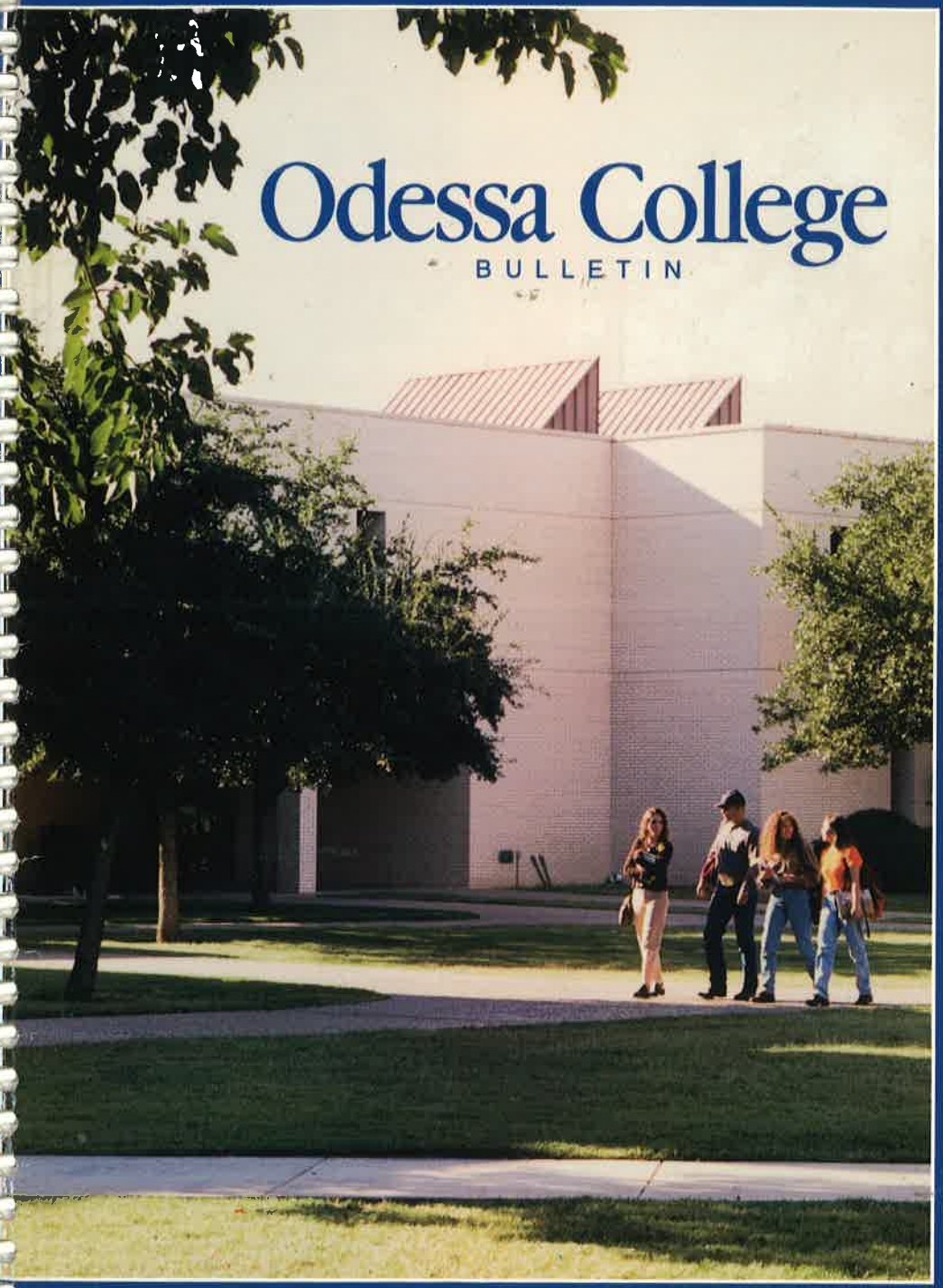
Odessa College

BULLETIN



1998-1999 Catalog of Courses

contents

General Information

Printed in Canada

1998-99 ODESSA

1998

May

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SUMMER 1998

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

Summer I

For Advance Registration dates, consult current class schedule.

Registration ..... May 20 & 21 (Wed & Thurs)
Holiday (Memorial Day) ..... May 25 (Mon)
Classes Begin ..... May 26 (Tues)
Late Registration/Schedule Changes ..... May 26 (Tues)
Last Day to Drop With a "W" ..... June 24 (Wed)
Last Class Day ..... July 1 (Wed)
Final Exams, End of Term ..... July 2 (Thurs)

Summer II

For Advance Registration dates, consult current class schedule.

Registration ..... July 6 (Mon)
Classes Begin ..... July 7 (Tues)
Late Registration/Schedule Changes ..... July 7 (Tues)
Last Day to Drop or Withdraw With a "W" ..... Aug 4 (Tues)
Last Class Day ..... Aug 11 (Tues)
Final Exams, End of Term ..... Aug 12 (Wed)

FALL 1998

For Advance Registration dates, consult current class schedule.

Nine Month Faculty Return ..... Aug 24 (Mon)
Registration ..... Aug 24-26 (Mon-Wed)
(M-Z) ..... Aug 24 (Mon)
(A-L) ..... Aug 25 (Tues)
(All) ..... Aug 26 (Wed)
Classes Begin at 5 p.m. ..... Aug 26 (Wed)
Late Registration/Schedule Changes ..... Aug 27-Sept 8 (Mon-Tues)
Last Day to Register for a Full Load ..... Sept 4 (Fri)
Late Register for No More Than 2 Classes ..... Sept 8 (Tues)
Holiday (Labor Day) ..... Sept 7 (Mon)
Twelfth Class Day ..... Sept 11 (Fri)
Deadline for Fall Degree Application ..... Sept 25 (Fri)
Staff Development (Offices Closed/No Classes) ..... Oct 16 (Fri)
Last Day to Drop or Withdraw with a "W" ..... Nov 13 (Fri)
Thanksgiving Holiday ..... Nov 25-28 (Wed-Sat)
Last Class Day ..... Dec 11 (Fri)
Final Exams ..... Dec 14-17 (Mon-Thurs)
Fall Graduation ..... Dec 17 (Thurs)
End of Semester ..... Dec 18 (Fri)
College Offices Closed ..... Dec 19-Jan 2 (Sat-Sat)

WEEKEND COLLEGE FALL 1998

Weekend College students may also register on any of the regular registration days for the fall semester.

Session A & B Registration
8:30 a.m.-6 p.m. ..... Aug 27 (Thurs)
8:30 a.m.-2 p.m. ..... Aug 28 (Fri)
Session A Classes Begin ..... Aug 29 (Sat)
Session B Registration
8:30 a.m.-6 p.m. ..... Nov 3 & 4 (Tues & Wed)
8:30 a.m.-2 p.m. ..... Nov 5 (Thurs)
Session B Classes Begin ..... Nov 6 (Fri)
Session A Final Exams, End of Term ..... Oct 10 (Sat)
Session B Final Exams, End of Term ..... Dec 12 (Sat)

COLLEGE CALENDAR

MIDWINTER 1998-99

For Advance Registration dates, consult current class schedule.

Registration 8-10 a.m. ..... Dec 28 (Mon)
First Class Day (Classes begin at 1 p.m.) ..... Dec 28 (Mon)
Holiday (New Year's Day) ..... Jan 1 (Fri)
Last Day to Drop or Withdraw With a "W" ..... Jan 5 (Tues)
Final Exams, End of Term ..... Jan 11 (Mon)

SPRING 1999

For Advance Registration dates, consult current class schedule.

Offices Open/12-Month Employees Return ..... Jan 4 (Mon)
Nine-Month Faculty Return ..... Jan 11 (Mon)
Registration ..... Jan 12-14 (Tues-Thurs)
(A-L) ..... Jan 12 (Tues)
(M-Z) ..... Jan 13 (Wed)
(All) ..... Jan 14 (Thurs)
Holiday (Martin Luther King Day) ..... Jan 18 (Mon)
Classes Begin ..... Jan 19 (Tues)
Late Registration/Schedule Changes ..... Jan 19-25 (Tues-Mon)
Last Day to Register for a Full Load ..... Jan 22 (Fri)
Late Register for No More Than 2 Classes ..... Jan 25 (Mon)
Deadline for Spring Degree Application ..... Feb 19 (Fri)
Spring Break ..... Mar 8-12 (Mon-Fri)
Holiday (Good Friday) ..... Apr 2 (Fri)
Last Day to Drop or Withdraw With a "W" ..... Apr 15 (Thurs)
Last Class Day ..... May 7 (Fri)
Final Exams ..... May 10-13 (Mon-Thurs)
Graduation Day ..... May 14 (Fri)

SUMMER 1999

Summer I

For Advance Registration dates, consult current class schedule.

Registration ..... May 25-27 (Tues-Thurs)
Holiday (Memorial Day) ..... May 31 (Mon)
Classes Begin ..... June 1 (Tues)
Late Registration ..... June 1 & 2 (Tues & Wed)
Last Day for Schedule Changes ..... June 1 & 2 (Tues & Wed)
Last Day to Drop With a "W" ..... June 23 (Wed)
Last Class Day ..... June 30 (Wed)
Final Exams, End of Term ..... July 1 (Thurs)

Summer II

For Advance Registration dates, consult current class schedule.

Registration ..... June 29 & 30 (Tues & Wed)
Classes Begin ..... July 5 (Mon)
Late Registration ..... July 5 & 6 (Mon & Tues)
Last Day for Schedule Changes ..... July 5 & 6 (Mon & Tues)
Last Day to Drop or Withdraw With a "W" ..... July 27 (Tues)
Last Class Day ..... Aug 3 (Tues)
Final Exams, End of Term ..... Aug 4 (Wed)

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Campus Directory

Hours are subject to change. Hours vary during registration, special sessions and school holidays.
** These offices close during the lunch hour.*

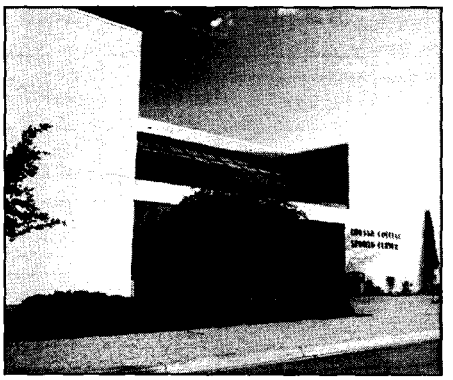
Office	Phone	Location	Regular Hours	Summer Hours
Admissions Office	335-6432	SUB 107	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Adult Basic Education (GED, ESOL classes)	332-9477	Noel Center 619 N. Grant	M-Th 8 a.m.-9 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.- 9 p.m. F 7:30 a.m.-5 p.m.
Bookstore	335-6655	SUB 102	M &Th 7:45 a.m.-5 p.m. T&W 7:45 a.m.-7 p.m. F 7:45 a.m.-3 p.m.	M-Th 7:30 a.m.-6 p.m.
Business Incubator	333-7409	Noel Center 619 N. Grant	M-F 8 a.m.-5 p.m.	M-F 8 a.m.-5 p.m.
Business Office (tuition, fees, IDs, parking stickers)	335-6419	ADM 101	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Cafeteria	335-6435	SUB 103	M-F 7:30 a.m.-7 p.m.	M-Th 7:15 a.m.-1:30 p.m.
Campus Police	335-6666 528-1974 (after hours)	GYM 107	M-F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Career Services	335-6890	SUB 205	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Children's Center	335-6480	SH 121	M-F 7:30 a.m.-5:30 p.m.	M-F 7:30 a.m.-5:30 p.m.
Computer Lab	335-6612	LRC 301-303	M-Th 8 a.m.-10 p.m. F 8 a.m.-5 p.m.,Sun 2-5 p.m.	Call for hours
Continuing Education	335-6580	DH 101	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Continuing Education Drive-Thru Booth	335-6580	Parking Lot	M-Th 8:30 a.m.-7 p.m. F 8:30 a.m.-4 p.m.	M-Th 8 a.m.-7 p.m.
Counseling Center	335-6433	SUB 204	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Dean of Arts, Humanities & Distance Education	335-6412	CT 100	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Dean of Learning Resources & Developmental Education	335-6611	LRC 119	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Dean of Science & Health	335-6446	CT 100	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Dean of Technical Studies	335-6409	ET 152	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Director of Intercollegiate Athletics	335-6567	SC 213A	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*

Hours are subject to change. Hours vary during registration, special sessions and school holidays.
** These offices close during the lunch hour.*

Office	Phone	Location	Regular Hours	Summer Hours
Executive Vice President for Instruction	335-6413	ADM 202	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
General Information	335-6400	ADM	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Learning Resources Center	335-6639	LRC	M-Th 7:45 a.m.-10 p.m. F 7:45 a.m.-5 p.m. Sun 2-5 p.m.	M-Th 7:30 a.m.-9 p.m.
Media Relations and Publications (catalogs, schedules)	335-6416	ADM 211	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Off-Campus Programs	335-6661	CT 122	M-F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
President's Office	335-6410	ADM 201	M-F 8 a.m.- 5 p.m.*	M-Th 7:30 a.m.- 5:30 p.m.*
Registrar	335-6404	SUB 202	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Special Projects	335-6578	SUB 204	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Sports Center & Community Recreation	335-6348	Sports Center	M-Th 6 a.m.-9 p.m. F 6 a.m.-7 p.m. Sat 9 a.m.-1 p.m.	M-Th 6 a.m.-9 p.m. F 6 a.m.-7 p.m. Sat 9 a.m.-1 p.m.
Student Activities	335-6403	Student Activity Center-Travis Hall	M-Th 8 a.m.-8 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Student Financial Services (loans, grants, scholarships, jobs for students, veterans)	335-6429	SUB 203	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Student Information Center	335-6432	SUB 107	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Telecourses	335-6412	CT 100B	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Testing Center	335-6620	GYM 200	M-Th 8 a.m.-6 p.m. F 8 a.m.-5 p.m.	M-Th 7:30 a.m.-5:30 p.m.
Tutoring Center	335-6612	LRC 200A	M-Th 8 a.m.-8 p.m. F 8 a.m.-5 p.m.	Call for hours
Upward Bound	335-6311	SUB 220	M-F 8 a.m.-5 p.m.* Sat 10 a.m.-3 p.m.	M-Th 7:30a.m.-5:30 p.m.* Sun-Th 6-week residential program
Vice President for Business Affairs	335-6415	ADM 203	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*
Vice President for Student Life (housing, insurance)	335-6684	ADM 212	M-F 8 a.m.-5 p.m.*	M-Th 7:30 a.m.-5:30 p.m.*

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 celebrated 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 52 years. Approximately 5,000 students are enrolled in university-parallel and occupational/technical credit courses. During a year, almost 11,000 individuals also enroll in one or more Adult Basic Education, Continuing Education or Community Recreation 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 will assist the student to advance as far along the learning spectrum as the student desires.

MISSION AND PURPOSE

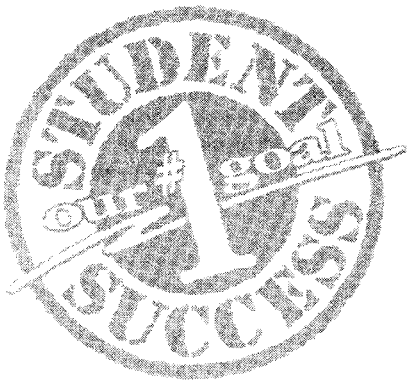
Odessa College is a comprehensive community college. Our mission as trustees, administrators, faculty, and staff at Odessa College is to provide the finest educational opportunities possible for all residents of our fourteen-county service area who have the desire and ability to learn.

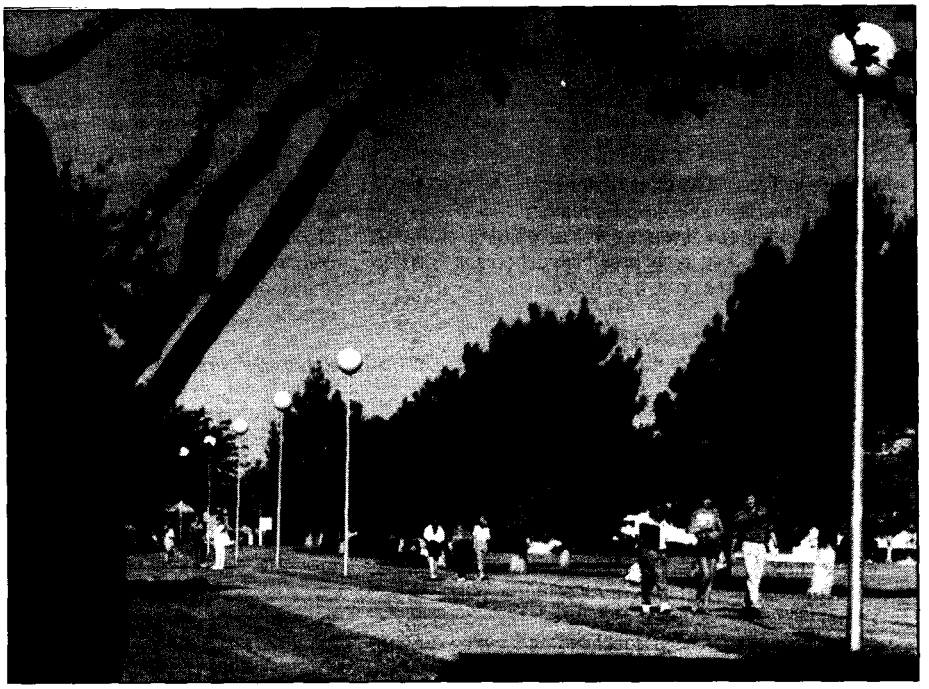
In accordance with our mission, OC's educational programs and services are designed to help people achieve their individual potential, to enrich their lives, and to become responsible and productive members of society. Thus, Odessa College exists for the following purposes:

- 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.





City of Odessa

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 University Health Sciences Center is adjacent to Medical Center Hospital, providing additional health opportunities.

Odessa boasts a daily newspaper, five television stations, 20 radio stations and more than 150 churches. 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.

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, OC will admit as students any persons who can benefit from the instructional programs offered. In addition, OC 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 OC Human Resources Office, or to the Assistant Secretary for Civil Rights at the Department of Education, Washington, D.C. 20202.

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 1996
Board of Vocational Nurse Examiners for the State of Texas	1996
Commission on Accreditation of Allied Health Education Programs with recommendation of the Accreditation Review Committee for Respiratory Therapy Education	June 1995
Commission in Accreditation of Allied Health Education Programs with recommendation of the Accreditation Review Committee for Surgical Technology Education	October 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	1997
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

School Year and Learning Options

SCHOOL YEAR

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. Formal winter graduation ceremonies are held at the end of the fall semester.

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 OC Counseling Center.

Midwinter Session

OC 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, three or four-semester hour course during this special session.

Weekend College

In the Weekend College, all courses parallel those offered in the regular term except that they are compressed into a shorter time span. Full academic recognition is given these courses, and the time spent and the credit earned is equivalent to that of a regular session.

LEARNING OPTIONS

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.

Distance Education

Odessa College offers an extensive distance learning program. The college offers traditional instruction at numerous off-campus sites. In addition, instruction is offered using various distance learning technologies. These include an interactive, two-way audio-video network, telecourse instruction broadcast over the college licensed PBS station, KOCV-TV, computer modem and the Internet.

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 OC. 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.

OC also offers classes at extension sites located in Andrews, Crane, Kermit, Monahans, Pecos, Seminole, Wink, McCamey, Imperial and other sites, as well as at Odessa High School, Permian High School and the Ector County Independent School District Career Center.

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

Interactive Two-Way Audio-Video Network (OC Net)

Classes are offered to Pecos, Wink and McCamey through a two-way compressed video system which allows students to see, hear and interact with their instructor via a large TV screen. Students use individual microphones in the classroom to talk with the instructor. Evening extension, dual credit and continuing education

courses are offered via the network. Interactive classrooms are located in the high schools at Pecos, Wink and McCamey. Students may register for these classes on the OC campus during registration or at the off-campus sites during extension registration. Local newspapers publish registration dates, times, locations and lists of course offerings.

Modem/Internet Courses

Odessa College offers classes via the Internet and computer modem.

Students may take computer modem courses by using a computer modem to dial into the college's bulletin board system, the Flatlander. Students also may access the bulletin board via the Internet. Communication between teacher and student is done on the computer via electronic mail (e-mail), and students seldom meet face-to-face with their instructor except for orientation, depending on the instructor's syllabus. Any student registering for this type of course must own or have access to a computer and a modem.

Anyone who has a computer with access to the Internet and the technology to access the World Wide Web may take Internet courses.

Internet and computer modem courses may be useful for students who are distant from campus, have work schedules that conflict with class schedules, or for other reasons are unable to come regularly to campus. Modem-access and Internet courses are convenient and offer flexibility for students; however, these classes require more self-discipline than traditional classes because they do not physically meet on a regular basis.

Students may register for these online courses during all regularly scheduled registration periods both on campus and at all off-campus sites.

TELECOURSES

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.

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.

Technical Programs

Odessa College offers a wide variety of technical programs designed to enable a student to enter his or her 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.

OC 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 OC, 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.

Continuing Education

Odessa College offers a wide variety of 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 licensure requirements.

Non-credit courses, seminars, teleconferences and workshops offer a wide range of activities intended to accommodate individuals of all ages. During the year, OC will plan activities 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 benefit from these courses may enroll. Extension classes in area cities also are offered. Any student

enrolled for non-credit in a 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.

