 2301 Introduction to Psychology	3
PSYC 2302 Applied Psychology	3
PSYC 2308 Child Psychology	3
SOCI 1301 Principles of Sociology	3
Total Semester Hours	**65**

**The following electives may be substituted for above courses to accommodate the transferring institution: PSYC 2306 Human Sexuality, PSYC 2315 Psychology of Adjustment, PSYC 2326 Social Psychology, and PSYC 2371 Current Issues in Psychology.*

Sociology Option

	Semester Hrs
Major Requirements	**12**
SOCI 1301 Principles of Sociology	3
SOCI 1306 Social Problems	3
SOCI 2326 Social Psychology	3
PSYC 2301 Introduction to Psychology	3
Total Semester Hours	**65**

**The following electives may be substituted for above courses to accommodate the transferring institution: Sociology Electives: SOCI 2301 Sociology of the Family, SOCI 2306 Human Sexuality, SOCI 2319 Ethnic Relations, SOCI 2339 Juvenile Delinquency, SOCI 2371 Fundamental Research Design.*

Course of Study for Associate in Science Degree

Psychology

	Semester Hrs
General Education Requirements	**55**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
CHEM 1311/1111 General Inorganic Chemistry I Fundamentals of Chemistry Lab I	4
CHEM 1312/1112 General Inorganic Chemistry II Fundamentals of Chemistry Lab II	4
COSC 1415 Introduction to Computer Science	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
HIST 1301 U.S. History to 1877	3
HIST 1302 U.S. History from 1877	3
MATH 1314 College Algebra or more advanced	3
MATH 1342 Mathematical Statistics	3
*PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech	3
Major Requirements	**12**
PSYC 2301 Introduction to Psychology	3
PSYC 2302 Applied Psychology	3
PSYC 2308 Child Psychology	3
SOCI 1301 Principles of Sociology	3
Total Semester Hours	**67**

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

Course of Study for Associate in Science Degree

Sociology

	Semester Hrs
General Education Requirements	**55**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
CHEM 1311/1111 General Inorganic Chemistry I Fundamentals of Chemistry Lab I	4
CHEM 1312/1112 General Inorganic Chemistry II	4
Fundamentals of Chemistry Lab II	4

COSC 1415 Introduction to Computer Science 4
ENGL 1301 Composition and Rhetoric 3
ENGL 1302 Composition and Literature 3
ENGL (sophomore level) 3
GOVT 2301 U.S. and Texas Government 3
GOVT 2302 American National Government 3
HIST 1301 U.S. History to 1877 3
HIST 1302 U.S. History from 1877 3
MATH 1314 College Algebra OR higher level math 3
MATH 1342 Mathematical Statistics 3
*PHED (any two one-hour activity courses) 2
SPCH 1321 Business and Professional Speech 3

Major Requirements 12
SOCI 1301 Principles of Sociology 3
SOCI 1306 Social Problems 3
SOCI 2326 Social Psychology 3
PSYC 2301 Introduction to Psychology 3

Total Semester Hours 67

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

Psychology Courses

PSYC 2301 Introduction to Psychology (42.0101.5140)
(3-0) ..... 3 hours
Presents a basic understanding of psychological terms, theories, and methodologies in the scientific discipline that studies behavior and mental processes. Cognitive abilities such as problem solving, decision making, and communication, affective states like building self-esteem and sociability, and behavioral events, where one participates as a group member, are explored. Information acquisition, interpretation, and communication of a psychological nature are the basis on which this course is predicated. In this way, psychological principles are understandable in the context of biology, the brain, neurotransmitters and hormones, personality theory, learning principles, life-span development, relationships, abnormal psychology, and therapies. A wide application of a variety of topics is the focus of this introductory course. (SCANS 5,6,9,10,11) Prerequisite: None.

PSYC 2302 Applied Psychology (42.0101.5240)
(3-0) ..... 3 hours
Stresses the interpersonal challenges relating to coworkers and clients. Critical workplace competencies include leadership, negotiation, team building, cohesiveness, and communication. Analyzing the interrelationships of organizational behavior across the spectrum from our similarities to our diversities is a major focus. Personal qualities that reinforce job success as responsibility, sociability, self-management, and workplace ethics are presented in practical, job-related situations to enhance the student's job future as an effective and valued employee. (SCANS 5,6,7,9,10) Prerequisite: None.

PSYC 2306 Human Sexuality (42.0101.5342)
(3-0) ..... 3 hours
Presents human sexuality from a biopsychosocial perspective with the intent that students acquire a scientific foundation of sexual knowledge. Students must acquire, interpret, and communicate a wide variety of information pertaining to psychosocial influences on human sexuality. Decision-making skills, personality qualities such as responsibility, self-esteem, and integrity, and communication of one's feelings and concerns are a major focus of this course. Social factors that influence sexuality, family attitudes, values, multimedia presentations, gender identity, and gender roles provide students with a scientific foundation in a multi-disciplinary approach. (SCANS 6,9,10,11) Prerequisite: None.

PSYC 2308 Child Psychology (42.0701.5140)
(3-0) ..... 3 hours
Competencies emphasize child growth and development processes, including biological and environmental factors which shape personality and affect achievement from prenatal through adolescence. Requires observational case study where the student acquires, organizes, maintains, evaluates, and communicates case study, data and information. (SCANS 6) Prerequisite: None.

PSYC 2315 Psychology of Adjustment (42.0101.5640)
(3-0) ..... 3 hours
Adjustment to life's difficult side is the focus of this course. Effectively managing one's time in the face of stress and time constraints, coping with a diversity of perception from others, interpreting and communicating information from others in different social settings provides students with a wide application of psychological information. In more tangential ways, personal qualities such as responsibility in the face of conflict and frustration will be addressed, along with self-management, and communication of problems and concerns to others that often present barriers to healthy adjustment. (SCANS 4,5,6,9,10,11) Prerequisite: None.

PSYC 2319 Social Psychology (42.1601.5140)
(3-0) ..... 3 hours
Presents methodologies and research dealing with human behavior in social situations. Interpersonal abilities, being a team member, leadership roles, and adjustment to diversity is a major focus. Problem solving in groups, communicating with others, self-management skills, and responsibility as psychosocial attributes will be addressed. The way society's institutions, group affiliations, and group dynamics influence an individual's behavior is the emphasis of this course. (SCANS 5,9,10,11). Prerequisite: None.

PSYC 2371 Current Issues in Psychology (42.0101.5440)
(3-0) ..... 3 hours
Designed for psychology majors, Current Issues provides the psychology major with an in-depth analysis of topics that will be required in specific courses offered at the university junior and senior level. Information acquisition, interpretation, and critical thinking in the following areas are highlighted: neuropsychology, brain, hormones, and neurotransmitters; cognitive and behavioral psychology and learning theory, abnormal psychology, social psychology and psychosocial influences in group dynamics, as well as an understanding of gender differences in relationships, and human sexuality. Cognitive abilities, problem solving, group dynamics, and interpersonal communication are competencies that students are required to demonstrate. (SCANS 5,6,9,10,11) Prerequisite: PSYC 2302; additional 3 hours of psychology courses and consent of department chair.

Sociology Courses

SOCI 1301 Principles of Sociology (45.1101.5142)
(3-0) ..... 3 hours
Presents terminology, concepts and theories that enable the student to analyze groups, institutions, and society from a sociological approach. Covers the various institutions that make up the society, and the various human interactions that dictate the characteristics surrounding social organizations. The course introduces information to the student emphasizing the relationship between culture and social interaction. Develop and facilitate students' critical thinking skills through organized evaluation of various social phenomena including deviant behavior, social change, and urbanization. (SCANS 6,9) Prerequisite: None.

SOCI 1306 Social Problems (45.1101.5242)
(3-0) .....3 hours
Presents various sociological concepts that serve to analyze and communicate information pertaining to the historical and current causation and disposition of society's social problems. Through empirical research and various problem-solving techniques, the student will learn to recognize various constraints and processes that effect the relationship between society and the social problems therein. This course is designed to stimulate student awareness of various social problems in society, enabling the student to implement reasoning and analytical skills. Students will gain qualities that will enhance their personal/professional lives in regard to responsibility, sociability, integrity/ honesty, and effective problem-solving communication. (SCANS 5,6,7,9,10,11) Prerequisite: None.

SOCI 2301 Sociology of the Family (45.1101.5442)
(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.

SOCI 2306 Human Sexuality (42.0101.5342)
(3-0) .....3 hours
Presents human sexuality from a biopsychosocial perspective with the intent that students acquire a scientific foundation of sexual knowledge. Students must acquire, interpret, and communicate a wide variety of information pertaining to psychosocial influences on human sexuality. Decision-making skills, personality qualities such as responsibility, self-esteem, and integrity, and communication of one's feelings and concerns are a major focus of this course. Social factors that influence sexuality, family attitudes, values, multimedia presentations, gender identity, and gender roles provide students with a scientific foundation in a multi-disciplinary approach. (SCANS 6,9,10,11) Prerequisite: None.