BUSINESS INCUBATOR

The Odessa College Business Incubator is located at Noel Center, 619 N. Grant Ave., in downtown Odessa. 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.

Those interested in learning more about the OC Business Incubator are invited to call the incubator manager or come to Noel Center 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 3,000 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 and English for Speakers of Other Languages 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.

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. Adult Basic Education class schedules also are included in the Continuing Education Schedule.

Community Recreation

Classes offered through the college's Community Recreation program allow people of all ages to learn or improve in a number of lifetime activities. Classes include step and water aerobics, golf, gymnastics, racquetball, scuba, swimming, lifeguard training, country and western dance, and hunter safety.

Community residents also can choose from several types of memberships to the OC Sports Center, one of the finest recreational facilities in the Permian Basin. The facility features a Fitness Center/Super Circuit, heated indoor swimming pool, indoor track, weightrooms and racquetball courts. To enroll for a course or purchase a membership, come to the Sports Center. You also may register at the Drive-Thru Booth located to the east of the Administrative Wing of the Student Union Building.

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 be potential first generation college students and meet income guidelines. Eligible students are selected from 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.

Admissions and Registration

ADMISSION REQUIREMENTS AND PROCEDURES

Odessa College has an open door admissions policy. Entrance examinations are not required; however, placement tests may be required. All applications, transcripts and other documentation should be completed and submitted a minimum of two weeks prior to the announced date of advance registration.

Admission to the college does not automatically admit students to all programs. Information regarding admission to or continuation in specific programs may be obtained from a counselor or department chair.

Requirements for Admission to the College

Admission to credit courses is based on a completed application form and criteria in one of the following categories:

HIGH SCHOOL GRADUATES

Submit an official high school transcript to the Admissions Office. This is required for all students who have never attended a post-secondary institution. Graduates of non-accredited high schools must present an official record of the high school work completed, the date of course completion, and must agree to limitations or conditions of admission established by the college.

GENERAL EDUCATIONAL DEVELOPMENT (GED) TEST RECIPIENTS

Submit an official report of test results to the Admissions Office.

TRANSFER STUDENTS

Students who have attended another college or university are eligible for admission. Submit to the Admissions Office an official transcript from all colleges or universities previously attended and a report of your Texas Academic Skills Program (TASP) Test scores, if required, prior to enrollment. If, because of time constraints, a student cannot submit a complete transcript prior to admission and enrollment, the student may submit an incomplete transcript or current grade report until an official transcript can be requested by the student.

STUDENTS ADMITTED BY INDIVIDUAL APPROVAL

Individuals who are 18 years of age or older and who do not qualify for admission under one of the other admission categories may be admitted on individual approval by the director of admissions if it is determined the person can benefit from study at the college.

RETURNING STUDENTS

Students in good standing who have attended OC but have not taken classes within the last calendar year must complete a reapplication for admission form in the Registrar's Office.

INTERNATIONAL STUDENTS (F-1 VISA)

Any individual from outside the United States may attend OC by meeting regular admissions standards, special admission requirements and deadlines for international students. In addition, international students must agree to comply with all international student regulations in order to remain enrolled. In order to be admitted, such students must submit:

a. A $50 (U.S. currency) non-refundable application fee.

b. A deposit of $1,500 (U.S. currency) (approximately equivalent to tuition and fees for two semesters) to be held in escrow. The deposit will be returned to the student during his or her last semester at OC.

c. An official transcript, in English, of all previous academic work and an educational summary work sheet of all previous education.

d. An official score report on the Test of English as a Foreign Language (TOEFL) with a minimum score of 525.

e. A physician's statement showing proof of immunization against diphtheria and tetanus within the last 10 years, a negative result on a tuberculosis test and evidence of good physical health.

f. A statement of financial ability to cover educational and living expenses for the expected time of enrollment. Students should expect to pay a minimum of $8,000 per calendar year for these expenses excluding the cost of transportation. International students are not eligible for any financial aid through the Odessa College Student Financial Services Office. (Please note: On campus housing facilities are not available.)

g. Proof of medical insurance prior to admission. Verification of medical insurance is required for each subsequent semester of enrollment.

Dual Credit and Early Admissions

The Dual Credit Program allows high school junior and senior students the opportunity to earn college credit through OC. High school seniors also have the opportunity to earn college credits at OC through the Early Admissions Program.

To be eligible for the Dual Credit Program, students must have an overall grade point average of 3.0 in the semester immediately preceding enrollment in a college course or have scored above the 90th percentile on the achievement subtest in the content area for which the student wishes to enroll. The high school principal or the principal's designee must make any exceptions to this requirement.

High school students should contact their high school counselor who will assist in course selection and with the Dual Credit schedule. A student may take a maximum of two college classes in any semester.

The Early Admissions Program allows high school seniors the opportunity to earn college credit while completing requirements for high school graduation. Credits earned through the Early Admissions Program count only toward college credit.

To be eligible for the Early Admissions Program, high school seniors must be within four units or 12 quarter credits of graduation and be recommended by their high school principal or the principal's designee. Students may enroll for a maximum of two classes each semester under the Early Admissions Program.

High school seniors may participate in both the Dual Credit Program and the Early Admissions Program at the same time. However, students may take a maximum of two classes each semester whether they participate in one or both programs.

All Dual Credit Program and Early Admissions Program students must meet admissions requirements set forth for all OC students. Dual Credit students must also adhere to special policies regarding Dual Credit classes. All OC admissions, Dual Credit and Early Admission Program forms may be obtained from the high school counselor.

TASP—Texas Academic Skills Program Requirements

All students who enter a public institution of higher education in the fall of 1989 and thereafter must be tested for reading, writing and mathematics skills. This test is required prior to enrollment in college level classes with the exception of certain certificate programs.

Performance on the test will not be used as a condition of admission. The test fee will be paid by the student.

Some students may be exempt from taking the TASP. Students may be exempt based on high TAAS, ACT or SAT scores. A list of exemptions for TASP can be found in the TASP registration bulletin available in the OC Testing Center and the OC Student Development (Counseling) Center.

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 be 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 younger than 18, their parents or legal guardian 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 younger than 18, their parents or legal guardian 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 younger than 18, their family's residence for the prior 12 months determines whether they are out-of-state residents.
4. **Foreign students:** Foreign students are considered out-of-state residents.

WAIVER OF RESIDENCE REQUIREMENTS:

OC 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 OC according to guidelines pursuant to Title 2, Texas Education Code and Rules and Regulations for determining residence status as established by the Texas Higher Education Coordinating Board.

Copies of these guidelines are available for inspection in the Admissions 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 OC or until they petition for and receive approval for change of status. Students who have been classified as non-residents may petition for a change in their residency status after residing in Texas for 12 consecutive months.

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

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 the 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 OC 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.

SPECIAL ADMISSIONS REQUIREMENTS FOR SELECTED PROGRAMS

Admission to OC 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 admission requirements:

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

TECH-PREP STUDENTS

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.

ORIENTATION REQUIREMENT

ORIE 1100, Orientation to Odessa College, is required for first-time students who are taking six or more credit hours. Exempted from this requirement are Dual Credit and Early Admissions students and certain other students under special conditions. All other first-time students should enroll in ORIE 1100 during their first semester at OC. The course covers policies, rules and regulations and academic skills. Students receive one credit that counts toward total enrollment hours for the semester. The credit does not transfer or count towards graduation.

OC EXPERIENCE

All students new to Odessa College are encouraged to participate in OC Experience, a program designed with the new student in mind. Participants will have an opportunity to acquaint themselves with the campus, as well as services available to students once classes begin. OC Experience activities include placement testing (if needed), information sessions, a campus tour, academic advisement and the opportunity to register early. To sign up for OC Experience or for more information, please contact the Student Information Center.

MORE INFORMATION

For more information about Odessa College, contact the Student Information Center, Room 107 of the Student Union Building. Applications and transcripts should be submitted to the Director of Admissions, Odessa College, 201 West University, Odessa, Texas 79764.

REGISTRATION PROCESS

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 prerequisites 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 OC.

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 is 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 credit 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 OC 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 of making up any work missed prior to their first time to attend. 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 credit 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. Mail-in registration and telephone registration with a credit card also are available.

OC also offers drive-up registration for non-credit continuing education classes. Please stop at the Drive-thru Booth at the end of the main drive entrance off West University Boulevard.

Sports activity and recreation classes are offered through Community Recreation at the 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.

Identification Cards

Odessa College requires photo identification cards for all on-campus, credit-hour students. ID cards are used for admission to Student Activities events, athletic events and fine arts presentations, for 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, in the Administrative Wing 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 permit during registration or at other times during the year. Payments are made at the Business Office during regular office hours. 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 parked on campus without a permit displayed will be ticketed. Failure to pay fines assessed by tickets will result in holds placed on registration and transcripts.

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. The Registrar's Office processes changes.

Directory Information

OC 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 each semester with the Registrar's Office.

Money Matters

TUITION AND FEES

Please note that *the following tables reflect the 1997-98 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 22, 23 for additional charges.

IN-DISTRICT TEXAS RESIDENT:

Semester Hours	Tuition	Reg Fee Non-Refundable	Building Use Fee	Activity Fee	ID Fee Non-Refundable	Computer Fee	**TOTAL BEFORE PARKING & OTHER FEES
1	42.00	15.00	12.00	10.00	1.00	1.00	81.00
2	42.00	15.00	24.00	10.00	1.00	2.00	94.00
3	42.00	15.00	36.00	10.00	1.00	3.00	107.00
4	56.00	15.00	48.00	10.00	1.00	4.00	134.00
5	70.00	15.00	60.00	10.00	1.00	5.00	161.00
6	84.00	15.00	72.00	10.00	1.00	6.00	188.00
7	98.00	15.00	84.00	11.00	1.00	7.00	216.00
8	112.00	15.00	96.00	12.00	1.00	8.00	244.00
9	126.00	15.00	108.00	13.00	1.00	9.00	272.00
10	140.00	15.00	120.00	14.00	1.00	10.00	300.00
11	154.00	15.00	132.00	15.00	1.00	11.00	328.00
12	168.00	15.00	144.00	16.00	1.00	12.00	356.00
13	182.00	15.00	156.00	17.00	1.00	13.00	384.00
14	196.00	15.00	162.00	18.00	1.00	14.00	406.00
15	210.00	15.00	168.00	19.00	1.00	15.00	428.00
16	224.00	15.00	174.00	20.00	1.00	16.00	450.00
17	238.00	15.00	180.00	21.00	1.00	17.00	472.00
18	252.00	15.00	186.00	22.00	1.00	18.00	494.00
19	266.00	15.00	192.00	23.00	1.00	19.00	516.00
20	280.00	15.00	198.00	24.00	1.00	20.00	538.00
21	294.00	15.00	204.00	25.00	1.00	21.00	560.00
22	308.00	15.00	210.00	26.00	1.00	22.00	582.00
23	322.00	15.00	216.00	27.00	1.00	23.00	604.00
24	336.00	15.00	222.00	28.00	1.00	24.00	626.00
25	350.00	15.00	228.00	29.00	1.00	25.00	648.00

OUT-OF-DISTRICT TEXAS RESIDENT:

Semester Hours	Tuition	Reg Fee Non-Refundable	Building Use Fee	Activity Fee	ID Fee Non-Refundable	Computer Fee	**TOTAL BEFORE PARKING & OTHER FEES
1	57.00	15.00	12.00	10.00	1.00	1.00	96.00
2	57.00	15.00	24.00	10.00	1.00	2.00	109.00
3	57.00	15.00	36.00	10.00	1.00	3.00	122.00
4	76.00	15.00	48.00	10.00	1.00	4.00	154.00
5	95.00	15.00	60.00	10.00	1.00	5.00	186.00
6	114.00	15.00	72.00	10.00	1.00	6.00	218.00
7	133.00	15.00	84.00	11.00	1.00	7.00	251.00
8	152.00	15.00	96.00	12.00	1.00	8.00	284.00
9	171.00	15.00	108.00	13.00	1.00	9.00	317.00
10	190.00	15.00	120.00	14.00	1.00	10.00	350.00
11	209.00	15.00	132.00	15.00	1.00	11.00	383.00
12	228.00	15.00	144.00	16.00	1.00	12.00	416.00
13	247.00	15.00	156.00	17.00	1.00	13.00	449.00
14	266.00	15.00	162.00	18.00	1.00	14.00	476.00
15	285.00	15.00	168.00	19.00	1.00	15.00	503.00
16	304.00	15.00	174.00	20.00	1.00	16.00	530.00
17	323.00	15.00	180.00	21.00	1.00	17.00	557.00
18	342.00	15.00	186.00	22.00	1.00	18.00	584.00
19	361.00	15.00	192.00	23.00	1.00	19.00	611.00
20	380.00	15.00	198.00	24.00	1.00	20.00	638.00
21	399.00	15.00	204.00	25.00	1.00	21.00	665.00
22	418.00	15.00	210.00	26.00	1.00	22.00	692.00
23	437.00	15.00	216.00	27.00	1.00	23.00	719.00
24	456.00	15.00	222.00	28.00	1.00	24.00	746.00
25	475.00	15.00	228.00	29.00	1.00	25.00	773.00

OUT-OF-STATE OR FOREIGN:

Semester Hours	Tuition	Reg Fee Non-Refundable	Building Use Fee	Activity Fee	ID Fee Non-Refundable	Computer Fee	**TOTAL BEFORE PARKING & OTHER FEES
1	207.00	15.00	12.00	10.00	1.00	1.00	246.00
2	207.00	15.00	24.00	10.00	1.00	2.00	259.00
3	207.00	15.00	36.00	10.00	1.00	3.00	272.00
4	226.00	15.00	48.00	10.00	1.00	4.00	304.00
5	245.00	15.00	60.00	10.00	1.00	5.00	336.00
6	264.00	15.00	72.00	10.00	1.00	6.00	368.00
7	283.00	15.00	84.00	11.00	1.00	7.00	401.00
8	302.00	15.00	96.00	12.00	1.00	8.00	434.00
9	321.00	15.00	108.00	13.00	1.00	9.00	467.00
10	340.00	15.00	120.00	14.00	1.00	10.00	500.00
11	359.00	15.00	132.00	15.00	1.00	11.00	533.00
12	378.00	15.00	144.00	16.00	1.00	12.00	566.00
13	397.00	15.00	156.00	17.00	1.00	13.00	599.00
14	416.00	15.00	162.00	18.00	1.00	14.00	626.00
15	435.00	15.00	168.00	19.00	1.00	15.00	653.00
16	454.00	15.00	174.00	20.00	1.00	16.00	680.00
17	473.00	15.00	180.00	21.00	1.00	17.00	707.00
18	492.00	15.00	186.00	22.00	1.00	18.00	734.00
19	511.00	15.00	192.00	23.00	1.00	19.00	761.00
20	530.00	15.00	198.00	24.00	1.00	20.00	788.00
21	549.00	15.00	204.00	25.00	1.00	21.00	815.00
22	568.00	15.00	210.00	26.00	1.00	22.00	842.00
23	587.00	15.00	216.00	27.00	1.00	23.00	869.00
24	606.00	15.00	222.00	28.00	1.00	24.00	896.00
25	625.00	15.00	228.00	29.00	1.00	25.00	923.00

LAB FEES

Agriculture (AGRI 1309)	15.00
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, 2306, 2470)	15.00
Biology (BIOL 2470)	10.00
Building Trades (Except BLDG 2377)	24.00
Business Computer Info Systems (Except 1200, 2377)	15.00
Chemistry (1105,1111,1112, 2101, 2123, 2125)	15.00
Child Development (CDEC1311,1318,1319,1356,1357,1358,1359,1413,2421)	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, 2210, 2211, 2212)	20.00
Culinary Arts (CULI 2215,2216,2217))	24.00
Diesel Mechanics (Except DESL 1377, 2377)	24.00
Drafting (Except DFTG 1405,1409,1452,2381)	5.00
Drafting (DFTG 1409, 1452)	24.00
Elect. & Electronics (Except ELEC 2205, 2302, 2305, 2377, 2414)	24.00
Elect. & Electronics (ELEC 2414)	15.00
Emergency Medical Technology (EMED 1501, 2601, 2801, 2802)	15.00
English (ENGL 0171, 0172, 0173, 0174 Word Processing)	5.00
English (ENGL 0370,1301, 1312, 2311 Word Processing)	10.00
Fire Technology (FIRE 1204, 1402, 1503)	24.00
Foreign Language (All 1411 and 1412 courses)	10.00
Geology (GEOL 1403, 1404)	15.00
Heating, Vent, Air Conditioning (Except HVAC 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
Machine Technology (Except MCHN 2381)	24.00
Maintenance Technology (Except MAIN 2377)	24.00
Mass Communication (COMM 1316, 1318, 1319)	10.00
Music, Class Instruction (MUSI 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177))	20.00
Nursing (Except NURS 1201, 1611, 1613, 2344)	15.00
Occupational Safety/Health Technology (OSHA 1310,1320,2395,2396)	10.00
Office Education (OFST Except 1200,1324, 1401, 1402, 1515, 2101, 2377, 2420)	10.00
Office Education (OFST 1200, 1401, 2101)	5.00
Petroleum Technology (PETR 1380)	15.00
Photography (Except PHOT 2370, 2377, 2390)	10.00
Photography (PHOT 2390)	15.00
Physical Education (Except PHED 1100, 1107, 1108, 1109, 1117, 1119, 1136, 1137, 1138, 1139, 1141, 1152, 1238, 1301, 1304, 1306, 1346, 2136, 2137, 2138, 2139, 2141, 2278, 2376)	5.00
Physical Education (PHED 1100, 1107, 1306)	10.00
Physical Education (PHED 1108, 1109, 1117, 1119, 1152)	24.00
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 1115, 1301, 1310, 1332, 1400, 1405, 2315, 2320, 2364)	15.00
Surgical Technology (SURG 1411)	15.00
Welding (Except WLDG 2381)	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, BIOL 2470, Marine Ecology, or PHED 1123, Skiing 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 1611	1	10.00	10.00
NURS 1613	2	10.00	20.00
NURS 1615	3	10.00	30.00
NURS 1615	1	24.00	24.00
NURS 1821	1	26.00	26.00
NURS 2808	1	26.00	26.00
RESP 1333	1	25.00	25.00
RESP 2362	1	60.00	60.00

MISCELLANEOUS FEES

Advanced Standing Examination 20.00
Diesel Technology (Uniform Fee—DESL 1501) 70.00
Diesel Technology (Uniform Cleaning Fee—DESL 1503, DESL 2510, DESL 2511) 16.00
Fire Academy (Equipment & Books, Estimated) 190.00
General Property Deposit (Refundable by request) 10.00
Late registration Fee 10.00
Law Enforcement Academy (Equipment and Books) 225.00
Law Enforcement/Criminal Justice-State Prison Guard Skills (CRIJ 1373) 44.00
Legal Assistant Access Fee (Except LEGL 2377) 15.00
LVN Nursing (Andrews & Monahans Equipment Fee-NURS 1611) 180.00
LVN, Nursing (Andrews & Monahans State License Fee/Review Course Fee-NURS 1615) 261.00
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 4.00
**Vehicle Registration, Summer I and II 1.00

**Student liability insurance or proof of comparable coverage is required for students enrolled in child development, clinical laboratory sciences, cosmetology, 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.*

Estimated Cost Per Semester

Students must purchase their own textbooks, workbooks and supplies such as paper and pencils. Some courses also require the purchase of special supplies.

Estimated In-District Student Expense

Semester Hours	**3**	**9**	**15**
Required Tuition and Fees	$107	$272	$428
Parking Fee (optional)	4	4	4
Property Deposit	10	10	10
Lab Fee (average $15 per course)	15	30	30
Books (based on $60 per book)	60	180	300
Total Per Semester	$196	$496	$772

Estimated Out-of-District Student Expense

(Non-Resident of the College District)

Semester Hours	**3**	**9**	**15**
Required Tuition and Fees	$122	$317	$503
Parking Fee (optional)	4	4	4
Property Deposit	10	10	10
Lab Fee (average $15 per course)	15	30	30
Books (based on $60 per book)	60	180	300
Total Per Semester	$211	$541	$847

PAYMENT AND REFUND POLICIES

Payment by check

Positive identification (driver license preferred) is required for any payment to OC. 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.

Installment Payments

Installment payment plans are offered for payment of tuition and fees. Students pay in three installments, the first a down payment of one-half of the tuition and fees plus $5 of a $15 processing fee. The balance is paid in two payments, each for one-fourth of the tuition and fees plus $5 for processing.

Schedule Change Fee

A schedule change fee of $5 will be charged for classes added during the first 12 class days of a regular semester or during the first four class days of a summer session except when the change is for the convenience of the college, a change in class time, a 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.

Returned Check Policy

All returned checks are collected through Checks Inc. A returned check fee of $27.06 is charged per check by Checks Inc. Returned checks should be paid within five days of the date notification is mailed to the student. Checks returned for tuition and fees may result in the student's automatic withdrawal from the college and all college records may be withheld. The student may re-enroll upon payment of all tuition and fees due. Odessa College reserves the right to require payment in cash from individuals with a history of returned checks.

Students attempting to drop classes by stopping payment of their check instead of initiating approved drop procedures through the Registrar's Office shall be subject to the normal returned check penalties.

Debts Owed the College

All forms of indebtedness to the college, including tuition, fees, fines, institutional loans, returned checks, property loss and property damage, must be paid before a student may re-enroll or have a transcript request honored. Failure to pay an outstanding account can result in the student being withdrawn from classes.