SOCI 2319 Race and Ethnic Relations (45.1101.5342)
(3-0) .....3 hours
Presents the various racial and ethnic groups that comprise the predominate United States population. Stresses the various interpersonal and intergroup relationships between groups and institutions. Describes and evaluates the social interpretations and responsibilities as they pertain to prejudices and discriminations that are recognized across American society. The course teaches students to develop their own thinking skills and personal qualities as they relate to others in personal, professional, and social interactions. (SCANS 5,6,7,9,10,11) Prerequisite: None.

SOCI 2326 Social Psychology (42.1601.5140)
(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 PSYC 2319 and SOCI 2326. Prerequisites: None.·

SOCI 2339 Juvenile Delinquency (45.0401.5142)
(3-0) .....3 hours
Presents various theories and theoretical causations that pertain to juvenile delinquency. Cover the various institutions, diversion program, and ideologies that encompass the process dealing with juvenile delinquency behavior, and analyze and critique the juvenile justice process as it is presently applied. The course teaches students to develop their own thinking skills and analytical perspectives of juvenile justice data, the nature of delinquency, and the history and philosophy of the juvenile justice system. The course is designed to stimulate student awareness and facilitate student evaluation of the nature, extent, and causes of juvenile delinquency. (SCANS 5,6,7,9,10,11) Prerequisite: None.

SOCI 2371 Fundamental Research Design
(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. Students should check with the senior institution to determine transferability of this course. (SCANS 6,7,8) Prerequisites: MATH 1342 Mathematical Statistics or MATH 1314 College Algebra; PSYC 2301 Introduction to Psychology or SOCI 1301 Principles of Sociology. Offered only in spring semester of even-numbered years.

Radiologic (X-Ray) Technology

Faculty: Sue Leach, chair; Johnna Davila, 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 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, a prospective student 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. Prior to entering the clinical practicum portion of the program, students are required to complete a physical examination which includes drug screening.

Applicants or other interested persons seeking additional information should contact the radiologic technology program director at the college. Prospective students are 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 semester. Students must obtain and maintain a policy of health and accident insurance throughout their enrollment.

Course of Study for Associate in Applied Science Degree

Radiologic Technology

Summer Session II

	Semester Hrs
MATH 1332 Structures of College Mathematics OR higher level math	3
XRAY 1304 Introduction to Radiologic Technology	3
XRAY 1314 Radiographic Positioning I	3

First Year

First Semester

BIOL 2404 Human Anatomy and Physiology	4
XRAY 1111 Radiographic Positioning II	1
XRAY 1221 Clinical Practicum I	2
XRAY 1301 Patient Care and Pathology for Radiographers	3
XRAY 1401 Radiographic Physics	4

Second Semester
- ENGL 1301 Composition and Rhetoric 3
- PHED 1100 Lifestyle Assessment and Modification 1
- XRAY 1112 Radiologic Positioning III 1
- XRAY 1322 Clinical Practicum II 3
- XRAY 1402 Principles of Radiographic Exposure 4

Summer Sessions

Summer Session I
- GOVT 2301 U.S. and Texas Government OR
  - GOVT 2302 American National Government 3
- XRAY 1323 Clinical Practicum III (12 weeks) 3

Summer Session II
- SPCH 1321 Business and Professional Speech 3

Second Year

First Semester
- COSC 1301 Introduction to Computer Systems 3
- XRAY 2201 Special Imaging 2
- XRAY 2321 Clinical Practicum IV 3
- XRAY 2401 Advanced Radiographic Procedures 4
- PHED (one-hour activity course) 1

Second Semester
- XRAY 2202 Department Design and Operation 2
- XRAY 2322 Clinical Practicum V 3
- XRAY 2402 Radiation Biology and Pathology 4
- ****Approved Elective 3**

Summer Session I
- XRAY 2323 Clinical Practicum VI 3

Total Hours 72

**PHED 1100 should be the first course taken in physical education.*
***Approved electives: PSYC 2301, SOCI 1301, HIST 1301 or HIST 1302, GOVT 2301 or GOVT 2302 or ENGL 1302.*

Radiologic Technology Courses

XRAY 1111 Radiographic Positioning II
(0-4) ..... 1 hour
Competencies include discussion and demonstration of standard radiographic positioning of the thorax, abdomen, spine and routine contrast media procedures to include film critique (film evaluation regarding anatomy positioning and technical factors). Includes radiographic demonstration of common pathologies of the thorax, spine and abdomen with a discussion of technical compensation. Student is required to read, understand and demonstrate understanding of positioning materials by selecting necessary equipment and producing standard radiographs on radiographic phantoms. Students evaluate and correct performance following a discussion with the instructor identifying the problem and solution. Students will participate in teams demonstrating their ability to work with diversity, exercise leadership and teach others new skills. Lab fee required. (SCANS 1,5,6,7,8,9,10,11) Prerequisite: XRAY 1314 or consent of the department chair. Corequisites: XRAY 1221, XRAY 1301 and XRAY 1401.

XRAY 1112 Radiographic Positioning III

(0-3) ..... 1 hour

Competencies include discussion and demonstration of radiographic positioning of the cranium to include film critique (film evaluation regarding anatomy, positioning and technical factors). Includes radiographic demonstration of common pathologies of the cranium with a discussion of technical compensation. Student is required to read, understand and demonstrate understanding of positioning materials by selecting necessary equipment and producing standard radiographs on radiographic phantoms. Students evaluate and correct performance following a discussion with the instructor in identifying the problem and solution. Students will participate in teams demonstrating their ability to work with diversity, exercise leadership and teach others new skills. Lab fee required. (SCANS 1,5,6,7,8,9,10,11) Prerequisite: XRAY 1111 or consent of the department chair. Corequisites: XRAY 1322 and XRAY 1402.

XRAY 1221 Clinical Practicum I

(0-16) ..... 2 hours

Introduces the clinical environment at a major facility. Requires observing operation of the X-ray department while rotating through different work areas. Student participates as a team member while learning to develop and utilize good interpersonal communication skills, better enabling the student to meet patients' needs. Competencies include: the production of standard radiographs of the chest, abdomen, and upper and lower extremities to include film critique (film evaluation regarding anatomy, positioning and technical factors): reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment when producing standard radiographs on patients with direct supervision (pre-competency); demonstrate ability to prioritize and organize activities necessary to complete examinations; evaluate and correct performance, in the presence of a technologist, following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; demonstration of specific exams with a model (performance evaluation) is required. Presents clinical introduction to fluoroscopic examinations and film critique. Lab fee required. (SCANS 1,4,5,6,7,8,9,10,11) Lab fee required. Prerequisite: XRAY 1314 or consent of the department chair. Corequisites: XRAY 1111, XRAY 1301 and XRAY 1401.

XRAY 1301 Patient Care and Pathology for Radiographers

(3-0) ..... 3 hours

Encompasses radiographic pathology, professional ethics, medicolegal considerations, general patient care, sterile technique, patient transportation, body mechanics, and emergencies the student radiographer will encounter in the radiology department. Various nursing procedures will be discussed and practiced. Students will identify and make technical adjustments for common systemic pathologies. Students must locate and understand information regarding patient care on the patient's chart. Student must communicate verbally and in writing thoughts regarding all aspects of this course. Teams will be formed to develop and/or interpret patient care plans. Students must put information into use at clinical facility when dealing with departmental employees and patients. Students must calculate patient dosages and prepare contrast media for radiographic examinations. (SCANS 1,2,3,5,6,9,10,11) Prerequisites: XRAY 1304 or consent of department chair. Corequisites: XRAY 1401, XRAY 1111 and XRAY 1221.

XRAY 1304 Introduction to Radiologic Technology

(3-0) ..... 3 hours

Introductory course in which student must acquire and communicate information regarding the field of radiologic technology, professional ethics, darkroom procedures, medical terminology, prime exposure factors and technical factors of film quality. Students must listen and speak well enough to participate in group discussions. Requires locating, understanding and interpreting written information in prose and in graphs, developing narratives to explain graphs, and performance of basic calculations. Introduces basic physics of X-ray equipment and auxiliary devices. Student learns to consider risks to patients and others and chooses best alternatives in regard to basic radiation protection. (SCANS 1,2,3,6,9,10) Prerequisite: None.

XRAY 1314 Radiographic Positioning I
(0-12) [6 weeks] .....3 hours
Presents fundamentals of radiographic positioning and terminology used to describe radiographic projections. Competencies include discussion and demonstration of standard radiographic positioning of the upper and lower extremities to include film critique (film evaluation regarding anatomy, positioning and technical factors). Includes radiographic demonstration of common pathologies of the extremities with a discussion of technical compensation. Student is required to read, understand and demonstrate understanding of positioning materials by selecting necessary equipment and producing standard radiographs on radiographic phantoms. Students evaluate and correct performance following a discussion with the instructor identifying the problem and solution. Students will participate in teams demonstrating their ability to work with diversity, exercise leadership and teach others new skills. Lab fee required. (SCANS 1,5,6,7,8,9,10,11) Prerequisite: None.

XRAY 1322 Clinical Practicum II
(0-24) .....3 hours
Introduces the day shift clinical environment at a major facility. While rotating through different work areas student participates as a team member while learning to develop and utilize good interpersonal communication skills better enabling the student to meet patients' needs. Competencies include: production of standard radiographs of the chest, abdomen, and upper and lower extremities with indirect supervision (post-competency), and radiographic examinations of the spine, skull and sinuses with direct supervision (pre-competency); film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment when producing standard radiographs on patients with direct supervision (pre-competency); indirect supervision (post competency); demonstrate ability to prioritize and organize activities necessary to complete examinations; students evaluate and correct performance, in the presence of a technologist, following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting radiologist with fluoroscopic examinations and demonstrating specific exams with a model (performance evaluation). (SCANS 1,4,5,6,7,8,9,10,11) Prerequisite: XRAY 1221. Corequisites: XRAY 1112 and XRAY 1402.

XRAY 1323 Clinical Practicum III
(0-32) [12 weeks] .....3 hours
Emphasizes practice of basic radiographic procedures in positioning and darkroom techniques. Causes student to use anatomical terms. While rotating through different work areas student participates as a team member while learning to develop and utilize good interpersonal communication skills better enabling him to meet patients' needs. Competencies include: discussion and demonstration of all standard radiographic positions with direct supervision (pre-competency); indirect supervision (post-competency) to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; evaluating and correcting performance, in the presence of a technologist, following a discussion identifying the problem and solution; completing necessary paperwork (some on computer) related to radiographic examinations performed; assist radiographers in obtaining radiographs on trauma patients; assist radiologist with fluoroscopic examinations and demonstrating specific exams with a model (performance evaluation). Includes the following in clinical rotations: special procedures, CT, breast imaging, MRI, quality assurance and heart catherization. (SCANS 1,4,5,6,7,8,9,10,11) Prerequisite: XRAY 1322 or consent of the

department chair.

XRAY 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. Students must be able to locate, understand, and interpret written information regarding the above in prose and in graphs, communicate written thoughts, perform basic calculations, and organize and maintain the information presented in this course. Preventive maintenance, electrical safety and troubleshooting equipment are presented. The student must listen and communicate well. (SCANS 1,2,3,6,8,11) Prerequisite: XRAY 1304. Corequisites: XRAY 1111 and XRAY 1221.

XRAY 1402 Principles of Radiographic Exposure

(4-2) ..... 4 hours

Presents characteristics of radiographic film construction, (locate, understand, and interpret written information in prose and graphs and create graphs with narrative to explain graph), design of radiographic darkrooms and automatic processing techniques. Troubleshooting of equipment is also included. Includes advanced radiographic principles such as review of prime exposure factors (requires decision making and problem solving), technique formation (requires performing basic calculations), body section radiography and conditions influencing radiographic exposure. Emphasizes radiation protection (consider risks to patients and others and choose best alternatives) and image quality. Teaches the students the components of the radiographic image and helps them to understand how components of imaging system affect the image. Requires two laboratory hours per week. Lab fee required. (SCANS 1,2,3,6,7,8,9) Prerequisite: XRAY 1401 or consent of the department chair. Corequisites: XRAY 1112 and XRAY 1322.

XRAY 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 requiring communication of written thoughts and information. Includes film critique with reading of patient records for diagnosis. (SCANS 1,2,6) Prerequisite: XRAY 1112 or consent of the department chair. Corequisites: XRAY 2401 and XRAY 2321.

XRAY 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, equipment troubleshooting, and departmental design and administration. Explores innovative techniques of imaging. Student must locate, understand and interpret written information in prose and graphs and communicate written thoughts effectively. (SCANS 1,2,6,7,9) Prerequisite: XRAY 2201 or consent of the department chair. Corequisites: XRAY 2402 and XRAY 2322.

XRAY 2321 Clinical Practicum IV

(0-24) ..... 3 hours

Introduces the student to special clinical rotations. While rotating through different work areas student participates as a team member while learning to develop and utilize good interpersonal communication skills better enabling the student to meet patients' needs. Competencies include: discussion and demonstration of all standard radiographic positions and ability to produce radiographs on trauma patients with direct supervision (pre-competency); indirect supervision (post-competency) to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and

demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; evaluate and correct performance, in the presence of a technologist, following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting radiographers in obtaining radiographs on trauma patients; assisting radiologist with fluoroscopic examinations; demonstrating specific exams with a model (performance evaluation). Includes the following in clinical rotations: special procedures, CT, breast imaging, MRI, heart catherization, ultrasound, nuclear medicine, radiation therapy and quality assurance. (SCANS 1,4,5,6,7,8,9,10,11) Prerequisite: XRAY 1323 or consent of the department chair. Corequisites: XRAY 2401 and XRAY 2201.

XRAY 2401 Advanced Radiographic Procedures
(4-0) ..... 4 hours
Presents specialized and highly-technical procedures in radiology requiring the student to locate, understand and interpret written information in prose and graphs. Includes neuroradiography, digital X-ray imaging, computer tomography, angiography, arteriography, female studies, pediatric radiography, foreign body localization, stereoradiography, venipuncture and interventional procedures. Prerequisite: XRAY 1402 or consent of the department chair. (SCANS 1,2,6) Corequisites: XRAY 2201 and XRAY 2321.

XRAY 2402 Radiation Biology
(4-0) ..... 4 hours
Presents a review of atomic physics. Stresses radiation biology and protection. Student must locate, understand, and interpret written information in prose and graphs and create graphs with a narrative to explain the graphs. Students are required to perform basic calculations, acquire, evaluate, organize and maintain information, understand the technological system and how the body reacts to radiation to decrease patient dose. Student must select technical factors considering risks and technical objective. Includes topics of radiation therapy and nuclear medicine. Students must be able to listen and speak well to participate in group discussions. Requires a term paper (SCANS 1,2,3,6,7,9,11) Prerequisite: XRAY 2401 or consent of the department chair. Corequisites: XRAY 2202 and XRAY 2322.

XRAY 2322 Clinical Practicum V
(0-24) ..... 3 hours
While rotating through different work areas student participates as a team member while learning to develop and utilize good interpersonal communication skills better enabling them to meet patients' needs. Competencies include: discussion and demonstration of all standard radiographic positions and ability to produce radiographs on trauma patients with direct supervision (pre-competency); indirect supervision (post competency) to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; evaluate and correct performance, in the presence of a technologist, following a discussion identifying the problem and solution; completion of necessary paperwork (some on the computer) related to radiographic examinations performed; assisting radiographers in obtaining radiographs on trauma patients; assisting radiologist with fluoroscopic examinations; demonstrating specific exams with a model (performance evaluation). Includes the following in clinical rotations: ultrasound, nuclear medicine, radiation therapy and quality assurance. (SCANS 1,4,5,8,11) Prerequisite: XRAY 2321 or consent of department chair. Corequisites: XRAY 2202 and XRAY 2402.

XRAY 2323 Clinical Practicum VI
(4-20) [6 weeks] .....3 hours
Includes basic physical concepts with expansion to increase depth and scope of underlying principles of radiology. While rotating through different work areas student participates as a team member while learning to develop and utilize good interpersonal communication skills better enabling the student to meet patients' needs. Competencies include: performance of all duties required of a registered radiologic technologist to include patient positioning, technique selection, interpersonal communication skills and film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting radiologist with fluoroscopic examinations; demonstrating specific exams with a model (performance evaluation). Includes the following in clinical rotations: ultrasound, nuclear medicine, radiation therapy and quality assurance. (SCANS 1,2,3,4,5,6,7,8,9,10,11) Prerequisite: XRAY 2322.

Reading

Faculty: Pam Williamson, chair; Elloui Moseley, Mona Sandlin.

An effective citizen must read well, and reading courses develop efficient tools for use in both the academic and workplace environment. All professional fields require above-average abilities in reading.

These courses implement multimedia, computerized instruction and support the philosophy that a person's ultimate reading potential is never reached. Because effective study skills predominantly depend on precise reading abilities, learning methods are an integrated element in the curriculum. 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.

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 as electives 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 0371 Basic Reading (32.0108.5235)
(3-0) .....3 hours
Initiates instruction in developmental reading with emphasis on building vocabulary, increasing reading rate, and improving comprehension. Aims to empower students with independent learning techniques and effective study skills to enhance self- esteem and reaffirm the belief in self as a successful learner. Includes individual diagnosis of reading strengths and weaknesses for placement in multi-leveled materials. Lab fee required. (SCANS 1,9,10) Prerequisite: None or placement by counselors.

READ 0372 College Reading (32.0108.5235)
(3-0) .....3 hours
Stresses efficient learning techniques and application of reading and study skills. Students are encouraged to establish habits that result in increased success in learning in both the classroom and job environments. Includes diagnosis of reading strengths and weaknesses for placement in computer exercises, timed reading practices and vocabulary study. (SCANS 1,9,10). Lab fee required. Prerequisite: Read 0371 passed with a "C" or better or satisfactory placement score.