Dropping a Course or Withdrawing From College

A student wishing to drop a course or withdraw from college should obtain a drop or withdrawal form from the Registrar's Office. Students are encouraged to consult with instructors and must see a counselor prior to withdrawal.

The student must withdraw either in person or by written or faxed information to the Registar's Office. Students must drop a class or withdraw from college before the official withdrawal date stated in the class schedule.

No longer attending class does not automatically constitute withdrawal from that class, nor does a student's notification to an instructor that the student wishes to be dropped. Failure of a student to officially drop a class will result in a grade of "F."

Refund Policy

The refund policy for both complete withdrawals and dropped classes is as follows:

Refunds Before First Day of Classes

1. A 100% refund for complete withdrawals (less any non-refundable fees).
2. A 100% refund for dropped classes.

Refunds on/or After First Day of Classes

	For Dropped Classes	For Complete Withdrawals From College
Fall and Spring Semesters		
During the first 15 class days	100%	75%
During the 16th through 20th class days	25%	25%
After the 20th class day	None	None
Summer Semesters		
During the first five class days	100%	75%
During the sixth through seventh class days	25%	25%
After the seventh class day	None	None

Canceled Classes

If a class is canceled by the college, all tuition and fees for that course will be refunded.

Other Than Semester-Length Courses

Refund of tuition and fees will be calculated on varying scales, depending on the course length.

Method of Calculating Class Days

For purposes of the refund policy, a class day is defined as a day during which college classes are conducted. The count begins with the first day classes are held in the term and includes each consecutive day thereafter. The count in not just of days a particular class meets.

Refunds will be processed after the last class day to withdraw for each semester. Allow two to three weeks for receipt of refund check after the processing date. Odessa College reserves the right to deduct from the refund any outstanding financial obligations to the college.

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 OC Student Financial Services. 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.

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. These students 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 include a FAFSA and an institutional aid application because the FFELP is 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 primarily to independent 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. Dependent students may borrow an unsubsidized Stafford if their parents do qualify for a PLUS.

Short-term institutional loans are made by OC to assist students with registration costs. A student attempting to enroll at OC is eligible to apply if the student has at least a 2.00 GPA, is 18 years or older 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. Students repay these loans in three installments, the first a down payment of at least 10 percent, or a minimum of $25, plus $5 of a $15 processing fee. The balance is paid in two payments, each of which includes $5 for processing. 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 annually awards more than $150,000 in academic scholarships to recognize scholastic merit. Some scholarships have no residency requirements. Others are designated for individuals from Ector County and 14 other West Texas counties: Andrews, Brewster, Crane, Culberson, Gaines, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Upton, Winkler and Ward. These scholarships are awarded based on varying levels of academic achievement.

Please note: A list of scholarships, amounts of each, number awarded each year and requirements is available from OC Student Financial Services.

Scholarships awarded by Student Financial Services: June 15 is the deadline to apply for academic scholarships awarded by OC for the fall semester. These include the **M.L. Mangrum, Half Century, Leland Croft, L.M. Adair, Odessa College Academic, Parker Endowment, Property Deposit, Davidson, Mary and Travis Simpson, Slaton-Bassett, and Trigger Vance Phillips** scholarships. Students apply to the Student Financial Services Office.

Academic scholarship applicants must submit a completed scholarship application and high school and college transcripts to the Student Financial Services Office. Applications are ranked according to the students' grade point averages, with some consideration given to an essay and completed coursework. A committee appointed by the director of Student Financial Services selects academic scholarship recipients. The committee awards scholarships to the highest ranking students until funds are depleted. Students must reapply each academic year.

Departmental scholarships are offered each year through the art and music departments and are awarded based on performance, merit, skill and ability. Other departments that award scholarships are cosmetology, nursing, petroleum, photography and social sciences. 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 OC 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 3.0 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 available to students attending Odessa College. Many individuals and organizations cooperate with OC 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.

Tuition Tax Credits

Beginning January 1, 1998, taxpayers may be eligible to claim a Hope Scholarship Credit against their federal income taxes. The Hope

Scholarship Credit may be claimed for the qualified tuition and related expenses of each student in the taxpayer's family who is enrolled at least half-time in one of the first two years of college. You may claim 100 percent of the first $1,000 of the taxpayer's out-of-pocket expenses, plus 50 percent of the second $1,000 of the taxpayer's expenses. The amount a taxpayer may claim as a Hope Scholarship Credit may be reduced according to annual income. Please ask your tax advisor if you qualify for the credit.

The Lifetime Learning Credit will be available July 1, 1998, and is a credit against federal income taxes. The credit is equal to 20 percent of the taxpayer's first $5,000 of out-of-pocket expenses for qualified tuition and related expenses for all the students in the family.

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 because 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 previously, 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 OC 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 OC 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 to attend all classes in which they are enrolled. The college requires instructors to keep accurate student attendance records; therefore, any student who must be absent from class for any reason should immediately consult with his or her instructor regarding the absence.

Students should understand that being absent from class seriously jeopardizes the possibility of success in a course. Any student who misses as much as 20 percent of scheduled class time in any semester should review his or her standing in the class with the instructor and determine whether to continue in the class or withdraw. If a student decides to withdraw from a class, he or she must comply with the deadlines published in the college's calendar.

Students enrolled in developmental courses in English, mathematics and reading because of scores on the TASP test should understand that attendance in those classes is mandatory under state law. A student in a developmental course who exceeds the number of absences listed below will be withdrawn from all classes in which he or she is registered. The student will be withdrawn after:

- nine (9) absences in a class that meets three times per week,
- six (6) absences in a class that meets two times per week,
- three (3) absences in a class that meets one time per week, or
- failure to attend and achieve progress in an individualized course of study which is assigned in lieu of enrollment in a scheduled developmental class.

Withdrawal

So that all records are left in proper order, students who leave OC 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.

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 credit class schedule for the semester. A schedule change fee of $5 will be charged for all changes except those caused by the college or those in which a student is only adding hours to the existing schedule.

Advanced Standing and Credit by Examination

Odessa College is an open testing center for the 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 OC. 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 OC 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 who 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
F	Failure	0

The following grades are not used for GPA calculations:

Grade	Description
PA	Passing
I	Incomplete
P	In Progress
Z	No grade assessed; requires re-enrollment. Restricted to developmental courses.
N	Audit
W	Withdrawn
S	Advanced Standing (credit by examination)
T	Transfer credit

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. 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 OC 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 OC 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 OC 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 OC the next long semester.

Appeal of Scholastic Suspension

Students who are placed on scholastic suspension may appeal their status to the director of admissions. Extenuating circumstances may allow such students to enroll under special conditions. Students on scholastic suspension may contact the Admission Office for appeal procedures.

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 OC, 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 OC 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 OC 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, students requesting a 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 end of the long semester immediately following the one in which the grade was assigned automatically will be changed to a grade of "F" by the college. 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 OC 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. The evaluated courses will be used to complete graduation degree requirements. The courses are not 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, OC 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 OC that are numbered the same at many Texas public colleges and universities.

Courses taken at OC 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 OC 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 OC, 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 OC. 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 OC have been cleared.

If another Texas public institution of higher education does not accept lower division academic course credit earned by a student at OC, that institution is obligated by the Texas Higher Education Coordinating Board to give written notice to the student and OC 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

While Odessa College does not routinely give academic credit for military experience, individuals are encouraged to utilize the credit by examination option if appropriate. Skills acquired in the military may be demonstrated on a departmental exam and credit awarded on the student's OC transcript. OC does award credit for physical education activity courses when a DD-214 is properly submitted to the Registrar's Office.

Students who passed the CLEP examinations while in the military may have their results evaluated under OC guidelines for awarding CLEP credit. Credit will be awarded if the college's standard for accepting CLEP credit is met. If military or CLEP credit has been awarded on an official transcript from another institution accredited by the appropriate regional accrediting association, that credit will be evaluated in the same manner as any other transfer work.

Odessa College is a Servicemen's Opportunity College and participates in ConAp, a program that admits new soldiers to the college at the time of their enlistment in the U.S. Army, Army Reserve or Army National Guard.

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 prepare them 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 an OC counselor 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 $3 charge will be made for all copies. Transcripts become the property of OC 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 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 OC 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 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 OC 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 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 OC. 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 in effect when they first entered OC 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 the winter 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.

OC charges a $15 graduation fee. Students also pay fees for caps and gowns and invitations.

Second Degrees

Students who have earned a degree at Odessa College may apply for a second degree after all stated requirements for the second degree have been completed, including a minimum of 15 semester hours taken in residence at OC 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.

Instructional Support Services

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.

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 admissions 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.

Learning Assistance

Students who come to Odessa College with diagnosed conditions which may interfere with learning can receive special assistance. Accommodations for learning disabilities and/or ADD/ADHD may be provided when a student requests them. A Request for Accommodations form and guidelines for beginning the request process are available in the Counseling Center.

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 Office of 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.

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. OC 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.

Student Support Services

Student Support Services (SSS) is a federally-funded program which provides ongoing support for Odessa College students accepted in the SSS program. Students in the program benefit from a variety of intensive, one-on-one services and participate in various social and cultural special events. The major activities of the SSS project focus on providing counseling and academic support to participants to ensure their success in college and on providing opportunities for interaction with faculty, staff and other students to create a climate for educational success. Other activities include assessment of academic needs, personal success plans, instruction and tutoring, advising, counseling, mentoring, and continuous monitoring.

SSS participants must be either low-income, first generation college students, or disabled. Participants are selected based on information provided in a program application and are interviewed by SSS staff. Students interested in applying for the SSS program should contact the SSS office on the second floor of the Student Union Building.

Testing Center

The Testing Center, located in Room 200 of the Gymnasium, offers a variety of testing and assessment services designed to help students set and meet educational and career goals. Placement testing for students enrolling in English, math and/or biology is scheduled during registration periods and on a regular monthly basis. The Testing Center also schedules entrance examinations for specific programs such as nursing, surgical technology, physical therapy assistant and the law enforcement academy.

Ability, career, interest and interpersonal inventories are offered to students who are seeking increased self-awareness for career and educational decisions. A small fee is charged for these tests. The center is the testing site for telecourse students or those who are in special testing situations. Students who use the services of the Testing Center must provide picture identification.

OC is an approved testing site for standardized state and national exams such as TASP, ACT, SAT and GED, which are associated with college admissions and placement. Registration booklets and schedules of fees for these exams are available on campus or from local high school counselors. Students also may take CLEP exams through the OC Testing Center.

Learning Resources Center

The Murry H. Fly Learning Resources Center (LRC) supports the college's curriculum resulting in a primary emphasis on each student's individual study and research needs. The faculty and staff work with the LRC's Technical Services and Public Services Departments in choosing materials to support all college programs. More than 81,991 books, 395 current periodicals, eight daily, weekly and national newspapers, and 6,828 media holdings are available to enhance the educational process.

Students can take advantage of research services by attending orientations or instructional class tours. Emphasis is placed on identification of sources, retrieval of information, quality judgment and use of research tools such as the online public access catalog and CD-ROM and First Search Internet databases. Brochures and handouts are available for more complete information. In addition, there is a large reserve collection for specific assignments which provides supplemental materials for students.

The LRC's Media Services Department delivers and maintains audiovisual equipment for classroom instruction as well as campus functions. Graphic design also is offered to assist classroom and campus needs.

The LRC seeks to provide the finest informational services possible. Suggestions and comments to improve all areas of the LRC are continually and seriously are invited.

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 one or three credit hours. These credit hours do not satisfy the requirements of any degree plan at OC, and they may not 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 peer tutors. 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 Learning Resources Center, Room 200A.

TASP Requirements

The Texas State Education Code requires that all students who enter public institutions of higher education after the fall of 1989 be tested for reading, writing and mathematics skills. This includes all full-time and part-time students enrolled in a TASP-liable certificate or degree program.

Performance on the test will not be used as a condition of admission. The test fee will be paid by the student.

Some students may be exempt from taking the TASP. A list of exemptions for TASP can be found in the TASP registration bulletin available in the OC Testing Center or Counseling Center. Vocational/technical students may be able to temporarily avoid taking the TASP if they are enrolled in an approved TASP-waived certificate program. Students should check with an OC counselor if they think they may be exempt or temporarily waived from the TASP requirements.

If a student has failed one or more portions of the TASP, Texas state law requires a student to be enrolled in and regularly attending some form of developmental education continuously until he or she passes all portions of the test. State law requires that the student who is enrolled in developmental education as a result of a TASP failure must satisfactorily participate in that remedial program. OC defines the student's satisfactory participation in developmental education as consistent attendance coupled with continuous progress through the content of the developmental education program.

Campus Facilities and Life

CAMPUS FACILITIES

Bookstore

The Odessa College Bookstore is an auxiliary enterprise owned by operated by the college as a service to students, faculty, staff and the community. The Bookstore's objective is to provide all the necessary and supplementary materials needed for student success. Textbooks, school supplies and novelty items are among the items sold. Profits generated by the Bookstore are used to provide scholarships for OC students.

Student Housing

Students who compete for OC 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 $100 deposit 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.

Cafeteria

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.

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.

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.

Meeting Facilities

Odessa College has meeting rooms available to both non-profit clubs and organizations and to businesses on a space-available basis. There is no charge for non-profit organizations. Businesses may pay a fee depending on the type of event scheduled. Food service is also available through the OC Cafeteria. Also available for community organizations is the recently renovated 750-seat Deaderick Auditorium. Contact the following offices for more information about booking these facilities:

- Community Room, Special Events Room, Electronics Technology Building Room 130—Vice President for Business Affairs
- Fine Arts Auditorium—Lonnie Clark, Instructor of Music
- Deaderick Auditorium—Dean of Arts, Humanities and Distance Education
- Continuing Education Annex B or C—Continuing Education Office

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 may be contacted on a 24-hour basis for emergencies on campus. The office is located on the westside of the Gymnasium, Room 107.

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.

Between 8 a.m.-5 p.m. weekdays, emergency messages for students should be directed to the Office of the Vice President for Student Life.

CAMPUS LIFE

Student Activities

Odessa 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 contributes to personal development through educational and social programming and through leadership in student organizations.

The interactions of students with each other and with the faculty on an informal basis can provide students with insights and understanding about their society and can enrich the quality of students' 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 free or for a minimal 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. The Student Activity Center offers free pool, ping-pong and other games to students with a current OC ID. Student Activities also offers pool and ping-pong in the Sports Center.

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

Clubs and Organizations

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

Student Government Association

The Student Government Association (SGA) 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 SGA 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.

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.

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 OC have won National Junior College All-American honors. The athletic program includes teams in women's basketball, cross country, 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 OC 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 12 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. OC 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. The women's cross country team finished sixth in the 1996 NJCAA national meet.

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.

$$\pi \int_0^1 \frac{x\,dx}{(1+x^2)^2}$$

$$u = 1 + x$$

$$du = 2x$$

contents

Degrees and Instructional Programs

Degrees and Instructional Programs

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 47 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 47 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 48 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. OC awards the A.A.S. degree in the following areas:

Automotive Technology
Building Trades
Child and Parent Development
Clinical Laboratory Sciences (Medical Laboratory Technology)
Computer Information Systems (Business Programming/PC Support Specialist Options)
Cosmetology (Operator/Instructor Options)
Culinary Arts
Diesel Technology
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)
Legal Assistant
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/Legal Emphasis Options)
Petroleum Technology
Photography
Physical Therapist Assistant
Radiologic Technology
Respiratory Therapy
Surgical Technology

Please refer to page 49 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, OC 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
- Heavy Equipment Specialist
- Diesel Truck Specialist
- Service Manager
- Diesel 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 Technology

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 Management Specialist
- Medical Office Clerk
- Medical Office Assistant
- Legal Office Clerk
- Legal Office Assistant
- Legal Office Specialist
- Medical Office Technology Specialist

Petroleum Technology
- Safety and Environmental Technician
- Well Head Pumper
- Gas Compressor Operator
- Gas Plant Operator
- Refinery Panel Operator

Please refer to page 49 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. OC awards a Certificate of Completion in the following vocational fields (refer to individual departmental sections for specific course and semester hour requirements):

Child and Parent Development
- Child Care/Preschool Assistant Teacher
- Child Development Associate (CDA)
- Child Care Management
- Child Care Aide

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 49 of this catalog for certificate requirements.

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:

Over 50 percent of the total certificate hours must have been completed in residence at Odessa College. Also, over 50 percent of the technical/vocational program courses required for the certificate must have been completed in residence at Odessa OC.

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 OC.

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).
- Computer Science: A three-semester-hour minimum from COSC 1301, COSC 1415 or BCIS 1401.
- 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.
- 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.

**Business administration A.A. degree requires three hours of sophomore English.*

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.
- Computer Science: A three-semester-hour minimum from COSC 1301, COSC 1415, BCIS 1401 or AGRI 1309.
- 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, 2326, 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): 1311, 1315, 1321, 2341
  - 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
- 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: 1311* (1302), 1318* (1311), 2341* (2303), 2421* (1408)
  - Culinary Arts: 1201*, 1202*, 1203*, 1206*
  - Engineering: 1304
  - Management: 1301*, 1321*, 2322*, 2330*
  - Music: 1301 (1370),1306, 1308
  - Philosophy: 1301, 2306
  - Office Systems Technology: 1200*, 1402*, 1404*, 1406*, 1424*, 1421*, 1422*, 2410* (2304)
  - 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.
- 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, 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.

- Over 50 percent of the total certificate hours must have been completed in residence at Odessa College. Also, over 50 percent of the technical/vocational program courses required for the certificate must have been completed in residence 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.

KEY TO SCANS 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

NOTE: Students enrolling in courses with a SCANS rating of 1, 2 or 3 should have a competency at the high school diploma or equivalency level or satisfactory placement score on an appropriate placement exam. Dual credit and early admission students in high school must have the approval of their high school principal or designee. Additional course prerequisites/corequisites may be found at the end of each course description.

Accounting *(see Business Administration)*

Agriculture

Faculty: Dr. T G Thomas.

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.*

Associate in Science Degree Agriculture—Equine Emphasis

Through the generous contribution of a prominent West Texas businessman, Odessa College has one of the largest and best-equipped equine facilities in the nation. Expressly donated for the development of the Odessa College rodeo team and students majoring in agriculture with an emphasis in equine science, this facility offers OC students a unique opportunity. The various components of the equine and related agricultural industries have been incorporated into an associate of science degree transferable to several senior institutions. Students should contact the coach of the Odessa College rodeo team and/or director of the Odessa College Rodeo and Agriculture Complex—Graham Center for information concerning scholarships and work-study jobs as well as stable for horses.

Course of Study for Associate in Science Degree

Agriculture—Equine Emphasis

	Semesters Hrs
General Education Requirements	**42**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
CHEM 1311/1111 Gen. Inorganic Chemistry/Fundamentals of Chem Lab I	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
SPCH 1315 Public Speaking	3
Major Requirements	**21**
AGRI 1231 The Agricultural Industry	2
AGRI 1309 Computers in Agriculture	3
AGRI 1419 Animal Science	4
AGRI 2321 Livestock Evaluation I	3
AGRI 2322 Livestock Evaluation II	3
PHED 1114, PHED 1115, PHED 2116 Beginning, Intermediate and Advanced Horsemanship	3
PHED 1332 Game Skills for Equestrian Sports and Recreation	3
Total Semester Hours	**63**

Agriculture Courses

AGRI 1131 The Agriculture Industry (01.0103.5221)
(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 1231 The Agriculture Industry (01.0103.5221)
(2-0) ..... 2 hours
An introduction of the basic components of the agricultural industry in the United States with a special consideration for changing economic focus of the equine industry. (SCANS 1) Prerequisite: None.

AGRI 1309 Computers in Agriculture (01.0101.5121)
(2-2) ..... 3 hours
Introductory course in the application of microcomputers in the agricultural environment. Students will be encouraged to develop a management system in some aspect of the care of horses or other animals associated with the program. Lab fee required. (SCANS 1, 2, 3, 5, 6, 8, 9) 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 setting. Functional and institutional aspects of agricultural finance and state and federal farm programs are covered. (SCANS 1, 3, 6, 7) Prerequisite: None.

AGRI 2321 Livestock Evaluation I (02.0201.5221)
(3-3) .....3 hours
An introduction of the basic factors for selection and evaluation of cattle, sheep and swine with a special emphasis on the breeding and performance of horses. (SCANS 1, 6, 9) Prerequisite: None.

AGRI 2322 Livestock Evaluation II (02.0201.5221)
(3-3).....3 hours
A continuation of AGRI 2321 with a special emphasis on the performance and management of horses. (SCANS 1, 6, 9) Prerequisite: None.

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

Art

Faculty: Barry Phillips, III, chair; Barry Phillips, Steve Goff.

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

	Semester Hrs
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

	Semester Hrs
Major Requirements	**27**
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	9
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 three sophomore level ARTS courses .*

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 organization and understanding of visual information. (SCANS 6, 9) Prerequisites: None.

ARTS 1316 Drawing I (50.0705.5230)
(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 (50.0708.5230)
(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.

Automotive Technology

Faculty: Jurl Davis, chair.

Maintaining and servicing automobiles and equipment is a thriving business and a very important activity in the American economy. The automotive service field is so widespread and fast growing that many excellent career opportunities are open to the person with proper qualifications. While a certificate of technology with an emphasis in automotive 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 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	3
*PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
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**

**PHED 1100 should be the first course taken in physical education..*
***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 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
Total Semester Hours	**16**

Level I - Chassis

	Semester Hrs
AUTO 1502 Introduction to Automotive Engine or AUTO 1505 Automotive Diesel	5
AUTO 1504 The Automotive Chassis	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or 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 or AUTO 1503 Transmissions and Power Trains	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or 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 or AUTO 2377 Cooperative Work Experience plus 2 hrs approved credit	5
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
Total Semester Hours	**24**

Course of Study for Advanced Skills Certificate (Level III)

Level III - Service Manager Certificate

May only be awarded along with or following completion of associate or higher-level degree.

	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

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. Lab fee required. (SCANS 1, 3, 4, 6, 7, 8, 9) 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. Lab fee required. (SCANS 1, 2, 3, 5, 6, 7, 8, 9, 10) 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. Lab fee required. (SCANS 3, 5, 6, 7, 9, 10, 11) 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. Lab fee required. (SCANS 3, 5, 6, 8, 9, 11) 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. Lab fee required. (SCANS 3, 5, 6, 7, 8, 9) 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. Lab fee required. (SCANS 1, 3, 4, 5, 6, 7, 9, 10, 11) 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. Lab fee required. (SCANS 1, 4, 5, 6, 7, 8, 11) 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. Lab fee required. (SCANS 1, 3, 4, 5, 6, 7, 8, 9, 10) 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. Lab fee required. (SCANS 5, 6, 7, 8, 9) Prerequisite: AUTO 2504 or consent of the department chair.

Bible *(see Social Sciences)*

Biology

Faculty: Rebecca Hennig, chair; Carolyn Amiet, Dr. Chet Cooper, 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 (32.0106.5139)
(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 and anatomy. Lab fee 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 required. (SCANS 1, 3, 6, 9) Prerequisite: Pass reading and math on TASP or placement exam.

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: BIOL 1406.

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. Lab fee required. (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 BIOL 0371 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 a placement exam or credit with a grade of "C" or better in BIOL 0371 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 (26.0701.5324)
(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 four-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 Session and between spring and summer semesters. The course involves a comprehensive and systematic study of intertidal (littoral) marine organisms, including; field observations, collecting, preservation techniques, 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**

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

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
Approved Elective (See department chair for options)	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
Approved Elective (See department chair for options)	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
Approved Elective (See department chair for options)	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
Approved Elective (See department chair for options)	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
Approved Elective (See department chair for options)	3
Total Semester Hours	**45**

Building Trades Courses

BLDG 1601 Construction Principles I

(4-6) ..... 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

(4-6) ..... 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
(4-6) ..... 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
(4-6) ..... 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
(4-6) ..... 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
(4-6) ..... 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
(4-6) ..... 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 Muñoz, 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	**53**
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
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
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
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 (22.0101.5225)
(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 (52.0301.5125)
(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 1204, 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 1204 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 commonnames 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 and Parent Development/Tech Prep

Faculty: Lucinda Hurlbut, chair; Mary Hanson.

The field of child and parent 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 and parent 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 and Parent 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 or SPCH 1315 Public Speaking	3
Major Requirements	**45**
CDEC 1311 Introduction to Early Childhood Education (CHLD 1302)	3
CDEC 1319 Child Guidance (CHLD 1307)	3
CDEC 1318 Nutrition, Health and Safety (CHLD 1311)	3
CDEC 1356 Emergent Literacy for Early Childhood (CHLD 2305)	3
CDEC 1357 Math and Science for Early Childhood (CHLD 2306)	3
CDEC 1358 Creative Arts for Early Childhood (CHLD 1305)	3
CDEC 1359 Children With Special Needs (CHLD 2304)	3
CDEC 1393 Special Topics in Family Living and Parenthood (Abuse and Neglect) (CHLD 1304)	3
CDEC 1403 Family and the Community (CHLD 1150)	4
CDEC 1413 Curriculum Resources for Early Childhood Programs (CHLD 2403)	4
CDEC 2341 The School Age Child (CHLD 2303)	3
CDEC 2384 Cooperative Education in Child Development (CHLD 2377)	3
CDEC 2421 Infant and Toddler (CHLD 1408)	4
CHLD 2301 Personal and Family Management	3
Related Requirements	**6**
PHED 1306 First Aid	3
PSYC 2308 Child Psychology	3
Total Semester Hours	**68**

**Indicates courses which may be articulated by tech-prep agreement with high school.*
***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	**13**
*CDEC 1311 Introduction to Early Childhood Education (CHLD 1302)	3
*CDEC 1318 Nutrition, Health and Safety (CHLD 1311)	3
*CDEC 1358 Creative Arts for Early Childhood (CHLD 1305)	3
*CDEC 1403 Family and the Community (CHLD 1150)	4
Related Requirements	**3**
PHED 1306 First Aid	3
Total Semester Hours	**19**

**Indicates courses which may be articulated by tech-prep agreement with high school.*

Level I Certificate — Child Development Associate (CDA)

	Semester Hrs
General Education Requirements	**3**
*COSC 1301 Introduction to Computer Systems	3
Major Requirements	**16**
CDEC 1311 Introduction to Early Childhood Education (CHLD 1302)	3
CDEC 1318 Nutrition, Health and Safety (CHLD 1311)	3
CDEC 1319 Child Guidance (CHLD 1307)	3
CDEC 1358 Creative Arts for Early Childhood (CHLD 1305)	3
CDEC 1403 Family and the Community (CHLD 1150)	4
Related Requirements	**3**
PHED 1306 First Aid	3
Total Semester Hours	**22**

**Indicates courses which may be articulated by tech-prep agreement with high school.*

Level II Certificate - Child Care/Preschool Assistant Teacher

	Semester Hrs
General Education Requirements	**12**
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
MATH 1332 Structures of College Mathematics I or higher level math	3
PSYC 2308 Child Psychology	3
Major Requirements	**35**
CDEC 1311 Introduction to Early Childhood Education (CHLD 1302)	3
CDEC 1318 Nutrition, Health and Safety (CHLD 1311)	3
CDEC 1319 Child Guidance (CHLD 1307)	3
CDEC 1356 Emergent Literacy for Early Childhood (CHLD 2305)	3
CDEC 1358 Creative Arts for Early Childhood (CHLD 1305)	3
CDEC 1359 Children With Special Needs (CHLD 2304)	3
CDEC 1393 Special Topics in Family Living and Parenthood (Abuse and Neglect) (CHLD 1304)	3
CDEC 1403 Family and the Community (CHLD 1150)	4
CHLD 2301 Personal and Family Management	3
CDEC 2384 Cooperative Education in Child Development (CHLD 2377)	3
CDEC 2421 Infant and Toddler (CHLD 1408)	4
Related Requirements	**3**
PHED 1306 First Aid	3
Total Semester Hours	**50**

**Indicates courses which may be articulated by tech-prep agreement with high school.*

Level III Certificate - Child Care Management
(Advanced Skills Certificate)
May only be awarded along with or following completion of associate or a higher-level degree.

	Semester Hrs
Major Requirements	**6**
CDEC 2326 Administration of Programs for Children I (CHLD 2120, 2130, 2135)	3
CDEC 2328 Administration of Programs for Children II (CHLD 2111, 2115, 2125)	3
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**

Child Development Courses

CDEC 1311 Introduction to Early Childhood Education [formerly CHLD 1302] (20.0201)
(2-3) ..... 3 hours
An introduction to the profession of early childhood education, focusing on developmentally appropriate practices, types of programs, historical perspectives, ethics and current issues. 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. Lab assignments are designed to allow students to use their reasoning ability to solve problems, make decisions and interpret observational forms. Lab fee required. (SCANS 1, 4, 9) Prerequisite: None.

CDEC 1318 Nutrition, Health and Safety [formerly CHLD 1311] (20.0201)
(2-3) ..... 3 hours
A study of nutrition, health, safety and related activities, including skill development in management of issues, guidelines and practices in nutrition, as well as community health, hygiene, safety and legal implications. Integration of these principles applied to a variety of settings. Requires choosing, planning and implementing food, health and safety activities with children. Lab fee required. (SCANS 1, 3) Prerequisite: None.

CDEC 1319 Child Guidance [formerly CHLD 1307] (20.0201)
(2-3) ..... 3 hours
An exploration of common behavior problems of young children in an early childhood setting. Emphasis on positive guidance techniques for effective behavior management. Practical application through direct participation in an early childhood setting. 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. Presents major theorists and theories of individual and group management. Lab fee required. (SCANS 5, 6, 7, 8, 10, 11) Prerequisite: None.

CDEC 1356 Emergent Literacy for Early Childhood [formerly CHLD 2305] (19.0706)
(2-3) ..... 3 hours
An exploration of principles, methods and materials for teaching young children language and literacy through a play-based, integrated curriculum. Introduces techniques for development of age appropriate language experiences in listening, speaking, reading and writing readiness. Includes 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. Lab fee required. (SCANS 1, 2, 8, 11) Prerequisite: None.

CDEC 1357 Math and Science for Early Childhood [formerly CHLD 2306] (20.0201)
(2-3) ..... 3 hours
An exploration of principles, methods and materials for teaching young children math and science concepts through discovery and play. 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. Lab fee required. (SCANS 1, 3, 4, 9) Prerequisite: None.

CDEC 1358 Creative Arts for Early Childhood [formerly CHLD 1305] (20.0201)
(2-3) ..... 3 hours
An exploration of principles, methods and materials for teaching young children music, movement, visual arts and dramatic play through process-oriented experiences to support divergent thinking. Creative activities will be planned and presented for all activity areas, including art, movement, music, language, science, mathematics and 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. Lab fee required. (SCANS 4, 6, 9) Prerequisite: None.

CDEC 1359 Children With Special Needs [formerly CHLD 2304] (20.0201)
(2-3) ..... 3 hours
A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, educational intervention, available resources, referral processes, and the advocacy role and legislative issues. Presents techniques to identify and serve children with special needs. Includes studies of physical, emotional, language and/or mental disabilities. Also, presents needs of gifted and talented children. Emphasizes constructing environment to enable children with special needs to function to their maximum abilities within the group structure. Stresses ways of working with parents of special children to bring out maximum home-center coordination. Lab fee required. (SCANS 5, 6, 10, 11) Prerequisite: None.

CDEC 1393 Special Topics in Family Living and Parenthood [formerly CHLD 1304] (20.0107)
(3-0) ..... 3 hours
Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. 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.

CDEC 1403 Family and the Community [formerly CHLD 1150 and 2310] (20.0107)
(3-1) ..... 4 hours
A study of the relationship between the child, the family, the community and early childhood educators, including a study of parent education, family and community lifestyles, child abuse and current issues. Effective listening and spoken techniques in parent/teacher conferences are developed along with communicating skills. Child care situations and resources are explained and written report examples are developed. The intellectual and emotional growth of children and parents will be taught as well as learning how to develop strategies for managing stressful situations. Lab fee required. (SCANS 2, 4, 5, 7, 9, 10, 11) Prerequisites: None.

CDEC 1413 Curriculum Resources for Early Childhood Programs [formerly CHLD 2403] (20.0201)
(3-3) ..... 4 hours
Fundamentals of curriculum design and implementation in developmentally appropriate programs for young children. Emphasizes planning and teaching curriculum for children birth to 5 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. Lab fee required. (SCANS 5, 7, 9, 10) Prerequisite: CDEC 1311, CDEC 1319 and a minimum of two of the following courses: CDEC 1318, CDEC 1356, CDEC 1357, CDEC 1358 or consent of the department chair.

CDEC 2326 Administration of Programs for Children I [formerly CHLD 2120, 2130, 2135] (20.0203)
(2-3) ..... 3 hours
A practical application of management procedures for early care and education programs, including a study of operating, supervising and evaluating programs. Topics on philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation and communication. The student will employ knowledge of programs, philosophies, curriculum and budget basics; develop goals and objectives, written/oral communications, parent communications; and interpret and supervise regulations, policies, staffing and evaluating. (SCANS 2, 4, 5, 6, 7, 9, 10, 11) Prerequisite: None.

CDEC 2328 Administration of Programs for Children II [formerly CHLD 2111, 2115, 2125] (20.0203)
(2-3) ..... 3 hours
An in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personnel management, team building, leadership, conflict resolution, stress management advocacy, professionalism, fiscal analysis and planning parent education/ partnerships, and technical applications in programs. The student will demonstrate skills in fiscal planning and analysis; legal and ethical issues; personnel management and team building; advocacy and professionalism; parent education and partnership; and technical applications in programs. The student will utilize skills in speaking, writing, computation and computer utilization. (SCANS 1, 2, 3, 4, 6, 7, 9) Prerequisite: None.

CDEC 2341 The School Age Child [formerly CHLD 2303] (20.0202)
(3-0) ..... 3 hours
A study of appropriate age (5 to 13 years) programs, including an overview or development, appropriate environments, materials and activities, and teaching/guidance techniques. Focuses on social, emotional, mental and physical development processes. Designed particularly for anyone working with individuals or groups from school age through adolescence. (SCANS 1, 9, 10) Prerequisite: None.

CDEC 2384 Cooperative Education in Child Development [formerly CHLD 2377] (19.0706)
(1-20) ..... 3 hours
Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer and student. Under supervision of college and employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. 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 CDEC 1311, CDEC 1319, CDEC 1413, CDEC 2421 and PSYC 2308 as well as consent of the department chair. Requires a grade of "C" or better for credit to be validated.

CDEC 2421 Infant and Toddler [formerly CHLD 1408] (20.0202)
(3-2) ..... 4 hours
A study of appropriate infant and toddler (birth to 3 years) programs, including an overview of development, quality caregiving routines, appropriate environments, materials and activities, and teaching/guidance techniques. Emphasizes development processes and environmental factors that can affect physical growth, shape personality and achievement from conception to 3 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. Lab fee required. (SCANS 1, 6, 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.

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 accredited by the National Accrediting Agency for Clinical Laboratory Sciences (next programmatic review: April 1998). 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 placement 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

	Semester Hrs
Summer Session II	
CLSC 1304 Urinalysis and Body Fluids	3
MATH 1332 Structures of College Mathematics I or higher level math	3
Fall Semester	
CHEM 1111 Fundamentals of Chemistry Laboratory I	1
CHEM 1311 General Inorganic Chemistry I	3
CLSC 1211 Urinalysis, Hematology & Hemostasis Lab	2
CLSC 1601 Hematology & Hemostasis	6
ENGL 1301 Composition & Rhetoric	3
Spring Semester	
BIOL 1406 General Biology I	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

Semester Hrs

Summer Session II

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 and 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 clinicals are under the full-time supervision of a certified medical technologist, certified medical laboratory technician or certified phlebotomist.

Because clinical 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 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 Clinical 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. Lab fee and liability insurance required. (SCANS 1, 2, 3, 6, 7, 8, 9) 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. Lab fee and liability insurance required. (SCANS 1, 2, 3, 6, 7, 8, 9) Prerequisite: CLSC 1211 and consent of the department chair. Corequisite: CLSC 1602.

CLSC 1220 Phlebotomy Clinical
(0-7) ..... 2 hours
Consists of a total of 112 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
(3-0) ..... 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
(5-0) ..... 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. Lab fee required. (SCANS 1, 2, 3, 5, 6, 7, 9, 10, 11) 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. Lab fee required. (SCANS 1, 2, 3, 4, 6, 7, 8, 9, 10) 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. Lab fee required. (SCANS 1, 2, 3, 6, 7, 8, 9) 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 calculations 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: Ray Cone, chair; Bobby Davis, Brenda Gardner, Mitch Slusher, Dale Stacy.

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 BCIS 2220 Spreadsheets and OFST 1200 Basic Keyboarding Skills	3-4
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	**24-25**

Option II - PC Support Specialist*

	Semester Hrs
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 Hrs
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 Hrs
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/Windows users and improve the skills of the experienced DOS/Windows 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. Spring only. Lab fee required. (SCANS 3, 4, 6, 7, 8, 9) 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. Lab fee required. (SCANS 1, 2, 3, 4, 7, 8, 9) 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. Lab fee required. (SCANS 1, 2, 4, 6, 7, 9) 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. Lab fee required. (SCANS 2, 3, 6, 7, 8, 9) Prerequisite: BCIS 1200 and BCIS 1401 or instructor approval.

BCIS 1401 Introduction to Computer Information Systems (52.1202.5227)
(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/Windows. 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. Lab fee required. (SCANS 1, 2, 3, 6, 8, 9) 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. Lab fee required. (SCANS 2, 3, 6, 7, 8, 9) 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. Spring only. Lab fee required. (SCANS 5, 6, 7, 8, 9) 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. Lab fee required. (SCANS 1, 2, 3, 6, 7, 8, 9) 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 MS-Word. 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 Excel. Topics covered include formulas, range commands, formatting, printing, proper spreadsheet design, statistical and financial functions, data management, graphs, table lookup functions, spreadsheet security and macros. Lab fee required. (SCANS 3, 4, 6, 7, 8, 9) 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. Lab fee required. (SCANS 1, 2, 3, 7, 8, 9, 10) 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. Lab fee required. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) 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. Lab fee required. (SCANS 1, 2, 4, 5, 6, 9, 10) 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. Lab fee required. (SCANS 1, 4, 6, 8, 9) 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. Fall only. Lab fee required. (SCANS 1, 6, 7, 8, 9) 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, newly developed software, and debugging and maintaining existing software. Fall only. Lab fee required. (SCANS 1, 6, 7, 8, 9) Prerequisite: BCIS 1419 and BCIS 1320 or instructor approval.

Computer Science

Faculty: Ray Cone, chair; Brenda Gardner, Mitch Slusher.

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 (11.0101.5227)
(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/ Windows, 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. Lab fee required. (SCANS 1, 2, 3, 6, 8, 9) 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/Windows 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. Fall only. 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. Spring only. 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. Fall only. 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. Lab fee required. (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. Lab fee required. (SCANS 1, 6, 7, 8, 9) Prerequisite: COSC 1418 or BCIS 1404 or instructor approval.

Cosmetology

Faculty: Linda Sullivan, chair; Sylvia Blain, Lou Ann Hitt, 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 any Monday 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 division dean.**

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 (1536 Clock Hours)	**36**
(Classes meet eight hours per day, Monday through Thursday)	
COSM 2601 Introduction to Cosmetology	6
COSM 2602 Cosmetology Skills Development	6
COSM 2603 Cosmetology Procedures I	6
COSM 2604 Cosmetology Procedures II	6
COSM 2605 Cosmetology Procedures III	6
COSM 2606 Cosmetology Procedures IV	6
Elective (must be outside the major area)	**3**
Related Required Courses	**9**
BUSI 2301 Business Law I	3
MGMT 2304 Personnel and Human Relations	3
MGMT 1321 Principles of Marketing or MGMT 2331 Introduction to Small Business Management	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 (768 Clock Hours)	**32**
COSM 2811 Lesson Plan Development and Supervision	8
COSM 2812 Management and Assessment Skills	8
COSM 2813 Classroom Teaching Skills	8
COSM 2814 State Licensure Exam Skills	8
Elective	**3**
Related Required Courses	**9**
BUSI 2301 Business Law I	3
MGMT 2304 Personnel and Human Relations	3
MGMT 1321 Principles of Marketing or MGMT 2331 Introduction to Small Business Management	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 (1536 Clock Hours)	**36**
COSM 2601 Introduction to Cosmetology	6
COSM 2602 Cosmetology Skills Development	6
COSM 2603 Cosmetology Procedures I	6
COSM 2604 Cosmetology Procedures II	6
COSM 2605 Cosmetology Procedures III	6
COSM 2606 Cosmetology Procedures 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 (768 Clock Hours)	**32**
COSM 2811 Lesson Plan Development and Supervision	8
COSM 2812 Management and Assessment Skills	8
COSM 2813 Classroom Teaching Skills	8
COSM 2814 State Licensure Exam Skills	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
(2-14) ..... 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 Cosmetology Skills Development
(2-14) ..... 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 Procedures I
(2-14) ..... 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 or corequisite: COSM 2602.

COSM 2604 Cosmetology Procedures II
(2-14) ..... 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 Procedures III
(2-14) ..... 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 or corequisite: COSM 2604.

COSM 2606 Cosmetology Procedures IV
(2-14) ..... 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 or corequisite: COSM 2605, COSC 1301 and PSYC 2302.

COSM 2811 Lesson Plan Development and Supervision
(6-6) ..... 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 Skills
(6-6) ..... 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 Skills
(6-6) ..... 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, 5, 6, 9, 11) Prerequisite or corequisite: COSM 2812.

COSM 2814 State Licensure Exam Skills
(6-6) ..... 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 or corequisite: COSM 2813, PSYC 2302 and COSC 1301.

Specialization Programs

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
(4-15) ..... 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
(4-15) ..... 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
(1-9) ..... 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.

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 employment 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 take 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	**6**
COSC 1301 Introduction to Computer Science	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	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
Total Semester Hours	**18**

Level I - Food Production Cook

	Semester Hrs
General Education Requirements	**9**
COSC 1301 Introduction to Computer Science	3
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	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
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
(1-3) ..... 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 interrelationship between food preparation and the importance of food quality, with emphasis on employing the correct sanitation procedures. Lab fee required. (SCANS 1, 3, 7, 8) Prerequisite: None. Corequisite: CULI 1202 and CULI 1203 or permission of the instructor.

CULI 1202 Soups and Sauces
(1-3) ..... 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. Lab fee required. (SCANS 1, 3, 4, 6, 7, 8) Prerequisite: CULI 1201. Corequisite: CULI 1201 and CULI 1203 or permission of the instructor.