READ 0373 Advanced College Reading (32.0108.5235)
(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. The student monitors and corrects ineffective behavior as he assesses self accurately, sets personal goals, and monitors progress. (SCANS 1,7,9,10) Lab fee required. Prerequisite: Read 0372 passed with a "C" or better or satisfactory placement score.

College Reading Techniques

The college reading techniques course provides an alternative reading program with structured, individualized, self-paced instruction in a multimedia, computerized environment. Regardless of present reading ability, students can expect to increase vocabulary, to gain faster reading rates and to improve comprehension. Effective study techniques offer opportunities to improve performance in both academic and vocational-technical courses.

Diagnostic tests are given to determine placement levels and specific areas of need. Post-tests evaluate progress during the semester. Through student-teacher conferences, a self-paced plan of action is developed to set immediate and long-range goals.

Students should consult with the instructor immediately upon registration to arrange meeting times for the flexible entry course.

READ 0171 Improving Reading Skills (32.0108.5235)
(0-24) ..... 1 hour
Introduces self-paced individualized instruction in a multimedia environment which is designed to teach the student efficient reading techniques. Students establish habits that result in increased success in learning in both the classroom and job environments, resulting in higher self- esteem. Through independent learning activities, the student learns to validate his or her understanding of reading materials. Student's vocabulary is increased with various written activities. To increase individual reading rate, students utilize computers and other pacing media. (SCANS 1,4,7,10) Lab fee required. Prerequisite: None.

Refrigeration/Air Conditioning *(see Heating, Ventilation and Air Conditioning)*

Religion *(see Social Sciences)*

Respiratory Care

Faculty: Phyllis Brunner, chair; Elizabeth Essig, director of clinical education; Gloria Hearne, Dr. John Bray, medical director.

Through its ladder concept curriculum in respiratory care, Odessa College offers an intensive program for therapists and technicians. The technician program requires 14 months of study and leads to a certificate of completion. The therapist program requires 22 months of study and leads to an associate in applied science degree.

The clinical practice of respiratory care involves the application of skills and knowledge in the diagnosis and treatment of cardiopulmonary disease. Respiratory therapists and technicians engage in the care of patients from all age groups who suffer from a broad spectrum of diseases. They perform their duties in all patient care areas of hospitals, although primary involvement is in the intensive care units. They staff diagnostic laboratories, provide respiratory services for patients at home and in rehabilitation centers, are involved in the transportation of patients who require respiratory care in route, and serve as managers or educators.

Individuals practicing respiratory care should be mature, responsible persons with strong interpersonal skills and the desire to care for others. Interest and competence in the basic sciences are strong determinants in the academic success of a respiratory therapy student. Respiratory care involves the application of highly technological equipment to patient care situations.

The curriculum balances general educational and technical courses with supervised clinical work in local hospitals under the direction of qualified therapists and technicians. Physicians 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 and pass a hospital physical. 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 1 of each year.

Course of Study for Associate in Applied Science Degree

Respiratory Therapy

First Year

Summer Session II

	Semester Hrs
ENGL 1301 Composition and Rhetoric	3
MATH 1332 Structures of College Mathematics or higher level math	3

First Semester

BIOL 2404 Human Anatomy and Physiology	4
RESP 1101 Fundamentals of Respiratory Care I Lab	1
RESP 1111 Clinical Practicum I	1
RESP 1300 Fundamentals of Respiratory Care I	3
RESP 1304 Principles of Respiratory Care	3
SPCH 1321 Business and Professional Speech	3

Second Semester

COSC 1301 Introduction to Computer Systems	3
*PHED 1100 Lifestyle Assessment and Modification	1
RESP 1112 Fundamentals of Respiratory Care II Lab	1
RESP 1312 Fundamentals of Respiratory Care II	3
RESP 1222 Clinical Practicum II	2
RESP 1332 Cardiopulmonary Pathophysiology	3

Summer Sessions I and II

RESP 1140 Respiratory Care Seminar	1
RESP 1333 Clinical Practicum III	3
RESP 1360 Critical Care	3

Second Year

Third Semester

BIOL 2420 Microbiology 4
GOVT 2301 U.S. and Texas Government OR
GOVT 2302 American National Government 3
RESP 2164 Neonatal/Pediatric Lab 1
RESP 2252 Clinical Practicum IV 2
RESP 2264 Neonatal/Pediatric Respiratory Care 2
RESP 2312 Cardiopulmonary Dynamics 3

Fourth Semester

CHEM 1105 Introductory Chemistry Lab 1
CHEM 1305 Introductory Chemistry 3
RESP 2130 Clinical Specialties Lab 1
RESP 2262 Clinical Practicum V 2
RESP 2330 Clinical Specialties 3
PHED one-hour activity course 1
PSYC 2301 Introduction of Psychology 3

Total Hours 70

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

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I - Respiratory Therapy Technician

First Year

Summer Session II **Semester Hrs**

ENGL 1301 Composition and Rhetoric 3
MATH 1332 Structures of College Mathematics or higher level math 3

First Semester

BIOL 2404 Human Anatomy and Physiology 4
RESP 1101 Fundamentals of Respiratory Care I Lab 1
RESP 1111 Clinical Practicum I 1
RESP 1300 Fundamentals of Respiratory Care I 3
RESP 1304 Principles of Respiratory Care 3
SPCH 1321 Business and Professional Speech 3

Second Semester

COSC 1301 Introduction to Computer Systems 3
*PHED 1100 Lifestyle Assessment and Modification 1
RESP 1112 Fundamentals of Respiratory Care II Lab 1
RESP 1222 Clinical Practicum II 2
RESP 1312 Fundamentals of Respiratory Care II 3
RESP 1332 Cardiopulmonary Pathophysiology 3

Summer Sessions I and II

RESP 1140 Respiratory Care Seminar 1
RESP 1333 Clinical Practicum III 3
RESP 1360 Critical Care 3

Total Semester Hours 41

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

Respiratory Care Courses

RESP 1101 Fundamentals of Respiratory Care I Lab
(0-3) ..... 1 hour
Practices techniques and basic calculations learned in RESP 1300. Presents concepts needed in the performance of skills, maintains and selects equipment necessary for technique, charting requirements for medical records. All techniques are performed in the laboratory setting prior to performing them in a clinical setting. (SCANS 2,3,8) Lab fee required. Prerequisite: None. Corequisite: RESP 1300.

RESP 1111 Clinical Practicum I
(0-8) ..... 1 hour
Provides initial exposure to hospital environment. Strengthens communication and decision-making skills by observation and administration of respiratory care modalities. Requires application of patient assessment techniques, utilizing medical terminology documentation, interpretation of medical records, and provides opportunity to apply sterilization techniques. (SCANS 1,2,8,9,11) Equipment fee required. Prerequisite: None. Corequisites: RESP 1101 and RESP 1300.

RESP 1112 Fundamentals of Respiratory Care II Lab
(0-3) ..... 1 hour
Practices skills learned in RT 1312. Introduces mechanical ventilator concepts, including calculations, and airway management techniques. Lab exercises are designed to allow students to select appropriate equipment, problem solve equipment errors, and communicate the recommended changes in therapeutics in a given problem. (SCANS 3,8,9,11) Lab fee required. Prerequisite: RESP 1101, RESP 1300, RESP 1304 and RESP 1111. Corequisite: RESP 1312 and RESP 1222.

RESP 1140 Respiratory Care Seminar
(1-0)[13 weeks] ..... 1 hour
Introduces most current literature in pulmonary care to help the student understand how social, organizational, and technological systems work together to provide effective standards of care. Requires preparation of journal reports from recent publications. Provides a comprehensive review of competencies for the entry level technician. (SCANS 6,7) Prerequisite: RESP 1312, RESP 1222, RESP 1332, RESP 1112. Corequisite: RESP 1333, RESP 1360.

RESP 1222 Clinical Practicum II
(0-16) ..... 2 hours
Applies, in a clinical setting, skills learned in RESP 1300. Allows a student to participate as a health care team member, including decision making and equipment troubleshooting. Enforces the personal qualities for job success such as understanding workplace ethics, time-management and organizational skills, responsibility, and sociability. Permits rotation through acute care facilities, including pediatrics and rehabilitation centers. (SCANS 4,5,8,9,10) Prerequisite: RESP 1011, RESP 1111, RESP 1300, RESP 1304. Corequisite: RESP 1312, RESP 1332, and RESP 1112.

RESP 1300 Fundamentals of Respiratory Care I
(3-0) ..... 3 hours
An in-depth presentation of oxygen therapy. Presents the technology, calculations, and equipment associated with respiratory care modalities such as aerosol therapy, incentive spirometry, IPPB, arterial blood gas sampling, and chest physiotherapy. (SCANS 3,8) Prerequisite: Admission to respiratory care program. Corequisite: RESP 1101.

RESP 1304 Principles of Respiratory Care
(3-0) ..... 3 hours
Introduces sciences used in respiratory care. Presents chemistry and its application in acid base balance. Presents physics to ensure the student's ability to solve problems and apply new skills in relation to Newton's laws, gas laws, and measurement systems. Introduces microbiology for the student to be able to understand the technology involved in identifying bacteria and other disease-causing organisms. (SCANS 7,9) Prerequisite: Admission to respiratory care program. Corequisite: RESP 1101, RESP 1111 and RESP 1300.