CULI 1203 Pantry and Short-Order Cooking
(1-3) ..... 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. Lab fee required. (SCANS 1, 3, 4, 5, 7, 8) Prerequisite: CULI 1201 and CULI 1202. Corequisite: CULI 1201 and 1202 or permission of the instructor.

CULI 1206 Introduction to Baking
(1-3) ..... 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. Lab fee required. (SCANS 1, 3, 4, 7, 8) Prerequisite: None. Corequisite: CULI 1207 and 1208 or permission of the instructor.

CULI 1207 Patisserie
(1-3) ..... 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. Lab fee required. (SCANS 1, 3, 4, 8, 9) Prerequisite: CULI 1206. Corequisite: CULI 1206 and CULI 1208 or permission of the instructor.

CULI 1208 Classical Desserts
(1-3) ..... 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. Lab fee required. (SCANS 1, 2, 3, 4, 7, 8, 9) Prerequisite: CULI 1206 and CULI 1207. Corequisite: CULI 1206 and CULI 1207 or permission of the instructor.

CULI 1221 Tableservice and Mixology
(2-0) ..... 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, and 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) ..... 3 hours
Introduces the concepts and principles of normal nutrition, with emphasis on the importance of nutrients and 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
(1-3) ..... 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. Lab fee required. (SCANS 1, 3, 4, 5, 7, 8) Prerequisite: CULI 1201, 1202 and 1203. Corequisite: CULI 2211 and CULI 2212 or permission of the instructor.

CULI 2211 International Cuisine
(1-3) ..... 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
(1-3) ..... 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
(1-3) ..... 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
(1-3) ..... 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
(1-3) ..... 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. Lab fee required. (SCANS 1, 2, 3, 5, 7, 8) 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.

CULI 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.

Developmental Education

Staff: Dr. Shirley Payne, dean.

Odessa College offers a developmental studies program for those students who need further development in or who wish to review fundamentals of mathematics, reading and writing. 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 may 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 (32.0106.5139)

(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 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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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. Lab fee required. Prerequisite: None.

The Tutoring Center, located in the Learning Resources Center, Room 200A, 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 may 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 (32.0104.5137)
(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 (32.0104.5137)
(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 0375 Intermediate Algebra (32.0104.5237)
(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 200A of the Learning Resources Center, 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 free 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 (32.0104.5137)
(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, 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: Completion of MATH 0375 or 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) Completion of MATH 0375 or 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) Completion of MATH 0375 or 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 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) Completion of MATH 0375 or 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 the reading program is an investment in self. No matter what a person's reading ability, reading skills can be improved.

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. Students who enroll for Basic English (0370) and have not taken and passed the reading section of the TASP must enroll in a reading class. Students should check their TASP liability before enrolling in reading.

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 individual reading strengths and weaknesses for placement in multilevel course that includes computer exercises, timed reading practices and vocabulary study. Lab fee required. (SCANS 1, 9, 10) Prerequisite: None, satisfactory placement score or placement by counselor.

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, reading rate, and study skills. The student monitors and corrects ineffective behavior as he assesses himself accurately, sets personal goals, and monitors progress. Lab fee required. (SCANS 1, 7, 9, 10) Prerequisite: Read 0372 passed with a "C" or better or satisfactory placement score or reading faculty approval.

College Reading Techniques

The college reading techniques course taught on the third floor of the Learning Resources Center, Room 309, provides an alternative reading program with structured, individualized, self-paced instruction.

Registration is open to those who have completed the fifth grade and beyond, and these students may enroll for one or three semester hours of credit or non credit. 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 Learning Resources Center, Room 309.

Students should consult with the lab instructor in person during the first week of classes to arrange their class schedule.

READ 0171 Improving Reading Skills (32.0108.5235)
(0-2) ..... 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, which ultimately can result in higher self-esteem. Through independent learning activities, the student learns to validate his understanding of reading materials, increase vocabulary with various written activities and gain in individual reading rates. Lab fee required. (SCANS 1, 4, 7, 10) Prerequisite: None.

Diesel Technology

Faculty: James McCutcheon.

The diesel technology program has been redeveloped to fit industry-specific needs. This fast growing field offers excellent career opportunities for qualified technicians and specialists. Completion of this program will offer students the opportunity to apply for an entry level career as a technician and one of several service specialist options.

Course of Study for Associate in Applied Science Degree

Diesel Technology

	Semester Hrs
General Education Requirements	**17**
COSC 1301 Introduction to Computer Systems	3
ENGL 1312 Report Writing or ENGL 1301 Composition and Rhetoric	3
GOVT 2301 U.S. and Texas Government or GOVT 2302 American National Government	3
MATH 1314 College Algebra 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

Major Requirements **46**
- DESL 1377 Diesel Practicum 3
- DESL 1501 Principles of Diesel Engines 5
- DESL 1502 Caterpillar Diesel Engines 5
- DESL 1503 Electrical Systems and Control Circuits 5
- DESL 1504 Fuel and Emissions Systems 5
- DESL 2377 Cooperative Work Experience 3
- DESL 2501 Transmissions, Power Trains and Accessories or DESL 2512 Powershifts, Drives and Transmissions 5
- DESL 2507 The Diesel Chassis or DESL 2511 Advanced Fluid Power 5
- DESL 2510 Advanced Engine Technology 5
- DESL 2520 Diesel Electronics 5

Related Requirements **4**
- WLDG 1421 Introduction to Welding Fundamentals (WELD 1401) 4

Total Semester Hours **67**

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

Diesel Mechanics Certificates of Technology

Certificates of technology are available in the following job-specific-fields.

Level I certificate is TASP-waived.

Level I - Diesel Technician

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
DESL 1377 Diesel Practicum	3
DESL 1501 Principles of Diesel Engines	5
DESL 1502 Caterpillar Diesel Engines	5
DESL 1503 Electrical Systems and Control Circuits	5
DESL 1504 Fuel Emissions Systems	5
ENGL 1312 Report Writing or ENGL 1301 Composition and Rhetoric	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
Total Semester Hours	**33**

Level II - Option I
Heavy Equipment Specialist

The 33 hours specified in level I certificate plus the following courses:

	Semester Hrs
DESL 2377 Cooperative Work Experience	3
DESL 2510 Advanced Engine Technology	5
DESL 2511 Advanced Fluid Power	5
DESL 2512 Powershifts, Drives and Transmissions	5
DESL 2520 Diesel Electronics	5
Total Semester Hours	**56**

Level II - Option II
Diesel Truck Specialist

The 33 hours specified in level I certificate plus the following courses:

	Semester Hrs
DESL 2377 Cooperative Work Experience	3
DESL 2501 Transmissions, Power Trains and Accessories	5
DESL 2507 The Diesel Chassis	5
DESL 2510 Advanced Engine Technology	5
DESL 2520 Diesel Electronics	5
Total Semester Hours	**56**

Level III - Service Manager Certificate

May only be awarded along with or following completion of associate or higher-level degree

	Semester Hrs
General Education Requirements	**9**
ACCT 1370 Introduction to College Accounting	3
MGMT 1301 Introduction to Management	3
MGMT 2304 Personnel and Human Relations	3
Total Semester Hours	**9**

Diesel Courses

DESL 1377 Diesel Practicum
(1-15).....3 hours
Capstone course designed for certificate completers to interrelate academic and vocational course lectures and labs with business and industry work experience. Under supervision of college faculty and a workplace supervisor, the students 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: DESL 1504 or consent of department chair.

DESL 1501 Principles of Diesel Engines
(4-4).....5 hours
Student teams 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 engine systems. The reading of technical materials is required. Lab fee required. (SCANS 1, 2, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

DESL 1502 Caterpillar Diesel Engines
(4-4).....5 hours
Student teams 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, diagnostic materials, and repair of the Caterpillar diesel engine. Listening, speaking and responsibility skills are emphasized. Lab fee required. (SCANS 1, 4, 5, 6, 8, 10, 11) Prerequisite: None.

DESL 1503 Electrical Systems and Control Circuits
(4-4).....5 hours
Student teams 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 diagnosis and repair of various components in the automotive electrical system. Listening, speaking and responsibility skills are emphasized. Lab fee required. (SCANS 1, 3, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

DESL 1504 Fuel and Emissions Systems
(4-4).....5 hours
Student teams 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. Listening, speaking and responsibility skills are emphasized. Lab fee required. (SCANS 1, 5, 6, 7, 8, 9, 10, 11) 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
Student teams 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, diagnostic materials, and repair of transmissions, differentials and accessories. Listening, speaking and responsibility skills are emphasized. Lab fee required. (SCANS 1, 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

DESL 2507 The Diesel Chassis
(4-4).....5 hours
Student teams 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. Listening, speaking and responsibility skills are emphasized. Lab fee required. (SCANS 1, 5, 6, 8, 9, 10, 11) Prerequisite: None.

DESL 2510 Advanced Engine Technology
(4-4).....5 hours
After verifying customer complaints, student teams will use diagnostic equipment to test, troubleshoot and repair electronic and auxiliary systems to include electronic controlled engines and other computer controlled systems. Preventive maintenance and tune-up techniques also are presented while stressing problem-solving strategies. Service manuals and other research tools and resources are emphasized along with the development of diesel vocabulary and specialized electronics math skills. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: DESL 1504 or consent of the department chair.

DESL 2511 Advanced Fluid Power
(4-4).....5 hours
After verifying customer complaints, student teams will conduct component testing and circuit design, operation, system diagnostics, and preventive and predictive maintenance. Basic hardware, tools, safety and practices normally associated with maintenance and service trades are also presented along with failure analysis and rebuilding of hydraulic components. Lab fee required. (SCANS 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: DESL 1504 or consent of the department chair.

DESL 2512 Powershifts, Drives and Transmissions
(4-4).....5 hours
After verifying customer complaints, student teams will learn operating principles of powershift transmissions, conventional oval track machines, and elevator sprocket machine final drives. Emphasis on hydraulic principles and power flow, diagnostic procedures, disassembly, inspection, repair and reassembly. Lab fee required. (SCANS 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: DESL 1504 or consent of department chair.

DESL 2520 Diesel Electronics
(4-4).....5 hours
After verifying customer complaints, student teams will perform preventive and predictive maintenance, system analysis and correct repair procedures. Theory and application of basic hardware, tools, safety, practices, and repair of wiring circuits on all types of electrical components will be emphasized. Lab fee required. (SCANS 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: DESL 1504 or consent of department chair.

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**
DFTG 1405 Technical Drafting (DRAF 1401)	4
DFTG 1409 Basic Computer-Aided Drafting (DRAF 2408)	4
DFTG 1417 Architectural Drafting—Residential (DRAF 2401)	4
DFTG 1433 Mechanical Drafting (DRAF 2402)	4
DFTG 1444 Pipe Drafting (DRAF 2404)	4
DFTG 1452 Intermediate Computer-Aided Drafting (DRAF 2418)	4
DFTG 2381 Cooperative Education—Drafting (DRAF 2377)	3
DFTG 2410 Structural Drafting (DRAF 2406)	4
DFTG 2412 Technical Illustration (DRAF 2403)	4
Related Requirements	**14**
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
OSHA 2395 Industrial Safety	3
PETR 1300 Petroleum Overview	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
Total Semester Hours	**66**

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

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	
DFTG 1405 Technical Drafting (DRAF 1401)	4
DFTG 1409 Basic Computer-Aided Drafting (DRAF 2408)	4
DFTG 1417 Architectural Drafting—Residential (DRAF 2401)	4
DFTG 1452 Intermediate Computer-Aided Drafting (DRAF 2418)	4
DFTG 2381 Cooperative Education—Drafting (DRAF 2377)	3
DFTG 2410 Structural Drafting (DRAF 2406)	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

DFTG 1405 Technical Drafting (DRAF 1401) 4
DFTG 1409 Basic Computer-Aided Drafting (DRAF 2408) 4
DFTG 1433 Mechanical Drafting (DRAF 2402) 4
DFTG 1452 Intermediate Computer-Aided Drafting (DRAF 2418) 4
DFTG 2412 Technical Illustration (DRAF 2403) 4
DFTG 2381 Cooperative Education—Drafting (DRAF 2377) 3
MCHN 1438 Basic Machine Shop I (MACH 1401) 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

DFTG 1405 Technical Drafting (DRAF 1401) 4
DFTG 1409 Basic Computer-Aided Drafting (DRAF 2408) 4
DFTG 1452 Intermediate Computer-Aided Drafting (DRAF 2418) 4
DFTG 2381 Cooperative Education—Drafting (DRAF 2377) 3
DFTG 2410 Structural Drafting (DRAF 2406) 4
OSHA 2395 Industrial Safety 3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401) 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

DFTG 1405 Technical Drafting (DRAF 1401) 4
DFTG 1409 Basic Computer-Aided Drafting (DRAF 2408) 4
DFTG 1444 Pipe Drafting (DRAF 2404) 4
DFTG 1452 Intermediate Computer-Aided Drafting (DRAF 2418) 4
DFTG 2381 Cooperative Education—Drafting (DRAF 2377) 3
OSHA 2395 Industrial Safety 3

Total Semester Hours 28

Advanced Skills Certificate of Technology

Technical Illustrator (Level III)

May only be awarded along with or following completion of associate or higher-level degree.

Semester Hrs

Technical Core

DFTG 1454 Architectural Drafting—Commercial (DRAF 2411) 4
DFTG 2402 Machine Drafting (DRAF 2412) 4
DFTG 1491 Advanced Technical Illustration (DRAF 2413) 4

Total Semester Hours 12

Drafting Technology Courses

DFTG 1405 Technical Drafting [formerly DRAF 1401] (48.0101)
(2-4) ..... 4 hour
Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views and reproduction processes. (SCANS 1, 2, 3, 4, 7, 8) Prerequisite: None.

DFTG 1409 Basic Computer-Aided Drafting [formerly DRAF 2408] (48.0101)
(2-4) ..... 4 hour
An introduction to basic computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating and scaling objects, adding text and dimensions, using layers, coordinating systems; as well as input and output devices. Lab fee required. (SCANS 1, 3, 5, 8, 9, 10) Prerequisite: DFTG 1405.

DFTG 1417 Architectural Drafting—Residential [formerly DRAF 2401] (48.0102)
(2-4) ..... 4 hour
Architectural drafting procedures, practices and symbols, including preparation of detailed working drawings for residential structure with emphasis on light frame construction methods. Lab fee required. (SCANS 1, 2, 3, 8) Prerequisite: DFTG 1405.

DFTG 1433 Mechanical Drafting [formerly DRAF 2402] (48.0105)
(2-4) ..... 4 hour
An intermediate course covering detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, isometrics and oblique drawings, including bill of materials and geometric tolerancing. Lab fee required. (SCANS 1, 3, 5, 8,9) Prerequisite: DFTG 1405.

DFTG 1444 Piping Drafting [formerly DRAF 2404] (48.0101)
(2-4) ..... 4 hour
A study of pipe fittings, symbols, specifications and their applications to a piping process system. This application will be demonstrated through the creation of symbols and their usage in flow diagrams, plans, elevations and isometrics. Offered spring semester even numbered years. Lab fee required. (SCANS 1, 3, 6, 8, 9) Prerequisite: DFTG 1405.

DFTG 1452 Intermediate Computer-Aided Drafting [formerly DRAF 2418] (48.0101)
(2-4) ..... 4 hour
A continuation of practices and techniques used in basic computer-aided drafting emphasizing batched files, scripted files, customized program menus, and extracted attributes. Introduction to three-dimensional drafting. Lab fee required. (SCANS 2, 6, 8, 9) Prerequisite: DFTG 1409.

DFTG 1454 Architectural Drafting—Commercial [formerly DRAF 2411] (48.0102)
(2-4) ..... 4 hour
Architectural drafting procedures, practices and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. Fall only. Lab fee required. (SCANS 3, 6, 9, 11) Prerequisite: DFTG 1417.

DFTG 1491 Special Topics in Drafting: Advanced Technical Illustration [formerly DRAF 2413] (48.0101)
(2-4) ..... 4 hour
A continuation of DFTG 2412. Competencies include inking, shading and rendering methods. Emphasizes the use of correct procedure, creative thinking and self-management. Lab fee required. (SCANS 8, 9, 10) Prerequisite: DFTG 2412.

DFTG 2381 Cooperative Education—Drafting [formerly DRAF 2377] (48.0101)
(1-20) ..... 3 hour
Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. (SCANS 5, 7, 9, 10, 11) Prerequisite: Sophomore standing and consent of the department chair.

DFTG 2402 Machine Drafting [formerly DRAF 2412] (48.0105)
(2-4) ..... 4 hour
Production of detail and assembly drawings of machines, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings. Lab fee required. (SCANS 2, 3, 5, 6, 8, 9) Prerequisite: DFTG 1433.

DFTG 2410 Structural Drafting [formerly DRAF 2406] (48.0101)
(2-4) ..... 4 hour
Discussion of detail drawing of structural shapes for fabrication with emphasis on framed and seated connectors and beam and column detailing. Designed to meet the standards of American Institute of Steel Construction, including units on concrete detailing conforming to American Concrete Institute standards. Offered spring semester odd numbered years. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisite: DFTG 1405.

DFTG 2412 Technical Illustration [formerly DRAF 2403] (48.0101)
(2-4) ..... 4 hour
Topics include pictorial drawing including isometrics, obliques, perspectives, charts and graphs; shading and transfer lettering; and use of different media. Lab fee required. SCANS (1, 8, 9) Prerequisite: DFTG 1405.

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

Elementary Education

Electives (Should be selected from social science, natural science, mathematics, foreign languages and fine arts) **14-15**

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) **14-15**

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 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 level math	3

Technical Core

ELEC 1401 D.C. 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 level math 3

Technical Core

ELEC 1401 D.C. 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
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 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

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
DFTG 1405 Technical Drafting (DRAF 1401) 4

Total Semester Hours 66

**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 Electronics Technology

Level I certificates are TASP-waived.

Level I Certificate for Electronics Technician

General Education Core	Semester Hrs
TMTH 1370 Technical College Math or higher level 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

General Education Core	Semester Hrs
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 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 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. Lab fee required. (SCANS 3, 5, 8, 9) 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. Lab fee required. (SCANS 5, 6, 7, 8, 9, 10) 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. Lab fee required. (SCANS 3, 5, 8, 9) Requires a scientific calculator. 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. Lab fee required. (SCANS 1, 5, 7, 8, 9) 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. Lab fee required. (SCANS 2, 3, 7, 8, 9) 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. Lab fee required. (SCANS 5, 7, 8, 9) 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. Lab fee required. (SCANS 5, 7, 8, 9) 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. Lab fee required. (SCANS 5, 8, 9) 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. Lab fee required. (SCANS 5, 8, 9) 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. Lab fee required. (SCANS 5, 8, 9) 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. Lab fee required. (SCANS 5, 8, 9) 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. Lab fee required. (SCANS 2, 6, 7, 8, 9) Prerequisite: ELEC 1403 and ELEC 1404 or consent of the department chair.

Emergency Medical Technology

Faculty: LeeDon Martin, chair; Michael Nunnelee, 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.

Students considering enrolling in EMED 1501 and EMED 1301 must have approval from department chair before enrolling.

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
EMED 1301 Clinical Procedures	3
EMED 1501 Basic Emergency Care	5
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

Second Semester

BIOL 1170 Medical Terminology	1
BIOL 2404 Human Anatomy and Physiology	4
ENGL 1302 Composition and Literature	3
GOVT 2301 U.S. and Texas Government or GOVT 2302 American National Government	3
*PHED (any one-hour activity course)	1
SPCH 1321 Business and Professional Speech	3

First Summer Session

EMED 2201 Electrocardiography and Prehospital Pharmacology	2

Second Year

Third Semester

COSC 1301 Introduction to Computer Science	3
EMED 2801 Paramedic Development I	8
+Guided Elective(s)	6

Fourth Semester

EMED 2802 Paramedic Development II	8
PSYC 2301 Introduction to Psychology	3
Elective	3

Total Semester Hours **63**

+Guided electives are chosen by students from the following courses:

- EMED 2601 Intermediate Emergency Care
- OSHA 2396 Hazardous Waste and Emergency Response
- PHED 2376 Prevention and Care of Athletic Injuries
- SPAN 1300 Conversational Spanish

**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 Basic Emergency Medical Technician

First Semester

EMED 1301 Clinical Procedures	3
EMED 1501 Basic Emergency Care	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 Procedures 3
EMED 1501 Basic Emergency Care 5
SPCH 1321 Business and Professional Speech 3

Second Semester

COSC 1301 Introduction to Computer Science 3
EMED 2401 Intermediate Clinical Procedures 4
EMED 2601 Intermediate Emergency Care 6
*PHED (any one-hour activity course) 1

Total Semester Hours 25

Level I Advanced Emergency Medical Technician

First Semester

COSC 1301 Introduction to Computer Science 3
EMED 1301 Clinical Procedures 3
EMED 1501 Basic Emergency Care 5
*PHED (any one-hour activity course) 1
SPCH 1321 Business and Professional Speech 3

Summer Semester

EMED 2201 Electrocardiography and Prehospital Pharmacology 2

Fall Semester

EMED 2801 Paramedic Development I 8
EMED 2802 Paramedic Development II 8

Total Semester Hours 33

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

Emergency Medical Technology Courses

EMED 1301 Clinical Procedures

(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. Students 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) Corequisite: 18 years of age, EMED 1501.