RESP 1312 Fundamentals of Respiratory Care II
(3-0) ..... 3 hours
Presents an extensive study of calculations involved in pharmacology. Introduces the theory, equipment and formulas necessary for the application of positive pressure technology and airway management. (SCANS 3,8) Prerequisite: RESP 1300. Corequisite: RESP 1112, RESP 1222 and RESP 1332.

RESP 1332 Cardiopulmonary Pathophysiology
(3-0) ..... 3 hours
Integrates normal and abnormal physiology of the cardiopulmonary system and requires the student to select appropriate technology to manage the disorders that affect the cardiopulmonary system. Includes the calculations of oxygen transport, the evaluation of gas exchange, electrophysiology of the heart, and the interpretation of blood gas analysis and pulmonary function studies. (SCANS 1,3,6,8) Prerequisites: RESP 1101, RESP 1111, RESP 1300, RESP 1304. Corequisite: RESP 1112, RESP 1222, RESP 1312.

RESP 1333 Clinical Practicum III
(0-30)(13 weeks) ..... 3 hours
Applies, to patients, the techniques learned in RESP 1312. The student will demonstrate the ability to locate and interpret medical information necessary to serve the patient with the appropriate procedures. The student will develop time-management skills and participate as a member of the health care team in the presence of diversity. Assignments in the adult and pediatric intensive care units, as well as general respiratory care areas, will allow the student to demonstrate responsibility, creative thinking and decision-making skills necessary for a respiratory practitioner. (SCANS 4,5,8,9,11) Prerequisites: RESP 1222. Corequisite: RESP 1140 and RESP 1360. Testing fee of $25 is required.

RESP 1360 Critical Care
(3-0) [13 weeks] ..... 3 hours
Introduces third generation ventilator technology. Emphasizes clinical application, including calculations, of new modes of ventilation such as EMMV, pressure support, pressure control, and inspiratory assist. Presents clinical application and interpretation of compliance curves in relation to positive pressure application and hemodynamic monitoring. (SCANS 1,3,6) Prerequisite: RESP 1112, RESP 1312, RESP 1222, RESP 1332. Corequisite: RESP 1140, RESP 1333.

RESP 2130 Clinical Specialties Lab
(0-3) ..... 1 hour
Presents specialized and highly technical procedures in advanced respiratory care requiring the student to locate, understand and interpret written information in advance life support techniques, pediatrics and pulmonary function studies. (SCANS 1,2,6) Lab fee required. Prerequisite: Consent of the department chair. Corequisite: None.

RESP 2164 Neonatal/Pediatric Lab
(0-3) ..... 1 hour
Practices techniques and basic calculations, in the laboratory setting, learned in RESP 2264. Presents concepts needed in the performance of skills, maintaining and selecting equipment necessary for technique mastery. (SCANS 3,8) Lab fee required. Prerequisite: None. Corequisite: RESP 2264.

RESP 2330 Clinical Specialties
(3-0) ..... 3 hours
This course will introduce students to other areas of medicine that are commonly encountered in clinical practice. Emphasis is placed on selection, application, maintenance, and monitoring the needed technology, increasing decision making and problem solving ability, to care for disorders of the critical and acute care patient. (SCANS 7,8,9) Prerequisites: RESP 1140, RESP 1333 and RESP 1360.

RESP 2252 Clinical Practicum IV

(0-16) ..... 2 hours

Allows the student to participate as a health care team member in the application of tasks to the patient in a variety of clinical settings. The student must evaluate and organize patient information, understand how to monitor and correct performance, and select, maintain and troubleshoot necessary equipment in the health care environment. Also, the student will demonstrate ability in decision making, self-management, and teaching others through development of an educational presentation. (SCANS 5,6,7,8,9,10,11) Prerequisite: RESP 1333. Corequisites: RESP 2312 and RESP 2364.

RESP 2262 Clinical Practicum V

(0-16) ..... 2 hours

Integrates all previously learned skills. Requires the student to apply patient care in the adult, pediatric, and neonatal intensive care units, home care and pulmonary rehabilitation facilities. Students will simulate roles in management and education, including development of work schedules, an inventory, and a budget. The student will demonstrate the ability to organize information and understand technology, and the use of reasoning to teach others a new skill and to monitor and correct performances of others. (SCANS 4,5,6,7,8,9) Testing fee of $60 required. Prerequisites: RESP 2252, RESP 2312 and RESP 2364. Corequisite: RESP 2330.

RESP 2264 Neonatal/Pediatric Respiratory Care

(2-0) ..... 2 hours

This course will introduce the student to neonatal and pediatric respiratory care. Topics to be covered include embryology, neonatal and pediatric abnormalities, and diseases specific to the neonatal and pediatric population. Information to understand the systems associated in mechanical ventilator technology and calculations to apply positive pressure will be emphasized. (SCANS 3,6,7) Prerequisites: RESP 1140, RESP 1333 and RESP 1360. Corequisites: RESP 2252, RESP 2312.

RESP 2312 Cardiopulmonary Dynamics

(3-0) ..... 3 hours

Presents advanced concepts, including interpretation of electrocardiography and hemodynamic monitoring information and the calculations associated with this technology. The student must demonstrate the understanding of the equipment and systems to monitor patient responses, correct malfunctions and suggest modifications or alternatives when necessary. (SCANS 1,3,7) Prerequisites: RESP 1140, RESP 1333, RESP 1360. Corequisites: RESP 2252 and RESP 2364.

Safety *(see Occupational Safety and Health Technology)*

Social Sciences

Faculty: Dr. Dick Kennedy, chair; Mary Kay Buinger, Dr. Brian Dille, Daphne Eastman, Dr. Tom Heiting, Truett Hilliard, Jack Kitzmiller, Robert Porter, Dr. Bill Rutherford.

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 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	**55**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (Sophomore Level)	6
Foreign Language 1411 and 1412	8
Foreign Language (sophomore level)	6
GOVT 2301 U.S. and Texas Government	3
GOVT 2302 American National Government	3
**HIST 1301 U.S. History to 1877	3
**HIST 1302 U.S. History from 1877	3
MATH 1332 Structures of College Mathematics I OR higher level math	3
MATH 1333 Structures of College Mathematics II OR higher level math	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3
Major Requirements	**12**
ECON 2301 Principles of Economics I (Macro)	3
ECON 2302 Principles of Economics II(Micro)	3
HIST 2311 History of Modern Europe to 1815	3
HIST 2312 History of Modern Europe since 1815	3
Total Semester Hours	**67**

***HIST 2301, History of Texas may be substituted for either HIST 1301 or HIST 1302.*
**PHED 1100 should be the first course taken in physical education.*

Economics Courses

ECON 1301 Introduction to Economics (19.0402.5242)
(3-0) ..... 3 hours
Permits average citizen to increase economic literacy. Includes organization and interpretation 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 ECON 2301 and/or ECON 2302. (SCANS 6) Prerequisite: None.

ECON 2301 Principles of Economics I (Macro) (45.0601.5142)
(3-0) ..... 3 hours
Provides organization, communication, and interpretation of fundamental, analytic concepts of economic theory and practice. Emphasizes macro-economic theory and practice. Includes money and banking, national income and employment, economic growth, public spending and international economy. (SCANS 6) Prerequisite: None.

ECON 2302 Principles of Economics II (Micro)(45.0601.5142)
(3-0) ..... 3 hours
Designed to provide communication and interpretation of fundamental analytic concepts of economic theory and practice. Emphasizes micro-economic theory and problem solving. Includes basic theory, price and output determination under varying conditions and income distributions and factor prices. (SCANS 6,9) Prerequisite: None.

Government Courses

GOVT 2301 U.S. and Texas Government (45.1002.5142)
(3-0) ..... 3 hours
Traces and interprets the 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 Educational Agency. (SCANS 6) Prerequisite: None.

GOVT 2302 American National Government (45.1002.5142)
(3-0) ..... 3 hours
Disseminates information and interprets the institution of government including the presidency, Congress, the courts and bureaucracy of the 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. (SCANS 6) Prerequisite: None.

History Courses

HIST 1301 United States History to 1877 (45.0802.5142)
(3-0) ..... 3 hours
Organizes, interprets, and evaluates the European background, establishment of colonial foundations, rise of American nationality, growth and sectional crisis, and the Civil War and Reconstruction. (SCANS 6,9) Prerequisite: None.

HIST 1302 United States History from 1877 (45.0802.5142)
(3-0) ..... 3 hours
Deals with the growth of big businesses and accompanying problems. Includes the interpretation and evaluation of American imperialism, causes and results of World War I, causes of World War II, post-war adjustments and prospective solutions. (SCANS 6,9) Prerequisite: None.

HIST 2301 History of Texas (45.0802.5242)
(3-0) ..... 3 hours
Organizes and interprets the 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. (SCANS 6,9) Prerequisite: None.

HIST 2311 History of Modern Europe to 1815 (45.0801.5442)
(3-0) .....3 hours
Surveys and interprets the 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. (SCANS 6) Prerequisite: None.

HIST 2312 History of Modern Europe Since 1815 (45.0801.5442)
(3-0) .....3 hours
Includes an interpretation and evaluation of the Napoleonic era, rise of liberalism and nationalism, causes and results of World War II, post-war problems and prospective solutions. (SCANS 6,9) Prerequisite: None.

HIST 2381 Afro-American History (45.0802.5142)
(3-0) .....3 hours
Organizes and interprets the role and contributions of Afro-Americans to development and culture of the United States. (SCANS 6) Prerequisite: None.

Philosophy and Religion Courses

PHIL 1301 Introduction to Philosophy I (38.0101.5135)
(3-0) .....3 hours
Presents an adventure in ideas including the interpretation of those 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. Critical thinking is an important component of this course. (SCANS 6,9) Prerequisite: None.

PHIL 1304 Comparative Religions (38.0201.5235)
(3-0) .....3 hours
An interpretation of religions of the world. Includes Hinduism, Buddhism, Confucianism, Taoism, Shinto, Judaism, Christianity, and Islam. (SCANS 6) Prerequisite: None.

PHIL 1316 History of Religion (38.0201.5135)
(3-0) .....3 hours
Investigates and interprets historically the development of the world from prehistory to modern times. Emphasizes role of religions in world history. (SCANS 6) Prerequisite: None.

PHIL 2306 Introduction to Philosophy II (Ethics) (38.0101.5335)
(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 and interprets the nature of goodness, duty and freedom. Considers selected ethical problems in light of each basic ethical system. (SCANS 6,9) Prerequisite: None.

PHIL 2321 Philosophy of Religion (38.0201.5335)
(3-0) .....3 hours
Examines and interprets 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. (SCANS 6) Prerequisite: None.

BIBL 1171 Acts of the Apostles
(1-0) .....1 hour
Communicates and interprets 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. (SCANS 6) Prerequisite: None.

BIBL 1372 Old Testament History
(3-0) .....3 hours
An introduction and survey of the Old Testament. Emphasizes historical setting, types of religious literature and religious element underlying the whole. (SCANS 6) Prerequisite: None.

BIBL 1373 New Testament History
(3-0) .....3 hours
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. (SCANS 6) Prerequisite: None.

BIBL 2371 History of the Life of Christ
(3-0) .....3 hours
Presents a study of the life of Christ as portrayed by Matthew, Mark, Luke and John. (SCANS 6) Prerequisite: None.

BIBL 2372 The Life and Letters of Paul
(3-0) .....3 hours
Consists of a study of the life and ministry of the apostle Paul. Examines his writings and central ideas. (SCANS 6) Prerequisite: None.

Sociology *(see Psychology and Sociology)*

Spanish *(see English and Foreign Languages)*

Speech

Faculty: Darlyne Ervin, chair; Deanne Causey, Joe Willis.

The speech 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.

Business and Professional Speech and Public Speaking are course offerings considered to be "core" classes because they help fulfill the communication requirements at most colleges and universities.

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

Speech

	Semester Hrs
General Education Requirements	**45**
COSC 1301 Introduction to Computer Science	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
Foreign language 1411 and 1412	8

GOVT 2301 U.S. and Texas Government 3
GOVT 2302 American National Government 3
HIST 1301 U.S. History to 1877 3
HIST 1302 U.S. History from 1877 3
*PHED (any two one-hour activity courses) 2
Science (two sequential semesters of a laboratory science) 8

Major Requirements 19
COMM 1335 Survey of Radio and Television 3
**SPCH 1144, 1145, 2144 and 2145: Forensic Laboratory 4
SPCH 1315 Public Speaking 3
SPCH 1342 Voice and Diction 3
SPCH 2335 Argumentation and Debate 3
SPCH 2341 Introduction to Oral Interpretation 3

Total Semester Hours 64

**PHED 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.*

Speech Courses

SPCH 0300 Basic Speech Communication Skills (32.0108.5135)
(3-0) ..... 3 hours
This course is a preparatory course in speech communication. Emphasis is placed on interpersonal and small group communication, critical thinking, and individual communication skills. This course is developmental in nature and may not satisfy requirements toward a four-year degree. (SCANS 5,9,10,11) Prerequisite: None.

SPCH 1144, 1145, 2144, 2145 Forensics Laboratory (23.1001.6035)
(0-2) ..... 1 hour each
This lab prepares the students for intercollegiate participation in various public speaking events. This course requires tournament participation. (SCANS 5,9,10,11 met in different ways depending on the student's individual events) Prerequisite: None.

SPCH 1311 Introduction to Speech Communication (23.1001.5135)
(3-0) ..... 3 hours
This course introduces the oral communication process through study of interpersonal skills. The course applies practices of communication in dyadic and group environments Variables of nonverbal communication, self-esteem, listening techniques, presentational speaking and cultural diversities are examined. (SCANS 5,10,11) Prerequisite: None.

SPCH 1315 Public Speaking (23.1001.5335)
(3-0) ..... 3 hours
In this course the student learns to apply oral communication skills toward a specified audience. Organization of ideas, the persuasion process, and audience analysis are components of the course objectives. The student will demonstrate these objectives through prepared messages using appropriate verbal and nonverbal techniques. (SCANS 5,6,9,10,11) Prerequisite: None.

SPCH 1321 Business and Professional Speech (23.1001.5235)
(3-0) ..... 3 hours
In this course students improve written and oral communication skills which affect business environments. Emphasis is placed on organizational networks, strategic planning, interviewing, presentational address, listening, and committee effect. The student will integrate these components with managerial methods and business image maintenance. Variables of culture and personality are analyzed. This course utilizes a "hands on" approach to application of the course materials. (SCANS 5,6,7,9,10,11) Prerequisite: None.

SPCH 1342 Voice and Diction (23.1001.5835)
(3-0) ..... 3 hours
This course presents the principles of the vocal process. The student's individual goals of vocal development and interpretation are targeted through classroom exercises and projects. The student will master the International Phonetic Alphabet. (SCANS 1,6,9,11) Prerequisite: None.

SPCH 2335 Argumentation and Debate (23.1001.5935)
(3-0) ..... 3 hours
This course introduces various argumentation techniques. The student will learn basic research skills and methods of cataloging evidence. The student will learn to organize and present ideas in effective communication paradigms. Individual debate and team formats will be demonstrated. (SCANS 5,6,9,10,11) Prerequisite: None.

SPCH 2341 Introduction to Oral Interpretation (23.1001.5735)
(3-0) ..... 3 hours
This course focuses on analysis and performance of written literature. The reader's evaluation of the literature and personal creativity are utilized toward a targeted objective for a specific audience. (SCANS 1,6,9,10,11) Prerequisite: None.

Surgical Technology

Faculty: Leola Rutledge, chair.

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 first aid also are introduced. During the second semester, applied psychology is presented, 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 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 and may sit for the National Certification Examination for Surgical Technologists. 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 Accreditation of Allied Health Education Programs (CAAHEP).

Course of Study for Associate in Applied Science Degree

Surgical Technology

Semester Hrs

Prerequisite Courses **8**
- BIOL 2401 Anatomy and Physiology 4
- BIOL 2402 Anatomy and Physiology 4

First Year

First Semester
- BIOL 1170 Medical Terminology 1
- PHED 1306 First Aid 3
- SURG 1411 Surgical Technology Practicum I 4
- SURG 1612 Introduction to Surgical Techniques 6

Second Semester
- PSYC 2302 Applied Psychology 3
- SURG 1613 Principles of Surgical Technology 6
- SURG 1614 Surgical Technology Practicum II 6

Summer Session I
- SURG 1615 Surgical Technology Practicum III 6

Second Year

First Semester
- BIOL 2420 Microbiology 4
- ENGL 1301 Composition and Rhetoric 3
- GOVT 2301 U.S. and Texas Government OR
  - GOVT 2302 American National Government 3
- MATH 1332 Structures of College Mathematics OR higher level math 3
- *PHED 1100 Lifestyle Assessment and Modification 1

Second Semester
- COSC 1301 Introduction to Computer Systems 3
- ENGL 1302 Composition and Literature 3
- PHED one-hour activity course 1
- PSYC 2301 Introduction to Psychology 3
- SPCH 1321 Business and Professional Speech OR
  - SPCH 1315 Public Speaking 3

Total hours **70**

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

Course of Study for Certificate of Completion

Level II - Surgical Technology

Semester Hrs

Prerequisite Courses **8**
- BIOL 2401 Anatomy and Physiology 4
- BIOL 2402 Anatomy and Physiology 4

First Semester
- BIOL 1170 Medical Terminology 1
- PHED 1306 First Aid 3
- SURG 1411 Surgical Technology Practicum I 4
- SURG 1612 Introduction to Surgical Techniques 6

Second Semester
- PSYC 2302 Applied Psychology 3
- SURG 1613 Principles of Surgical Technology 6
- SURG 1614 Surgical Technology Practicum II 6

Summer Session I
- SURG 1615 Surgical Technology Practicum III 6

Total hours **43**

Surgical Technology Courses

SURG 1411 Surgical Technology Practicum I
(0-14) ..... 4 hours
Presents techniques needed to begin a study of the technologies in the operating room including emphasis on maintaining a safe environment for the patient, care and handling of instrumentation, competence in basic calculations and related nursing activities. Stresses skills in locating, understanding and interpreting written information related to the operating room environment and routines. Activities for skills in basic aseptic technique, following schedules and using materials and equipment efficiently are presented. Stresses workplace competencies including interpersonal relationships, team building, self-esteem and acquisition and evaluation of information. Simulation lab and on-site clinicals enhance and reinforce learned skills. Lab fee required. (SCANS 3,4,5,6) Prerequisites: BIOL 2401 and BIOL 2402 . Corequisite: SURG 1612.