EMED 1501 Basic Emergency Care

(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. Lab fee required. (SCANS 1, 2, 4, 5, 7, 8, 9, 10) State certification requires EMED 1301 as a corequisite: State certification fee required. Prerequisite: Must be 18 years of age.

EMED 2201 Electrocardiography and Prehospital Pharmacology
(2-0) [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) * Prerequisite: None.

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 Clinical Procedures
(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 Emergency Care
(4-8) ..... 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 Paramedic Development I
(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: BIOL 2404, EMED 2201, EMT certification and consent of the department chair.

EMED 2802 Paramedic Development II
(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. (SCANS 1, 2, 3, 5, 8, 9, 10, 11) State exam fee required. Prerequisite: EMED 2801 and consent of the department chair.

Engineering

Faculty: Yancy Nuñez, 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, freehand 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 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: Donna Smith, chair; I-Fan Chen, Dr. Judith Cornes, Beverly Forsyth, Wayne Johnson, Mark Jordan, Kathryn Keen, Dr. Daryl Lane, Dr. Bob Mobley, Dr. David Mulry, Ivan Reyez, Dr. Michael White, Lynn Whitson.

English

Language makes us human, not only raising us above a mere animal-like existence but also allowing us to create societies and culture by shaping and controlling our thought. Language is fundamental not only to our survival and progress but also to the form of our literary creations; it reflects the heritage and dignity of the human condition. The English Department, therefore, is committed to providing comprehensive instruction in composition and literature and creating the finest educational opportunities possible for students who have the desire and ability to learn.

Specifically, it provides the first two years of English and pre-professional courses for transfer students, occupational/technical writing courses for students in specialized vocational fields, developmental and general education to prepare students for the TASP and higher level writing and critical thinking skills, courses to meet various community needs, and opportunities for personal enrichment. In sum, the English Department offers excellence in its courses, services and practices. It affirms equal access for all individuals within the diverse student population and approaches all endeavors with the highest standards of ethics and professionalism.

Tutoring Labs

Tutoring is available free of charge to OC students. A Tutoring Lab is located in the Learning Resources Center (LRC), Room 200A. This lab offers open access to both the PLATO computer lab on the third floor of the LRC and to the IBM-compatible computers in LRC 301. Additional writing labs, equipped with computers, are located in Wilkerson Hall 206 and Wilkerson Hall 213; log-in for both of these labs is in Wilkerson Hall 206.

All labs provide 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.

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 (college level)	6
*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 (see department chair for options)	**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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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 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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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. Lab fee required. (SCANS 2, 9) Prerequisite: None.

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 or pass the English portion of the TASP before enrolling in ENGL 1301. Lab fee required for ENGL 0370 WP (Word Processing). (SCANS 2, 9) 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. Lab fee required for ENGL 1301 (Word Processing). (SCANS 1, 2, 9) 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. Lab fee required for ENGL 1312 (Word Processing). (SCANS 2, 9, 11) Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

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. Lab fee required for ENGL 2311 (Word Processing). (SCANS 2, 6, 9) Prerequisite: ENGL 1302 or consent of the department chair.

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 OFST 1100 Basic Keyboarding Skills, a one-hour, eight-week course that develops touch-method skills on the alpha-numeric keyboard.

Students have an alternative to the regular ENGL 1302 course listed above. The alternative is ENGL 1302-Science Fiction, which is based on science fiction and fantasy novels, stories and movies.

Students who are pursuing a certificate of technology or an associate in applied science degree in certain technical programs enroll in ENGL 1312-Report Writing and/or ENGL 2311-Technical and Report Writing instead of ENGL 1301-Composition and Rhetoric to meet the general education requirements in English for those technical programs.

On the sophomore level, the department offers an alternate method for completing ENGL 2327-Survey of American Literature I and ENGL 2328-Survey of American Literature II. 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 (college level)	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 (see department chair for options)	**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. Lab fee required. (SCANS 2, 9) 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. Lab fee required. (SCANS 2, 9) 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 (16.0901.5231)
(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. Lab fee required. (SCANS 2, 9) 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. Lab fee required. (SCANS 2, 9) 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. Lab fee required. (SCANS 2, 9) 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 1305 Intensive Spanish Practicum (16.0905.5131)
(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 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 elements self-paced. Lab fee required. (SCANS 2, 9) 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 elements self-paced. Lab fee required. (SCANS 2, 9) 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. Many elements self-paced. (SCANS 2, 9) Prerequisite: SPAN 2311 or its equivalent.

SPAN 2313 Spanish for Native Speakers of Spanish I (16.0905.5431)
(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 2315 Spanish for Native Speakers of Spanish II (16.0905.5431)
(3-0) ..... 3 hours
A continuation of SPAN 2313. Examines structure of the language and uses advanced material for reading and writing. (SCANS 2, 9) Prerequisite: SPAN 2313 or consent of the instructor.

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. (SCANS 2, 9) Prerequisite: Span 2321, its equivalent or consent of the instructor.

Environmental *(see Occupational Safety and Health Technology)*

Fire Technology

Faculty: LeeDon Martin, chair; Mike Nunnelee.

The fire technology program assists in the development of meaningful educational experiences for pre-service and in-service firefighters. 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
First Year

First Semester	Semester Hrs
FIRE 1204 Fire Hydraulics and Equipment	2
FIRE 1401 Fire Safety	4
FIRE 1402 Fire Protection	4
FIRE 1503 Fire Tactics and Strategies	5
Second Semester	
EMED 1301 Clinical Procedures	3
EMED 1501 Basic Emergency Care	5
FIRE 1107 Fire Skills	1
FIRE 1306 Fire Prevention	3
FIRE 1505 Hazardous Materials	5

Second Year

Third Semester

ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3
FIRE 2315 Advanced Fire Tactics and Strategies 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
OSHA 2396 Hazardous Waste and Emergency Response 3
*PHED (any one-hour activity course) 1

Fourth Semester

COSC 1301 Introduction to Computer Systems 3
Elective 3
FIRE 2307 Fire Safety Education 3
FIRE 2377 Cooperative Work Experience 3
PHED (any one-hour activity course) 1
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

Total Semester Hours 64

*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 by completing the course of study listed below.

Certificates of Technology

Level I - Fire Protection

Level I certificates are TASP-waived.

First Semester **Semester Hrs**

FIRE 1204 Fire Hydraulics and Equipment 2
FIRE 1401 Fire Safety 4
FIRE 1402 Fire Protection 4
FIRE 1503 Fire Tactics and Strategies 5

Second Semester

EMED 1301 Clinical Procedures 3
EMED 1501 Basic Emergency Care 5
FIRE 1107 Fire Skills 1
FIRE 1306 Fire Prevention 3
FIRE 1505 Hazardous Materials 5

Total Semester Hours 32

Level III - Advanced Certificate

May only be awarded along with or following completion of Associate or higher-level degree.

First Semester **Semester Hrs**

FIRE 2301 Fire and Arson Investigation 3
FIRE 2302 Building Codes and Construction 3
FIRE 2303 Fire Administration 3

Total Hours 9

Fire Technology Courses

FIRE 1107 Fire Skills
(1-1) ..... 1 hour
Students will understand the recognition of fire hazards and the objectives and view 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 organizations, their public image and cooperation with the public. Considers legal aspects and insurance problems. Emphasizes development and implementation of a systematic and deliberate inspection program and the 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 1204 Fire Hydraulics and Equipment
(2-1) ..... 2 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) Lab fee required. Prerequisite: None.

FIRE 1306 Fire Prevention
(2-2) ..... 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 fire prevention organization, 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 1401 Fire Safety
(3-3) ..... 4 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, 11) Prerequisite: None.

FIRE 1402 Fire Protection
(3-3) ..... 4 hours
Presents history and philosophy of fire protection and reviews statistics of loss of life and property by fire. Introduces 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 1503 Fire Tactics and Strategy
(4-2) ..... 5 hours
Participants will cover the 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.

FIRE 1505 Hazardous Materials
(5-1) ..... 5 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 2301 Eire 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 maintaining 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 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 2315 Advanced Fire Tactics and Strategies
(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 preplanning, 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. 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, 7, 8, 9) Prerequisite: FIRE 1402 or consent of the department chair.

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.

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 (45.0301.5142)
(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 (45.0201.5342)
(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 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**

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

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	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 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 HVAC System Troubleshooting	4
MAIN 1402 Plumbing Fundamentals	4
MAIN 2404 Structural Repair	4
MATH 1314 College Algebra or MATH 1372 Technical College Algebra	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 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)

May only be awarded along with or following completion of Associate or higher-level degree.

	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. Lab fee required. (SCANS 1, 5, 8, 9) 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. Lab fee required. (SCANS 3, 5, 8, 9) 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. Lab fee required. (SCANS 5, 8, 9) 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. Lab fee required. (SCANS 1, 2, 3, 8, 10) Prerequisite: None.

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 HVAC System Troubleshooting
(3-3) ..... 4 hours
Competencies prepare students to troubleshoot refrigeration and air conditioning systems and use troubleshooting charts as well as deal with customer's expectations. Emphasizes the mechanical refrigeration system. Lab fee required. (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. Lab fee required. (SCANS 1, 2, 7, 8) Prerequisite: HVAC 1400 and 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. Lab fee required. (SCANS 3, 5, 6, 8) Prerequisite: None.

History *(see Social Sciences)*

Human Development *(see Orientation)*

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**
CDEC 1393 Special Topics in Family Living and Parenthood (Abuse and Neglect) [formerly CHLD 1304]	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: Jim McKown, chair; Sidney Lyle, Brad Miller, 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	**4**
*OFST 1404 Beginning Word Processing or *OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	4
Major Requirements	**38**
*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 2520 County Corrections	5
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 1390 Armed Private Security Investigator	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 2385 Spanish for Law Enforcement and Emergency Workers	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
Total Semester Hours	**68**

**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.*

***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.*

Students must complete 68 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	**4**
*OFST 1404 Beginning Word Processing or	
*OFST 1421 Keyboarding and Document Preparation or	
OFST 1422 Business Productions	4
Major Requirements	**38**
*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 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
*CRIJ 2520 County Corrections	5
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
Total Semester Hours	**68**

**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.*

***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.*

Students must complete 68 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	**7**
*COSC 1301 Introduction to Computer Systems	3
*OFST 1404 Beginning Word Processing or	
*OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	4
Major Requirements	**11**
*CRIJ 1301 Introduction to Criminal Justice	3
*CRIJ 1307 Crime In America	3
*CRIJ 2520 County Corrections	5
Total Semester Hours	**18**

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**
*CRIJ 1301 Introduction to Criminal Justice or *COSC 1301 Introduction to Computer Systems	3
*OFST 1404 Beginning Word Processing or *CRIJ 1307 Crime In America or	
*OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	3
Major Requirements	**9**
CRIJ 1371 State Prison Guard Theory and Technique	3
CRIJ 1372 State Prison Guard Procedure	3
CRIJ 1373 State Prison Guard Skills	3
Total Semester Hours	**15**

Prior to admission to the correctional officer program, applicants must be approved by the TDCJ-ID which requires 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	**13**
*COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
*OFST 1404 Beginning Word Processing or	
*OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	4
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speaking	3

Major Requirements	**23**
*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 2520 County Corrections	5
Total Semester Hours	**36**

**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

May only be awarded along with or following completion of Associate or higher-level degree.

	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 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 State Prison Guard 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 State Prison Guard 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 State Prison Guard 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 in 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, the authority of those serving in "loco-parentis," kinds of searches—vehicle, houses, packages and persons –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 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
(3-0) ..... 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
(3-2) ..... 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. (SCANS 2, 5, 6, 7, 9, 10, 11) Lab fee required. 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 2520 County Corrections (Jail Operation & Management)
(5-0) ..... 5 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 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; Cindy Casparis.

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 Science (six to eight 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	**30**
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	
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 2350 Environmental Law	3
LEGL 2355 Fundamentals of Criminal Law	3
LEGL 2360 CLA Review	3
BUSI 2301 Business Law	3
OFST 2415 Legal Transcription	4
Total Semester Hours	**68**

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

Course of Study for Associate in Applied Science Degree
Legal Assistant

	Semester Hrs
General Education Requirements	**17**
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 1314 College Algebra or MATH 1372 Technical College Algebra or MATH 1324 Mathematical Analysis for Business I	3
*PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech or SPCH 1315 Public Speaking	3

Major Requirements	**42**
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 Procedures	3
LEGL 2302 Legal Research	3
LEGL 2311 Wills, Trusts, and Probate Administration	3
LEGL 2312 Torts, Insurance, and Claims Investigation	3
LEGL 2316 Techniques of Litigation Practice/Procedure	3
LEGL 2317 Administrative Law	3
LEGL 2360 CLA Review	3
LEGL 2350 Environmental Law	3
LEGL 2355 Fundamentals of Criminal Law	3
LEGL 2377 Cooperative Work Experience	3
Related Requirements	**11**
BUSI 2301 Business Law	3
OFST 1404 Beginning Word Processing	4
OFST 2415 Legal Transcription	4
Total Semester Hours	**70**

**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	**20**
LEGL 1301 Introduction to Legal Writing	3
LEGL 1302 Introduction to Paralegalism	3
LEGL 2302 Legal Research	3
LEGL 2377 Cooperative Work Experience	3
OFST 1404 Beginning Word Processing	4
OFST 2415 Legal Transcription	4
Total Semester Hours	**26**

A total of 26 semester hours and a minimum grade point average of 2.0 are required for a level I—legal assistant—certificate. For a level II advanced legal assistant, the 26 semester hours specified in level I certificate—legal assistant—plus the following courses are required:

Level II - Advanced Legal Assistant

	Semester Hrs
General Education Requirements	**3**
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**21**
LEGL 1304 Principles of Family Law	3
LEGL 1305 Introduction to Civil Litigation	3
LEGL 2301 Legal Drafting and Office Practice	3
LEGL 2311 Wills, Trusts and Probate Administration	3
LEGL 2312 Torts, Insurance and Claims Investigation	3
LEGL 2316 Techniques of Litigation Practice/Procedures	3
LEGL 2317 Administrative Law	3
Total Semester Hours	**50**

National Association of Legal Assistants (NALA) —Upon completion of the associate degree or certificate program, students may 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
(3-0) ..... 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) 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 wills and trusts 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
The student 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
(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 2350 Environmental Law
(3-0) ..... 3 hours
An examination and review of statutory, administrative and case law concerning the protection of environmental quality in the United States. Basic principles, policies and procedures as embodied in federal and state regulatory programs will be scrutinized. (SCANS 1, 2, 4, 7, 10) Prerequisite: LEGL 1305.

LEGL 2355 Fundamentals of Criminal Law
(3-0) ..... 3 hours
Student 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: Consent of the department chair.

LEGL 2360 CLA Review
(3-0) ..... 3 hours
An examination and review of the sections of the Certified Legal Assistants exam administrated by the National Association of Legal Assistants (NALA). The goal of the course is to prepare students to use knowledge gained in previous courses to successfully pass the CLA exam and obtain their national certification.

LEGL 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 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 or consent of the department chair.

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 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
General Maintenance	**27**
BLDG 1602 Carpentry I	6
BLDG 1604 Carpentry II	6
ELEC 1401 D.C. Circuits	4
HVAC 1404 Heating	4
MAIN 2377 Cooperative Work Experience	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
Total Semester Hours	**63**

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

Maintenance Technology Courses

MAIN 1402 Plumbing Fundamentals
(3-3) ..... 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. Lab fee required. (SCANS 1, 2, 3, 4, 9, 10) 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 Muñoz, 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.*
***Indicates courses which may be articulated by tech-prep agreement with high school.*

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 1301 Composition and Rhetoric or 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 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
MGMT 1301 Introduction to Management	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 or 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 or BCIS 1401 Introduction to Computer Information Systems or **COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	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 or **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
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**

**Indicates courses which may be articulated by tech-prep agreement with high school.*

Level III - Management Advanced Skills Certificate

May only be awarded along with or following completion of Associate or higher-level degree.

	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. .....3hours

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

(2-0) .....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 or MGMT 1331 or consent of department chair.

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: MGMT 1321 or MGMT 1331 or consent of department chair.

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, Kris Markman.

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	**49**
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 or Science (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
Major Requirements	**6**
COMM 1307 Introduction to Mass Communications	3
COMM 1335 Survey of Radio and Television	3
AND any 9 hours selected from the following courses	**9**
COMM 1318 Basic Photography I	3
COMM 1336 Television Production I	3
COMM 1337 Television Production II	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 2311 News Gathering and Writing I	3
COMM 2315 News Gathering and Writing II	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
Total Semester Hours	**64**

**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	**49**
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 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
Major Requirements	**3**
COMM 1307 Introduction to Mass Communications	3
AND any 12 hours selected from the following courses	**12**
COMM 1131 Publications	1
COMM 1132 Publications	1
COMM 1316 News Photography	3
COMM 1318 Basic Photography I	3
COMM 1319 Basic Photography II	3
COMM 1335 Survey of Radio and Television	3
COMM 1336 Television Production I	3
COMM 2131 Publications	1
COMM 2132 Publications	1
COMM 2303 Audio and Radio Production	3
COMM 2311 News Gathering and Writing I	3
COMM 2315 News Gathering and Writing II	3
COMM 2325 Practicum in Electronic Media	3
COMM 2326 Practicum in Electronic Media	3
Total Semester Hours	**64**

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

Mass Communication Courses

COMM 1131, 1132, 2131, 2132 Publications (09.0401.5426)

(0-5) ..... 1 hour each

Gives students the opportunity to tailor their Odessa College experience to further their career goals in mass communication. Students will work on the staff of at least one of the official college publications for up to five hours a week under faculty supervision. (SCANS 5, 6, 7, 9) Prerequisites: COMM 1307; TASP competency in reading and writing or consent of the instructor.

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 I (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 1337 Television Production II (10.0104.5226)
(3-0) ..... 3 hours
Continuation of the television production sequence. 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 the instructor.

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. Lab fee required. (SCANS 5, 8, 9, 10, 11) 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)
(2-3) ..... 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. Lab fee required. (SCANS 5, 8, 9, 10, 11) 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 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 2311 News Gathering and Writing I (09.0401.5726)
(3-0) ..... 3 hours
Introduces the basic fundamentals of news writing for all mass media. Students will be instructed in the methods and techniques used for gathering, processing and delivering news in a professional manner. (SCANS 2, 7, 9) Prerequisites: COMM 1307, basic typing skills and competency in diction and grammar required.

COMM 2315 News Gathering and Writing II (09.0401.5826)
(3-0) ..... 3 hours
Continuation of the news gathering and writing sequence. Specialized news story forms will be highlighted with an emphasis on advanced reporting techniques. Students will write stories for broadcast during the news programs on KOCV-FM. (SCANS 7, 9) Prerequisites: COMM 2311 or consent of the instructor.

COMM 2324 Practicum in Electronic Media (09.0701.5326)
(2-4) ..... 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. Lab fee required. (SCANS 5, 8, 9, 10, 11) 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)
(2-4) ..... 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. Lab fee required. (SCANS 5, 8, 9, 10, 11) 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)
(2-4) ..... 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. Lab fee required. (SCANS 5, 8, 9, 10, 11) 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 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.

Mathematics

Faculty: Yancy Nuñez, chair; George Brewer, Jim Camp, Dr. James Fields, Shawna Masters, 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: Completion of MATH 0375 or 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: Completion of MATH 0375 or 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: Completion of MATH 0375 or 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: Completion of MATH 0375 or 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 (32.0104.5137)
(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 0375 Intermediate Algebra (32.0104.5237)
(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 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 (66 hours) 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, mathematics, communications, layout and blueprint reading so as to provide students with sufficient knowledge for entry employment in the trade.

The Industrial Welding Option (65 hours) 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 1332 Structures of College Mathematics I 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

and one of the following two options

Industrial Machinist Option

	Semester Hrs
Technical Core	**18**
DFTG 1405 Technical Drafting I (DRAF 1401) or DFTG 1409 Basic Computer Aided Drafting (DRAF 2408)	4
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
OSHA 2395 Industrial Safety	3
PETR 1300 Petroleum Overview	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4

	Semester Hrs
Major Requirements	**31**
MACH 2404 CNC Programming and Application 2-Axis Lathe	4
MACH 2405 CNC Programming and Application 3-Axis Mill	4
MCHN 1405 Metals and Heat Treatment (MACH 2403)	4
MCHN 1441 Basic Machine Shop II (MACH 1402)	4
MCHN 1413 Basic Milling Operations (MACH 1403)	4
MCHN 2433 Advanced Lathe Operations (MACH 2401)	4
MCHN 2437 Advanced Milling Operations (MACH 2402)	4
MCHN 2381 Cooperative Education—Machinist/Machine Technologist (MACH 2377)	3
Total Semester Hours	**66**

Industrial Welding Option

	Semester Hrs
Technical Core	**18**
DFTG 1405 Technical Drafting I (DRAF 1401)	4
MCHN 1438 Basic Machine Shop Fundamentals (MACH 1401)	4
OSHA 2395 Industrial Safety	3
PETR 1300 Petroleum Overview	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4

	Semester Hrs
Major Requirements	**27**
WLDG 1413 Introduction to Blueprint Reading for Welders (WELD 1403)	4
WLDG 1430 Introduction to Gas Metal Arc (MIG) Welding (WELD 2402)	4
WLDG 1434 Introduction to Gas Tungsten Arc (TIG) Welding (WELD 2404)	4
WLDG 1435 Introduction to Pipe Welding (WELD 1402)	4
WLDG 1437 Introduction to Metallurgy (WELD 2403)	4
WLDG 2381 Cooperative Education—Welder/Welding Technologist (WELD 2377)	3
WLDG 2406 Intermediate Pipe Welding (WELD 2401)	4
Elective (must be outside major area)	**3**
Total Semester Hours	**65**

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

Certificates of Technology in Metal Trades Technologies

Certificates of technologies are available in the following job-specific fields. See the department chair for course requirements and Permian Basin job opportunities.