SURG 1612 Introduction to Surgical Techniques
(6-2) ..... 6 hours
Presents terminology, concepts and techniques needed to begin a study of Surgical Technology. Covers weights and measures, pharmacology, patient care including medical-legal aspects and ethics, microbiology, infection, sterilization and disinfection. Students will use basic numerical techniques for calculations in pharmacology. Stresses working with others of diverse backgrounds in peer relationships as well as care-giver relationships with clients. Covers written information dealing with clients. Emphasis placed on recognizing problems relating to patient care and planning actions. Applies knowledge and skills to the clinical process. (SCANS 1,3,5,9,10) Prerequisites: BIOL 2401 and BIOL 2402. Corequisite: SURG 1411.

SURG 1613 Principles of Surgical Technology
(6-2) ..... 6 hours
Presents operating room principles and techniques, through interpretation of written information. Emphasis is on acquiring, evaluating and interpreting information regarding patient care related to preoperative diagnoses and surgical intervention. Covers surgical procedures for each body system and emphasizes the equipment and setup for the basic technologies. (SCANS 1,6,8) Prerequisites: SURG 1411 and SURG 1612. Corequisite: SURG 1614.

SURG 1614 Surgical Technology Practicum II
(0-21) ..... 6 hours
Assignments in the operating room environment stressing participation as a viable member of the team. Emphasis on prioritization of general surgical technique activities and use of materials. Student will understand overall intent of surgical procedures and choose equipment and supplies related to these tasks. Increase in responsibility for self-management and problem solving. (SCANS 4,5,6,8,10) Prerequisites: SURG 1411, SURG 1612. Corequisite: SURG 1613.

SURG 1615 Surgical Technology Practicum III
(0-32) ..... 6 hours
Presents extended clinical experience with rotations through surgical specialties with the student having the opportunity to contribute to a group effort to provide optimal care of clients. Emphasis is on working with a variety of tools and equipment. Students are urged to acquire and apply new knowledge and skills as well as persevere toward higher goals. (SCANS 5,8,9,10) Prerequisites: SURG 1411, SURG 1612, SURG 1613, SURG 1614 and completion of all academic courses.

Vocational Nursing *(see Nursing)*

Welding Technology *(see Metal Trades)*

X-Ray Technology *(see Radiologic Technology)*

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Yancy Nunez
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Lynn Reese
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Associate Professor of Government and Economics, B.A., Howard Payne College; M.A., University of Texas of the Permian Basin; Ed.D., Texas Tech University

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Department Chair and Associate Professor of Surgical Technology, A.A.S., Odessa College; B.S.N., Texas Tech University Health Sciences Center

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Reading Paraprofessional, B.S., Texas Tech University

Sonny Sansom, R.R.T.
Lecturer of Respiratory Therapy

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Associate Professor of Law Enforcement, B.S., John Jay College of Criminal Justice

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Medical Director of Radiologic Technology, B.A., Loyola College, Montreal, Quebec, Canada; M.D., McGill University, Montreal, Quebec, Canada

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Chemistry Paraprofessional, B.S., Sul Ross State University

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Carla Wells
Assistant Professor of Psychology, B.S., University of Texas at Austin; M.S., Texas Woman's University

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Professor of Music, B.M.E., M.M.E., Ph.D., Texas Tech University

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Professor of English, B.A., M.A.T., Angelo State University; Ph.D., University of North Texas

Virginia Lynn Whitson
Assistant Professor of English, B.A., M.A., University of Texas of the Permian Basin

Gregory D. Williams
Director of Enrollment Management and Associate Professor of Psychology, B.A., M.A., M.Ed., University of Texas of the Permian Basin

Pamela R. Williamson
Department Chair and Instructor of Reading, B.A., University of Texas at El Paso; M.A., University of Texas of the Permian Basin

Joseph A. Willis
Instructor of Speech, B.A., Eastern New Mexico University; M.A., Texas Tech University

Rick Zimmerman
Baseball Coach and Instructor of Physical Education, B.S., M.S., Fort Hays, Kansas State College

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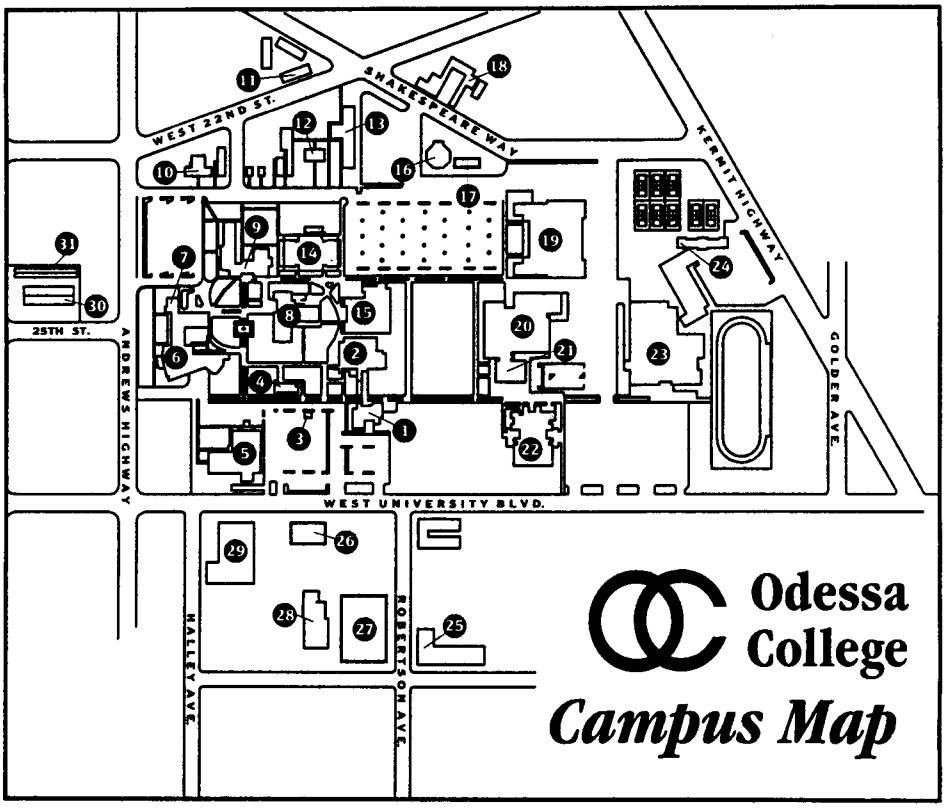

1. Administrative Wing
2. Student Union Building/Bookstore
3. Continuing Education Drive-Thru Registration Booth
4. Student Activity Center-Travis Hall
5. Jack Rodgers Fine Arts Center
6. Deaderick Hall
7. KOCV TV/KOCV FM
8. Learning Resources Center
9. Baskin Hall
10. Wrangler Hall
11. Custodial Department, Shipping & Delivery
12. Baptist Student Union
13. Parker Downs Hall
14. Wilkerson Hall
15. Gymnasium/Gymnastics Center
16. Globe of the Great Southwest
17. Anne Hathaway Cottage
18. Physical Plant/Transportation
19. Electronics Technology Department
20. Sedate Hall
21. Children's Center
22. Composite Technology Building
23. Sports Center
24. Tennis Center
25. Construction Department
26. Continuing Education Annex A
27. Continuing Education Annex B
28. Continuing Education Annex C
29. Cosmetology Building
30. Haley Diesel Mechanics Center
31. Auto Mechanics Center

APPLICATION FOR ADMISSION

ODESSA COLLEGE

Admissions Office
201 W. University
Odessa, Texas 79764

OFFICE USE ONLY
_____Res _____Classification _____VISA

PLEASE PRINT

(1) **Name** (full legal name): _____
Last First Middle Other Names

Other name(s) (cont'd)_____ (2) **Phone** (___)_____ (___) _____
Home Work

(3) **Social Security Number** |___|___|___| |___|___| |___|___|___|___| (4) **E-Mail Address** _____

(5) **Permanent Address** _____
Street or P.O. Box City County State Zip Code

How long have you lived at your permanent address? _____Years _____Months If less than 24 months, go to #6.