Level I certificates are TASP-waived.

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
DFTG 1405 Technical Drafting (DRAF 1401) or DFTG 1409 Basic Computer Aided Drafting (DRAF 2408)	4
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
MACH 2404 CNC Programming and Application 2-Axis Lathe	4
MACH 2405 CNC Programming and Application 3-Axis Mill	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
Total Semester Hours	**25**

Level I - Milling Machine Operator Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401) or DFTG 1409 Basic Computer Aided Drafting (DRAF 2408)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
MCHN 1413 Basic Milling Operations (MACH 1403)	4
MCHN 1441 Basic Machine Shop II (MACH 1402)	4
MCHN 2433 Advanced Lathe Operations (MACH 2401)	4
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
Total Semester Hours	**26**

Level I - Engine Lathe Operator Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401) or DFTG 1409 Basic Computer Aided Drafting (DRAF 2408)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
MCHN 1441 Basic Machine Shop II (MACH 1402)	4
MCHN 2433 Advanced Lathe Operations (MACH 2401)	4
Total Semester Hours	**22**

Level I - General Welder Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
WLDG 1435 Introduction to Pipe Welding (WELD 1402)	4
Total Semester Hours	**18**

Level I - Fitter Welder Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
WLDG 1413 Introduction to Blueprint Reading for Welders (WELD 1403)	4
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
WLDG 1435 Introduction to Pipe Welding (WELD 1402)	4
Total Semester Hours	**22**

Level I - Certified Welder Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
WLDG 1435 Introduction to Pipe Welding (WELD 1402)	4
WLDG 1434 Introduction to Gas Tungsten Arc (TIG) Welding (WELD 2404)	4
WLDG 2406 Intermediate Pipe Welding (WELD 2401)	4
Total Semester Hours	**26**

Level I - Pipe Welding Foreman Option

	Semester Hrs
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
WLDG 1413 Introduction to Blueprint Reading for Welders (WELD 1403)	4
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
WLDG 1430 Introduction to Gas Metal Arc (MIG) Welding (WELD 2402)	4
WLDG 1435 Introduction to Pipe Welding (WELD 1402)	4
WLDG 1434 Introduction to Gas Tungsten Arc (TIG) Welding (WELD 2404)	4
WLDG 2406 Intermediate Pipe Welding (WELD 2401)	4
Total Semester Hours	**34**

Level II - Machinist Option

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401) or DFTG 1409 Basic Computer Aided Drafting (DRAF 2408)	4
MACH 2404 CNC Programming and Application 2-Axis Lathe	4
MACH 2405 CNC Programming and Application 3-Axis Mill	4
MATH 1314 College Algebra or MATH 1372 Technical College Algebra	3
MCHN 1405 Metals and Heat Treatment (MACH 2403)	4
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
MCHN 2433 Advanced Lathe Operations (MACH 2401)	4
MCHN 1441 Basic Machine Shop II (MACH 1402)	4
MCHN 2381 Cooperative Education–Machinist/Machine Technologist (MACH 2377)	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
Total Semester Hours	**44**

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
DFTG 1405 Technical Drafting (DRAF 1401) or DFTG 1409 Basic Computer Aided Drafting (DRAF 2408)	4
MACH 2404 CNC Programming and Application 2-Axis Lathe	4
MACH 2405 CNC Programming and Application 3-Axis Mill	4
MATH 1314 College Algebra or MATH 1372 Technical College Algebra	3
MCHN 1405 Metals and Heat Treatment (MACH 2403)	4
MCHN 1413 Basic Milling Operations (MACH 1403)	4
MCHN 1438 Basic Machine Shop I (MACH 1401)	4
MCHN 1441 Basic Machine Shop II (MACH 1402)	4
MCHN 2381 Cooperative Education—Machinist/Machine Technologist (MACH 2377)	3
MCHN 2433 Advanced Lathe Operations (MACH 2401)	4
OSHA 2395 Industrial Safety	3
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
Total Semester Hours	**51**

Level II - Welding Machine Operator Option

	Semester Hrs
COSC 1301 Introduction to Computer Systems	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
DFTG 1405 Technical Drafting (DRAF 1401)	4
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or MATH 1372 Technical College Algebra	3
OSHA 2395 Industrial Safety	3
WLDG 1413 Introduction to Blueprint Reading for Welders (WELD 1403)	4
WLDG 1421 Introduction to Welding Fundamentals (WELD 1401)	4
WLDG 1430 Introduction to Gas Metal Arc (MIG) Welding (WELD 2402)	4
WLDG 1434 Introduction to Gas Tungsten Arc (TIG) Welding (WELD 2404)	4
WLDG 1435 Introduction to Pipe Welding (WELD 1402)	4
WLDG 1437 Introduction to Metallurgy (WELD 2403)	4
WLDG 2406 Intermediate Pipe Welding (WELD 2401)	4
Total Semester Hours	**44**

Machine Technology Courses

MACH 2404 CNC Programming and Application 2-Axis Lathe
(2-6) ..... 4 hours
Presents operations of computerized numerical control (CNC) 2-axis lathe using a variety of hardware and software. Students will understand and interpret the terminology related to programming of 2-axis lathe 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. Lab fee required. (SCANS 1, 3, 5, 6, 8, 9) Prerequisite: MCHN 2437 or consent of department chair.

MACH 2405 CNC Programming and Application 3-Axis Mill
(2-6) ..... 4 hours
Presents operations of computerized numerical control (CNC) 3-axis mill using a variety of hardware and software. Students will understand and interpret the terminology related to programming of 3-axis mill and other 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. Lab fee required. (SCANS 1, 3, 5, 6, 8, 9) Prerequisite: MACH 2404 or consent of department chair.

MCHN 1405 Metals and Heat Treatment [formerly MACH 2403] (48.0501)
(2-3) ..... 4 hours
Designed for students going into the workforce as CNC operators, manual machinists, tool designers or heat treat operators. Topics include properties of metals and heat treatment of metals. The student will identify chemical, mechanical and physical properties of materials; determine the hardness and strength of ferrous and nonferrous metals; and use heat treat procedures to change the properties of the metal. 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. Lab fee required. (SCANS 1, 2, 6, 8) Prerequisite or corequisite: None.

MCHN 1413 Basic Milling Operations [formerly MACH 1403] (48.0501)
(2-6) ..... 4 hours
An introduction to the common types of milling machines, basic parts, nomenclature, basic operations and procedures, machine operations, safety; machine mathematics; blueprint reading; and theory. This is a follow-up course to MCHN 1441. The student will describe milling parts and functions; use formulas to calculate speeds and feeds; identify types of milling machines; describe the difference between climb and conventional milling; calculate speeds and feeds for milling machines; set up milling machines; and operate milling machines. 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 work performance and to apply advanced machine practices to the students' performance. Lab fee required. (SCANS 1, 3, 4, 5, 8, 9, 10) Prerequisite or corequisite: MCHN 1441 or consent of department chair.

MCHN 1438 Basic Machine Shop I [formerly MACH 1401] (48.0501)
(2-6) ..... 4 hours
An introduction to machine shop theory, math and terminology, basic bench work and part layout using a variety of common measuring tools. Application of basic operation of machine tools, such as bandsaw, grinders, drill press, lathe and mills with common hand tools. The student will identify machine parts and their functions; select layout tools and techniques; define machine shop terminology; perform basic machine setups; calculate common shop formulas; perform semi-precision and precision layout; execute grinding techniques; demonstrate basic machine operations; apply proper measuring tools; select and acquire 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 machines and perform daily maintenance, and are responsible for time management and performance. Requires grinding and sharpening single-point cutting tools for lathe and drill press projects. Lab fee required. (SCANS 1, 3, 4, 7, 8, 9, 10, 11) Prerequisite: None.

MCHN 1441 Basic Machine Shop II [formerly MACH 1402] (48.0501)
(2-6) ..... 4 hours
A continuation of Basic Machine Shop I (MCHN 1438). The student will identify machine parts and their functions; select layout tools and techniques; define machine shop terminology; perform basic machine setups; calculate common shop formulas; perform semi-precision layout; execute grinding techniques; demonstrate basic machine operations; and apply proper measuring tools. 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 and set up and requires classroom and laboratory performance to demonstrate maximum machine tool performance. Lab fee required. (SCANS 1, 3, 4, 8, 9, 10) Prerequisite or corequisite: MCHN 1438 or consent of department chair.

MCHN 2381 Cooperative Education—Machinist/Machine Technologist [formerly MACH 2377] (48.0501)
(1-20) ..... 3 hours
Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. As outlined in the learning plan, the student will master the theory, concept and skills involving the tools, materials, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental and legal systems associated with the particular occupation and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed-upon workplace goals and objectives. 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.

MCHN 2433 Advanced Lathe Operations [formerly MACH 2401] (48.0501)
(2-6) ..... 4 hours
An advanced study of the lathe operations. The identification and/or use of special cutting tools and support tooling, such as form tools, carbide inserts, taper attachments, follower, and steady rest. Close tolerance machining required. The student will identify and apply special lathe tooling; interpret advanced operation formulas; list machine and work setup procedures; list and explain machine operation procedures; calculate speeds and feeds; calculate machine movement; perform advanced setups utilizing support tooling; and perform advanced machining operations to specifications. Requires more complex projects and higher performance standards. Lab fee required. (SCANS 1, 4, 5, 8, 9) Prerequisite or corequisite: MCHN 1413 or consent of department chair.

MCHN 2437 Advanced Milling Operations [formerly MACH 2402] (48.0501)
(2-6) ..... 4 hours
An advanced study of milling machine operations. Identification and/or use of milling cutters and support tooling including end mills, slab mills, face mills, involute cutters, rotary tables, and indexing heads. A review of related math and machine theory. This is a follow-up course to MCHN 2433. The student will identify specialty cutters; interpret advanced operations formulas; calculate speeds and feeds; calculate machine coordinates; perform set up of advanced milling procedures; and perform advanced milling operations. The student will demonstrate proficiency in task interpretation and ability to communicate problem-solving techniques to customers and employers. Competencies stress quality of finished products. Lab fee required. (SCANS 1, 4, 5, 6, 8, 9) Prerequisite or corequisite: MCHN 2433 or consent of department chair.

Welding Technology Courses

WLDG 1413 Introduction to Blueprint Reading for Welders [formerly WELD 1403] (48.0508)
(2-6) ..... 4 hours
A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description and welding processes, including systems of measurement and industry standards. Interpretation of plans and drawings used by industry. The student will define terms and abbreviations; and identify and explain object views, lines and dimensions. The student will identify, explain and interpret weld symbols; identify structural shapes; demonstrate the proper use of measuring devices; read and interpret blueprints, read welding detail drawings; and calculate dimensions and material. Students will be responsible for choosing the proper procedures, tools and equipment to perform assigned actions and be able to explain their selections. Lab fee required. (SCANS 1, 3, 6, 8, 9) Prerequisite or corequisite: WLDG 1435 and DFTG 1405 or consent of department chair.

WLDG 1421 Introduction to Welding Fundamentals [formerly WELD 1401] (48.0508)
(2-6) ..... 4 hours
An introduction to the fundamentals of equipment used in the oxyacetylene and arc welding, including welding and cutting safety, basic oxyacetylene welding and cutting, basic arc welding processes and basic metallurgy. The student will demonstrate safety procedures associated with oxyacetylene and arc process; perform basic welds using oxyacetylene and arc welding equipment; and identify ferrous and nonferrous metals. 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. Lab fee required. (SCANS 5, 6, 8, 9, 10, 11) Prerequisite: None.

WLDG 1430 Introduction to Gas Metal Arc (MIG) Welding [formerly WELD 2402] (48.0508)
(2-6) ..... 4 hours
A study of the principles of gas metal arc welding, setup and use of GMAW equipment, and safe use of tools/equipment. Instruction in various joint designs. The student will describe welding positions with various joint designs on plate; describe safety rules and equipment used; describe the efforts of welding parameters in GMAW; and understand safety rules, equipment used and testing performed by visual inspection. Students will weld various types of structural material and diagnose welding problems and perform visual inspections. Competencies include advanced skills using gas metal arc welding (GMAW) on steel, stainless steel and aluminum. Emphasizes mixture of gases and their effect on arc and welds. Welds tested by AWS standards. Students will learn problem-solving techniques specific to GMAW and FCAW. Lab fee required. (SCANS 8, 9) Prerequisite or corequisite: WLDG 1421 or WLDG 2406 or consent of department chair.

WLDG 1434 Introduction to Gas Tungsten Arc (TIG) Welding [formerly WELD 2404] (48.0508)
(2-6) ..... 4 hours
An introduction to the principles of gas tungsten arc welding (GTAW), setup/use of GTAW equipment and safe use of tools and equipment. Welding instruction in various positions on joint designs. The student will describe various joint designs; describe safety rules and equipment; and describe the effects of welding parameters in GTAW; and will weld various structural materials. 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. Lab fee required. (SCANS 8, 9) Prerequisite or corequisite: WLDG 1421 or consent of the department chair.

WLDG 1435 Introduction to Pipe Welding [formerly WELD 1402] (48.0508)
(2-6) ..... 4 hours
An introduction to welding of pipe using the shielded metal arc welding process, including electrode selection, equipment setup and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes. The student will describe equipment and required pipe preparation and perform 1G and 2G welds using various electrodes. 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. Lab fee required. (SCANS 4, 6, 7, 8, 9) Prerequisite or corequisite: WLDG 1421 or consent of department chair.

WLDG 1437 Introduction to Metallurgy [formerly WELD 2403] (48.0508)
(2-6) ..... 4 hours
A study of ferrous and nonferrous metals from the ore to the finished product. Emphasis on metal alloys, heat treating, hard surfacing, welding techniques, forging, foundry processes, and mechanical properties of metal including hardness, machinability and ductility. The student will describe technical terms used in the various phases of metallurgy, from early history to classification of steel. The student will discuss ferrous and nonferrous metals and how they are processed and used in industry; and describe mechanical and physical properties, surface treatment and heat treatment of metals. Lab fee required. (SCANS 1, 2, 6, 8) Prerequisite: None.

WLDG 2381 Cooperative Education—Welder/Welding Technologist [formerly WELD 2377] (48.0508)
(1-20) ..... 3 hours
Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer and the student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. As outlined in the learning plan, the student will master the theory, concepts and skills involving the tools, materials, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental and legal systems associated with the particular occupation and the business/industry; demonstrated ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. 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.

WLDG 2406 Intermediate Pipe Welding [formerly WELD 2401] (48.0508)
(2-6) ..... 4 hours
A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G and 6G using various electrodes. Topics covered include electrode selection, equipment setup and safe shop practices. The student will describe equipment and required pipe preparation. The student will perform 1G, 2G, 5G and 6G welds using various electrodes. Emphasizes technology of welding carbon steel plate and pipe with LH 7018 and stainless electrodes. Welds tested by AWS standards. Lab fee required. (SCANS 1, 3, 4, 5, 8) Prerequisite: WLDG 1421 or WLDG 1435 or consent of department chair.

Music

Faculty: Dr. Kathryn Hoppe, chair; Lonnie Clark, Randy Talley, Dr. Charlotte Whitaker.

The Odessa College music department, offering an associate in 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)
(0-6) ..... 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 1301 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 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 audiovisual 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: MUSI 1312. Prerequisite for MUSI 2312: MUSI 2311.

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, CDs, 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 one-half hour lesson on a secondary instrument. Non-music majors may have a one-half hour or one-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) Private instruction fee required. Prerequisite: None.

Non-Music Major Courses

MUAP 1189, 1190, 2189, 2190 Applied Music (50.0903.5430)
(0-1/2) ..... 1 hour each

MUAP 1289, 1290, 2289, 2290 Applied Music (50.0903.5430)
(0-1) ..... 2 hours 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: Dr. Carol Boswell, chair; Clarice Rowland, assistant director and coordinator of RN-Evening Direct Option Program; Marylin Boomer, Laura Cralle, Wanda Davis, Dee Ann Decker, Patty Jordan, Eva Mauldin, Gail Meagher, Jan Phillips, Pat Ritchey, Robbie Rogers, Lori Wingate.

Faculty, Andrews: Patricia Bayless, chair; Melissa Ray.

Faculty, Monahans: Stacy Wallis, chair; Linda Trimmier.

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 included 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 included 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 Monahans 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. Information concerning tuition and fees, and length of the program are available from NLNAC: 350 Hudson Street; New York, NY 90014; 800-669-1656

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: June 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. Students wishing to apply for admission or persons seeking additional information should contact the counseling center at Odessa College.
10. All courses (nursing and non-nursing) must be passed with a grade of "C" of better.

Admission Requirements for LVN Option, Andrews and Monahans 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.
7. All courses must be passed with a grade of "C" or better.

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

*PHED 1100 Lifestyle Assessment and Modification	1
SPCH 1315 Public Speaking	3

First Semester

PSYC 2308 Child Psychology	3
NURS 1102 Adult Assessment	1
NURS 1503 Fundamentals of Nursing	5
NURS 1504 Fundamentals of Nursing Clinical	5

Second Semester

COSC 1301 Introduction to Computer Systems	3
NURS 1306 Nursing Clinical I	3
NURS 1805 Care of Adult Populations	8

Summer Sessions I and II

**NURS 1222 Nursing Clinical 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 Clinical	5

Second Semester
NURS 1306 Nursing Clinical I 3
NURS 1805 Care of Adult Populations 8

Summer Session I and II
**NURS 1222 Nursing Clinical II 2
**NURS 1821 Nursing Care I 8

***Vocational level (These courses are optional.)*

Second 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 183 or the RN Evening option found on page 184.

	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

SPCH 1315 Public Speaking	3

First Semester

ENGL 1301 Composition and Rhetoric	3
NURS 1102 Adult Assessment	1
NURS 1503 Fundamentals of Nursing	5
NURS 1504 Fundamentals of Nursing Clinical	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 Clinical I	3
NURS 1805 Care of Adult Populations	8
PSYC 2308 Child Psychology	3

Summer Sessions I and II

**NURS 1222 Nursing Clinical II	2
**NURS 1821 Nursing Care I	8

Completers of NURS 1821 with a grade of "C" or higher are eligible to (a) receive a 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.
***Vocational level. (These courses are optional.)*

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 in applied science 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 Monahans Extensions

The LVN Option is offered at the Andrews and Monahans 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
(3.2-0) [5 weeks] ..... 1 hour (long term)
(3.2-0) [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. Lab fee required. (SCANS 1, 2, 5, 6, 9, 10, 11) Prerequisites: BIOL 2401 and 2402.

NURS 1201 Pharmacology
(1-3) [16 week] ..... 2 hours (long term)
(2-5) [9 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, MATH 1332 (college level).

NURS 1222 Nursing Clinical 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. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisite: NURS 1805. Corequisite: NURS 1821.

NURS 1306 Nursing Clinical 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.) Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisites: NURS 1503 and NURS 1504. Corequisite: NURS 1805.

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 complement theory. Lab fee required. (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.

NURS 1504 Fundamentals of Nursing Clinical

(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. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, MATH 1332 and NURS 1201. Corequisite: NURS 1503.

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 complement theory. Successful completion of course makes the student eligible to enter second year of the Career Ladder Option curriculum. Lab fee required. (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

(3-17) ..... 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.

NURS 1612 Vocational Nursing II

(4-11) ..... 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. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None. Corequisite: NURS 1611.

NURS 1613 Vocational Nursing III

(2-23) ..... 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

(3-18) ..... 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. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: NURS 1611 and NURS 1612. Corequisite: NURS 1613.

NURS 1615 Vocational Nursing V

(1-27) ..... 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. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: NURS 1611, NURS 1612, NURS 1613 and NURS 1614.

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 complement theory. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisites: NURS 1503 and NURS 1504. Corequisite: NURS 1306.

NURS 1821 Nursing Care I

(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 complement theory. Lab fee required. (SCANS 1, 2, 5, 6, 7, 10, 11) Prerequisite: NURS 1805. Corequisite: NURS 1222.

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. Lab fee required. (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. Lab fee required. (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. Lab fee required. (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, and 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. Lab fee required. (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 are included. Emphasizes implementation of the nursing process in critical paths. Administers medications and treatments following established protocols. Utilizes computer assignments to complement theory. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisite: NURS 2807.

Occupational Safety and Health Technology

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, including those working in oil and gas, nursing homes, grocery and retail stores, etc.