(6) **Local Address** (if different than permanent)

_____
Street or P.O. Box City County State Zip Code

(7) **List addresses last 24 months** (two years):

Address City State Zip From (date) to (date)

Address City State Zip From (date) to (date)

Address City State Zip From (date) to (date)

(8) **Date of Birth** ___/___/___ Age_____ Place of Birth _____
Mo Day Year City and State

(9) **Sex:** ☐ M ☐ F

(10) **Ethnic Background** (Requested in compliance with federal guidelines.)(Check one)

☐ (1) White - Non-Hispanic origin ☐ (2) Black - Non-Hispanic origin ☐ (3) Hispanic
☐ (4) Asian or Pacific Islander ☐ (5) American Indian or Alaskan Native ☐ (6) Non-resident (International)

(11) **Are you a U.S. citizen?** ☐ Yes ☐ No
Permanent Resident Alien? Number _____ Place Obtained _____ Date _____
International Applicant?_____ Country of Citizenship _____ Visa Type _____

(12) **High School last attended:** _____
Name of School City County State

(13) **Did you graduate from high school:** ☐ Yes ☐ No Date of Graduation:_____
Month/Year

(14) **If you did not graduate from high school, have you successfully completed the GED?** ☐ Yes ☐ No Date GED received:_____
Month/Year

(15) **Have you attended any other college or university?** ☐ Yes ☐ No.
If yes, please complete the spaces that follow, listing the most recent college or university first. List all colleges attended.
NOTE: Official transcripts from all previous colleges attended are required.

Name of College/University	Location (City, State)	Dates Attended	Degree/Certificate Received
		to	
		to	
		to	

(16) **Are you eligible at this time to return to the college or university you most recently attended?** ☐ Yes ☐ No

(17) **Expected date of enrollment:** _____Year Semester: ☐ Fall ☐ Midwinter ☐ Spring ☐ SSI ☐ SSII

Odessa College does not discriminate on the basis of sex, race, color, national origin, religion, disability or age.

I certify that all answers given are complete and accurate to the best of my knowledge, and upon admission I agree to abide by all rules and regulations of Odessa College.

_____
Signature of Applicant **Date**

Name: Last First Middle Maiden

DO NOT WRITE IN THIS SPACE

APPLICATION FOR ADMISSION

ODESSA COLLEGE
Admissions Office
201 W. University
Odessa, Texas 79764

OFFICE USE ONLY
_____ Res _____ Classification _____ VISA

PLEASE PRINT

(1) **Name** (full legal name): _____
Last First Middle Other Names

Other name(s) (cont'd) _____ (2) **Phone** (___) _____ (___) _____
Home Work

(3) **Social Security Number** |___|___|___| |___|___| |___|___|___|___| (4) **E-Mail Address** _____

(5) **Permanent Address** _____
Street or P.O. Box City County State Zip Code

How long have you lived at your permanent address? _____Years _____Months If less than 24 months, go to #6.

(6) **Local Address** (if different than permanent)

_____
Street or P.O. Box City County State Zip Code

(7) **List addresses last 24 months** (two years):

_____
Address City State Zip From (date) to (date)

_____
Address City State Zip From (date) to (date)

_____
Address City State Zip From (date) to (date)

(8) **Date of Birth** ___/___/___ Age_____ Place of Birth _____
Mo Day Year City and State

(9) **Sex:** ☐ M ☐ F

(10) **Ethnic Background** (Requested in compliance with federal guidelines.)(Check one)

☐ (1) White - Non-Hispanic origin ☐ (2) Black - Non-Hispanic origin ☐ (3) Hispanic
☐ (4) Asian or Pacific Islander ☐ (5) American Indian or Alaskan Native ☐ (6) Non-resident (International)

(11) **Are you a U.S. citizen?** ☐ Yes ☐ No
Permanent Resident Alien? Number _____ Place Obtained _____ Date _____
International Applicant?_____ Country of Citizenship _____ Visa Type _____

(12) **High School last attended:** _____
Name of School City County State

(13) **Did you graduate from high school:** ☐ Yes ☐ No Date of Graduation:_____
Month/Year

(14) **If you did not graduate from high school, have you successfully completed the GED?** ☐ Yes ☐ No Date GED received:_____
Month/Year

(15) **Have you attended any other college or university?** ☐ Yes ☐ No.
If yes, please complete the spaces that follow, listing the most recent college or university first. List all colleges attended.
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Name of College/University	Location (City, State)	Dates Attended	Degree/Certificate Received
		to	
		to	
		to	

(16) **Are you eligible at this time to return to the college or university you most recently attended?** ☐ Yes ☐ No

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I certify that all answers given are complete and accurate to the best of my knowledge, and upon admission I agree to abide by all rules and regulations of Odessa College.

_____
Signature of Applicant **Date**

DO NOT WRITE IN THIS SPACE
Name: _____ Last First Middle Maiden

CAT.REV . 2/96

TASP INFORMATION

1. All students must take the TASP test prior to completing nine hours of non-remedial coursework. Students may not enroll in non-remedial coursework beyond the ninth semester hour without having taken the TASP test. Failure to do so will result in complete withdrawal from school.

2. Students must have all TASP scores sent to Odessa College from National Evaluation Systems, Inc.

3. Students who fail any portion of the TASP test must enroll in and participate in a remedial class in at least one of the areas failed. Failure to do so will result in complete withdrawal from school.

4. Concurrent Enrollment/Early Admissions students who take the TASP test and fail any part of the test may not enroll in courses at Odessa College.

I understand the TASP state regulations regarding the credit hour limit and remediation required, if necessary, as indicated by my test scores.

I also understand the consequence of non-compliance with state TASP requirements.

AUTHORIZATION FOR RELEASE OF TASP TEST SCORES

I also authorize Odessa College to obtain my TASP Test scores from National Evaluation Systems, Inc. I hereby knowingly, freely, and voluntarily waive any right or cause of action arising as a result of the transmission of my test scores from which any liability may or could accrue to the Texas Higher Education Coordinating Board, the State of Texas, any other governmental body, institution of higher education, or corporate entity which was associated with the transmission of the requested information. I understand that, upon request, Odessa College will provide me with a copy of my TASP Test scores received from National Evaluation Systems, Inc. I further understand that I have the right to challenge the accuracy of the transmitted scores.

Signature: _____ Date: _____

Residency Issues

1. (a) **Are you a U.S. Citizen?** ❑ Yes ❑ No

   (b) If not a citizen, do you hold Permanent Residence status for the U.S.?

   ❑ Yes ❑ No

   If yes, date permanent resident card issued: _____

   Number: _____

2. **Is Texas your state of legal residence?**

   ❑ Yes ❑ No

   (IF NO, GO TO NO. 6)

3. **Upon whom are you basing your claim of residence status?** (one only)

   ❑ Self (If checked, go to #4 below)

   ❑ Parent (If checked, go to #5 below)

   ❑ Legal Guardian (court ordered papers must be provided)

   ❑ Active duty military based in Texas

   ❑ Dependent of active duty service member based in Texas

4. **If your claim of residence status is based upon self, answer the following questions:**

   (a) How long have you resided in Texas? _____Years and _____Months

   (b) Previous state or country of residence: _____

   (c) If you came here within the past 5 years, why did you move to Texas?

   ❑ Education ❑ Employment ❑ Other:_____

   _____

5. **If your claim for residence status is based upon parent or legal guardian, please answer the following questions:**

   (a) Name of person upon whom claim is based: _____

   (b) Relationship to self: ❑ parent ❑ legal guardian

   (c) How long has this person resided in Texas?_____Years and _____Months

   (d) Previous state or country of residence: _____

   (e) If this person came here within the past 5 years, why did this person move to Texas?

   ❑ Education ❑ Employment ❑ Other:_____

   _____

   (f) Is this person a U.S. citizen? ❑ Yes ❑ No

   (g) Has parent or legal guardian claimed you as a dependent for U.S. federal income tax purposes for the tax year preceding your registration?

   ❑ Yes ❑ No

   (h) Will this person claim you for the current tax year?

   ❑ Yes ❑ No

6. Oath of Residency

I understand that information submitted herein will be relied upon by college/university officials to determine my status for admission and residency eligibility. I authorize the college/university to verify the information I have provided. I agree to notify the proper officials of the institution of any changes in the information provided. I certify that the information on this application is complete and correct and understand that the submission of false information is grounds for rejection of my application, withdrawal of any offer of acceptance, cancellation of enrollment, or appropriate disciplinary action.

NOTE: If you have attended school or resided out of state, additional proof of residency may be required. Military personnel/dependents must submit a copy of ID or dependent's card and proof of military assignment in Texas at each enrollment. Permanent resident aliens and foreign students must submit copies of permits and/or visas.

_____ _____

Signature Date

NOTE: In order to change your residency classification you must submit a completed Application for Residency Reclassification, including all documentation, prior to the official census day of the relevant semester to the Registrar's office.

FOR OFFICE USE

Remarks _____

_____

_____

Approved Texas resident ❑ Yes ❑ No

Verified by _____

Majorie

ersity
exas 79764
STAGE GUARANTEED

1997