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	3
MGMT 2304 Personnel and Human Relations or 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: EPA	3
OSHA 2398 Environmental Issues: Behavioral Safety	3
Related Requirements	**8**
EMED 1501 Basic Emergency Care	5
PETR 1380 Computers for Petroleum	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 — 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: EPA	3
Related Requirements	**3**
PETR 1380 Computers for Petroleum	3
Total Semester Hours	**30**

Occupational 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

(3-1) ..... 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. Lab fee required. (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

(3-1) ..... 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. Lab fee required. (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

(3-1) ..... 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. Lab fee required. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

OSHA 2396 Hazardous Waste and Emergency Response

(3-1) ..... 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. Lab fee required. (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	**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 1324 Mathematical Analysis 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 **47**
- 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 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions 4
- OFST 1422 Business Productions or OFST 2410 Advanced Business Productions 4
- *OFST 1424 Office Bookkeeping 4
- OFST 2377 Cooperative Work Experience 3
- OFST 2410 Advanced Business Productions or OFST 2402 Information Processing 4
- OFST 2401 Advanced Word Processing and Internet Access 4
- OFST 2420 Business Communication 4
- OFST 2421 Office Procedures 4

Related Requirements **6**
- BUSI 1301 Introduction to Business or MGMT 1301 Introduction to Management 3
- MGMT 2304 Personnel and Human Relations 3

Total Semester Hours **70**

**Indicates courses which may be articulated by agreement with high school.*
***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 **16**
- OFST 1401 Data Entry/Business Calculations 4
- *OFST 1404 Beginning Word Processing 4
  (If taking OFST 1421, delay until second semester and take OFST 1402)
- *OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions 4
- *OFST 1424 Office Bookkeeping 4

General Education Requirements **3**
- *COSC 1301 Introduction to Computer Systems 3
- SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

Total semester hours **22**

A total of 22 semester hours and a minimum 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 22 semester hours specified in level I—office clerk certificate—plus the following courses:

Semester Hrs

Major Requirements **31**
- OFST 1402 Business Language Skills 4
- OFST 1406 Basic Spreadsheet 4
- OFST 1422 Business Productions or OFST 2410 Advanced Business Productions 4
- OFST 2377 Cooperative Work Experience 3
- OFST 2401 Advanced Word Processing and Internet Access 4
- OFST 2402 Information Processing or OFST 2410 Advanced Business Communications 4
- OFST 2420 Business Communications 4
- OFST 2421 Office Procedures 4

General Education Requirements **3**
MATH 1314 College Algebra or
MATH 1324 Mathematical Analysis for Business or
MATH 1372 Technical College Algebra 3

Total Semester Hours **56**

A total of 56 semester hours and a minimum grade point average of 2.0 are required for a level II certificate.

Level III (Advanced Skills Certificate)
Office Management Specialist

Students may earn a level III certificate—advanced skills certificate—office management specialist by completing the following requirements.

Semester Hrs

Major Requirements **4**
OFST 2402 Information Processing or OFST 2440 Internet and Web Page Skills 4

Related Requirements **6**
MGMT 1302 Managerial Functions 3
MGMT 2301 Management Skills Development 3

Total Semester Hours **10**

A total of 10 semester hours and a minimum grade point average of 2.0 are required for a level III certificate—advanced skills certificate—office management specialist. Level III certificate may only be awarded along with or following completion of an associate or higher-level degree.

Course of Study for Associate in Applied Science
Office Systems Technology Legal 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 **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 1324 Mathematical Analysis 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

Major Requirements **50**
OFST 1324 Legal Terminology 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 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions 4
OFST 1422 Business Productions or
OFST 2401 Advanced Word Processing and Internet Access or
OFST 2410 Advanced Business Productions 4
*OFST 1424 Office Bookkeeping 4
OFST 2377 Cooperative Work Experience 3
OFST 2415 Legal Transcription 4
OFST 2420 Business Communication 4
OFST 2421 Office Procedures 4
OFST 2455 Legal Document Processing 4

Related Requirements **3**
MGMT 2304 Personnel and Human Relations 3

Total Semester Hours **70**

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

Certificates of Completion

Level I certificates are TASP-waived

Level I—Legal Office Clerk

	Semester Hrs
Major Requirements	**15**
OFST 1324 Legal Terminology	3
OFST 1401 Data Entry/Business Calculations	4
*OFST 1404 Beginning Word Processing	4
*OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	4
General Education Requirements	**6**
*COSC 1301 Introduction to Computer Systems	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Total Semester Hours	**21**

A total of 21 semester hours and a minimum 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—Legal Office Assistant

A total of 21 semester hours specified in level I certificate—legal office clerk—plus the following courses:

	Semester Hrs
Major Requirements	**35**
OFST 1402 Business Language Skills	4
OFST 1406 Basic Spreadsheet	4
OFST 1422 Business Productions or OFST 2401 Advanced Word Processing and Internet Access or OFST 2410 Advanced Business Productions	4
*OFST 1424 Office Bookkeeping	4
OFST 2377 Cooperative Work Experience	3
OFST 2415 Legal Transcription	4
OFST 2420 Business Communication	4
OFST 2421 Office Procedures	4
OFST 2455 Legal Document Processing	4
General Education Requirements	**3**
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business or MATH 1372 Technical College Algebra	3
Total Semester Hours	**59**

A total of 59 semester hours and a minimum grade point average of 2.0 are required for a level II certificate.

Level III—Legal Office Technology Specialist

Students may earn a level III certificate—advanced skills certificate—legal office technology specialist by completing the following requirements:

	Semester Hrs
Major Requirements	**4**
OFST 2402 Information Processing or OFST 2440 Internet and Web Page Skills	4
Related Requirements	**6**
LEGL 1302 Introduction to Paralegalism	3
LEGL 2301 Legal Drafting and Office Procedures	3
Total Semester Hours	**10**

A total of 10 semester hours and minimum grade point average of 2.0 for a level III certificate—advanced skills certificate—legal office technology specialist. Level III certificate may only be awarded along with or following completion of associate or higher-level degree.

Course of Study for Associate in Applied Science Degree

Office Systems Technology—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	**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 1324 Mathematical Analysis 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	**49**
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 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	4
OFST 1422 Business Productions or OFST 2401 Advanced Word Processing and Internet Access or OFST 2410 Advanced Business Productions	4
*OFST 1424 Office Bookkeeping	4
OFST 1515 Medical Insurance Coding and Terminology	5
OFST 2101 Computerized Medical Recordkeeping (8 weeks)	1
OFST 2377 Cooperative Work Experience	3
OFST 2408 Medical Transcription	4
OFST 2420 Business Communication	4
OFST 2421 Office Procedures	4
Related Requirements	**3**
MGMT 2304 Personnel and Human Relations	3
Total Semester Hours	**69**

A total of 69 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.

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

Course of Study for Certificate of Technology Options

Level I certificates are TASP-waived.

Level I - Medical Office Clerk

	Semester Hrs
Major Requirements	**17**
OFST 1401 Data Entry/Business Calculations	4
*OFST 1404 Beginning Word Processing	4
(If taking OFST 1421, delay until second semester and take OFST 1402)	
*OFST 1421 Keyboarding and Document Preparation or OFST 1422 Business Productions	4
OFST 1515 Medical Insurance Coding and Terminology	5
General Education Requirements	**6**
*COSC 1301 Introduction to Computer Systems	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Total Semester Hours	**23**

A total of 23 semester hours and a minimum 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 23 semester hours specified in level I certificate plus the following courses:

	Semester Hrs
Major Requirements	**32**
OFST 1402 Business Language Skills	4
OFST 1406 Basic Spreadsheet	4
OFST 1422 Business Productions or OFST 2401 Advanced Word Processing and Internet Access or OFST 2410 Advanced Business Productions	4
*OFST 1424 Office Bookkeeping	4
OFST 2101 Computerized Medical Recordkeeping (8 weeks)	1
OFST 2377 Cooperative Work Experience	3
OFST 2408 Medical Transcription	4
OFST 2420 Business Communication	4
OFST 2421 Office Procedures	4
General Education Requirements	**3**
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business or MATH 1372 Technical Algebra for Business	3
Total Semester Hours	**58**

A total of 58 semester hours and a minimum 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

Major Requirements

BIOL 2404 Human Anatomy and Physiology 4
OFST 2402 Information Processing or
OFST 2401 Advanced Word Processing and Internet Access or
OFST 2440 Internet and Web Page Skills 4
OFST 2417 Advanced Medical Transcription 4

Total Semester Hours 12

A total of 12 semester hours and a minimum grade point average of 2.0 are required for level III—advanced skills certificate—medical office technology specialist. Level III certificate may only be awarded along with or following completion of associate or higher-level degree.

Office Systems Technology Courses

OFST 1200 Basic Keyboarding Skills
(1-2) ..... 2 hours
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. Lab fee required. (SCANS 1, 4, 6, 9, 10) Prerequisite: None.

OFST 1324 Legal Terminology
(3-0) ..... 3 hours
Students will demonstrate the acquisition of a basic vocabulary, develop listening and learning skills, and will acquire and evaluate legal terms to prepare and interpret basic reports used in a typical legal office. (SCANS 1, 2, 6, 11) Prerequisite: None.

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. Lab fee required. (SCANS 1, 3, 4, 8, 9) Prerequisite: Math 0371 or consent of department chair.

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 1421 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. Lab fee required. (SCANS 2, 3, 6, 9) Corequisite: OFST 1401 or approval of instructor. Prerequisite: OFST 1421 or approval of department chair.

OFST 1421 Keyboarding and Document Preparation

(3-2) ..... 4 hours

Student will demonstrate touch-method skills on 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, 2, 3, 4, 6, 8, 9) Prerequisite: None.

OFST 1422 Business Productions

(3-2) ..... 4 hours

Students will develop additional keyboarding skills including composing and processing documents—business letters, reports and tabulations materials—on the computer. Student will demonstrate responsibility in following instructions and in practicing time management. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9, 10) Prerequisite: OFST 1421 or equivalent.

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. Lab fee required. (SCANS 1, 2, 3, 6, 8, 9, 10) Prerequisite: None.

OFST 1515 Medical Insurance Coding and Terminology

(5-0) ..... 5 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 inquiries, and communicating with patients. Student will demonstrate the acquisition of a basic vocabulary, develop listening and learning skills, and prepare and interpret basic reports used in a typical hospital or medical office. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 11) Prerequisite: None.

OFST 2101 Computerized Medical Recordkeeping

(1-1) ..... 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. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9, 11) Prerequisite: None.

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 2, 3, 4, 5, 6, 7, 9, 11) Prerequisite: Sophomore standing and consent of the department chair.

OFST 2401 Advanced Word Processing and Internet Access

(3-2) ..... 4 hours

Student will develop skill using advanced word processing applications including advanced formatting and desktop publishing. Student also will develop skills using the Internet, including downloading files using a Windows browser, Gopher, and a FTP program, create a World Wide Web home page and perform e-mail functions. 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, 8, 9, 10) Prerequisite: OFST 1404 (OFST 1422 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 2, 3, 4, 5, 6, 7, 8, 9, 10) Prerequisite: OFST 1404, (OFST 2304 may be taken concurrently).

OFST 2408 Medical Transcription
(3-2) ..... 4 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, 2, 3, 4, 6, 9) Prerequisite: OFST 1422, OFST 1515 or equivalent, or type 50 wpm, OFST 1404, or other word processing skills.

OFST 2410 Advanced Business Productions
(3-2) ..... 4 hours
Student will increase speed and accuracy using speed drills. Will develop skill in machine transcription, proofreading and producing mailable documents from unarranged material. Simulations in medical, legal or general office provide decision-making skills. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9) Prerequisite: OFST 1422 and OFST 2401 (may be taken concurrently).

OFST 2415 Legal Transcription
(3-2) ..... 4 hours
Student will demonstrate the acquisition of skills in vocabulary, listening, organizing, interpreting and transcribing basic reports used in a legal office. Provides transcription of actual dictation by lawyers. Lab fee required. (SCANS 1, 2, 3, 4, 6, 9) Prerequisite: OFST 1324, OFST 1422 or equivalent, or type 50 wpm, OFST 1404 or other word processing skills.

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 1515, OFST 2408, 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, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisite: OFST 1402, OFST 1422. (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. Lab fee required. (SCANS 2, 4, 6, 8, 10) Prerequisite: OFST 1402, OFST 1404, OFST 1406, OFST 1421. (OFST 1422 and OFST 2401 may be taken concurrently)

OFST 2440 Internet and Web Page Skills
(3-2) ..... 4 hours
Student will acquire extensive Internet skills utilizing Windows browser, Gopher and FTP programs. Student will demonstrate proficiency by using Internet tools in developing a World Wide Web home page and performing e-mail functions. Lab fee required. (SCANS 1, 6, 9, 10) Prerequisites: OFST 1404, OFST 1422 or consent of department chair.

OFST 2455 Legal Document Processing
(3-2) ..... 4 hours
Student will develop skill in integrating word processing with the production of all types of legal documents. Includes applications for problem solving, decision making and team skills. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10) Prerequisite: OFST 1404, OFST 1324.

Orientation

Faculty: Judy Merritt, director; Rodney Hernandez, Terri Pease, LaRae Phillips, 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. Students are required to complete a tour of the Learning Resources Center, a study skills component and a course evaluation. The course covers the policies, rules, regulations and services provided to students as well as the state-mandated TASP requirement. ORIE 1100, Orientation to Odessa College, is required for first-time students who are taking six or more credit hours. Exempted from this requirement are Dual Credit and Early Admissions students and certain other students under special conditions. All other first-time students who enroll in nine or more semester hours during their first semester at Odessa College should 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. Students are required to complete a tour of the Learning Resources Center, a study skills component and a course evaluation. 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.

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	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.*

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

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
- Approved Elective (see department chair for options) 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
- Approved Elective (see department chair for options) 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
- Approved Elective (see department chair for options) 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
Approved Elective (see department chair for options)	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 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

Competencies include performing and interpreting basic calculations and tests that are recognize the functions and properties of these various fluids, and prepare a daily report on his/hers findings. (SCANS 1, 2, 3, 6, 8, 9) 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 or 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. Lab fee required. (SCANS 4, 6, 8) 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. Lab fee required. (SCANS 4, 6, 8) 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. Lab fee required. (SCANS 4, 8) Prerequisite: TASP competency in reading, writing and math or consent of instructor.

PHOT 2311 Commercial Photography I

(1-7) ..... 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. Lab fee required. (SCANS 4, 6, 8) Prerequisites: COMM 1319 and PHOT 1362; TASP competency in reading, writing and math or consent of instructor.

PHOT 2312 Commercial Photography II

(1-7) ..... 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. Lab fee required. (SCANS 6, 8) 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. Lab fee required. (SCANS 5, 8) 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. Lab fee required. (SCANS 5, 8) 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. Lab fee required. (SCANS 8, 9) 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. Lab fee required. (SCANS 4, 8) 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. Lab fee required. (SCANS 4, 8) 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. Lab fee required. (SCANS 4, 8, 9) 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 utilizing Adobe Photoshop. 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. Lab fee required. (SCANS 4, 8) Prerequisites: COMM 1319; TASP competency in reading, writing and math, or consent of instructor.

Physical and Health Education

Faculty: Jim Carlson, chair; Karin Carlson, Paul Chavez, Tricia Floyd, Kenneth Hines, Pat Hodges, Betty Hudson, Orlando Ontiveroz, Calvin Sinkfield, Stephanie Thomas, Scott Walkinshaw, Jim Watkins, 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.

All physical education activity courses may be taken as a pass/fail option.

Course of Study for Associate in Science Degree

Exercise and Sport Science Option

	Semester Hrs
General Education Requirements	**45**
**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)	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 or higher level math	3
Science (with lab)	4
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	**67**

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

***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	**44**
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)	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
Science (with lab)	4
*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	**66**

**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. Lab fee required. (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 a 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. Lab fee required. (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. Lab fee required. (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 students (P.C.S.) to a variety of physical activities including; rhythmical movement, aquatics, hydro-fitness (resistance training), walking/jogging. P.C.S. 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. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Approval by the department chair.

PHED 1113 Weight Training, Advanced (36.0108.5128)
(0-3) ..... 1 hour
Continued improvement in strength and flexibility and the opportunity to develop specific muscle groups. Lab fee required. (SCANS 3, 4, 9, 10) Prerequisite: PHED 1111 or consent of the instructor.

Lifetime Activities

PHED 1114, PHED 1115, PHED 2116 Beginning, Intermediate and Advanced Horsemanship (36.0108.5128)
(0-3) ..... 1 hour each
Basic methods and techniques for various riding events such as rodeo, drill, show and speed horses. The course will cover rider preparation for performance, basic equipment and riding style. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Consent of instructor.

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. Lab fee required. (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 schottische), 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. Lab fee required. (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 (36.0108.7128)
(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 mid-winter 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. (SCANS 5, 9, 10) Prerequisite: Advanced swimming skills.

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 Fitness Swimming (36.0108.5128)
(0-3) ..... 1 hour
Aerobic fitness developed through lap swimming. Other fitness parameters include strength, flexibility, nutrition and proper body weight. Physiological principles of exercise. Lab fee required. (SCANS 4, 9, 10) Prerequisite: PHED 1147 or the ability to execute the five basic swimming strokes in deep water.

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. (SCANS 3, 4, 5, 9, 10) 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. Lab fee required. (SCANS 5, 9, 10) 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 (31.0506.7128)
(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. Lab fee required. (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 (31.0506.7228)
(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. Lab fee required. (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. Lab fee required. (SCANS 5, 7, 9, 10, 11) Prerequisite: None.

PHED 1308 Techniques of Officiating Sports I (12.0204.5128)
(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. (SCANS 5, 6, 7, 9, 10, 11) 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 1332 Game Skills for Equestrian Sports and Recreation (31.0101.5128)
(2-1) ..... 3 hours
Survey and development of skills necessary to perform equine sporting and recreational activities. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1346 Drug Use and Abuse (51.0301.5228)
(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: 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, nonverbal 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) Corequisite: PTAP 1502. Prerequisites: PTAP 1301 and PTAP 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, bed mobility and transfers, progressive gait training, vital signs, medical asepsis, dressings and bandaging are studied. (SCANS 5) Corequisite: PTAP 1301.

PTAP 1441 Clinical Practicum I

(2-14) ..... 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, PTAP 1401, PTAP 1302 and PTAP 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) Corequisite: PTAP 1302. Prerequisites: PTAP 1301 PTAP and PTAP 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 PTAP 2601. Prerequisites: PTAP 1301, PTAP 1401, PTAP 1302, PTAP 1502, and PTAP 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 PTAP 2601. Prerequisites: PTAP 1301, PTAP 1401, PTAP 1302, PTAP 1502 and PTAP 1441.

PTAP 2443 Clinical Practicum III

(2-14) ..... 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, PTAP 1401, PTAP 1441, PTAP 1302, PTAP 1502, PTAP 2401, PTAP 2601 and PTAP 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 and facilitation of responses desired in the performance of exercise. The acquisition of joint range of motion information by use of goniometry; sensory, coordination and postural assessments and treatment interventions; monitoring and correcting patient performance; decision-making, problem-solving and reasoning skills as they relate to therapeutic exercise from a diagnosis/symptom-related viewpoint are studied and integrated with kinesiology. (SCANS 6, 7, 9) Corequisites: PTAP 2401 and PTAP 2342. Prerequisites: PTAP 1301, PTAP 1401, PTAP 1302, PTAP 1502 and PTAP 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 progressive disabilities, traumatic brain injury, cerebral vascular accident, spinal cord injury, prosthetics, orthotics, cardiac rehabilitation, respiratory care, sports medicine, work hardening, burn care and pediatrics. This course is completed during the first part of the semester to allow for the final full-time clinical practicum. (SCANS 4, 9) Corequisite: PTAP 2443. Prerequisites: PTAP 1301, PTAP 1401, PTAP 1302, PTAP 1502, PTAP 1441, PTAP 2401, PTAP 2601 and PTAP 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 everyday life. Career paths offer students a wide selection of occupations including neuropsychology, clinical practice, research, teaching, industrial/organizational and communications. Psychology majors may choose between an associate of arts (A.A.) or an associate of science (A.S.) degree.

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 2371 Fundamental Research Design.*

Course of Study for Associate in Science Degree

Psychology

	Semester Hrs
General Education Requirements	**52**
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	**64**

**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	**52**
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 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	**64**

**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
Presents a wide array of interpersonal challenges relating to the workplace. 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 such 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
An in-depth study of human sexuality across the life cycle utilizing legal, ethical, sociological, biological and psychological perspectives. Course incorporates current research and theories to explore the impact of social and cultural expectations on human sexual behavior. (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 (42.1601.5142)
(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 are 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 2340 Current Issues in Psychology (formerly PSYC 2371) (42.0101.5540)
(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
Introduces the student to sociological concepts, theories and new ways of thinking about social issues such as poverty, inequality and deviance. Examines various social institutions and their contributions to social life; identifies the social groups that make up society; and explores the significance of culture and social structure for understanding human behavior. Telecourse and self-paced courses also available. (SCANS 6, 9) Prerequisite: None.

SOCI 1306 Social Problems (45.1101.5242)
(3-0) ..... 3 hours
Critically analyzes the causes of social policy, responses to and implications of numerous social problems utilizing a sociological imagination. Course includes field trips and guest speakers to obtain firsthand knowledge of social problems and to meet professionals who work directly with them. The course is designed to introduce students to social problems as well as to stimulate critical thinking about problems and their solutions. (SCANS 5, 6, 7, 9, 10, 11) Prerequisite: None.

SOCI 2301 Sociology of the Family (45.1101.5442)
(3-0) ..... 3 hours
Emphasizing cultural, class and racial diversity, the course examines various dynamics of marriages, families and other intimate relationships. Course includes an introduction to theories, concepts and research methods used in the sociological study of marriages and families. Love and mate selection; sexuality, reproduction and birth; communication and conflict; and divorce and marriage are among many of the issues covered. (SCANS 2, 5, 6, 9, 10, 11) Prerequisite: None.

SOCI 2306 Human Sexuality (42.0101.5342)
(3-0) ..... 3 hours
An in-depth study of human sexuality across the life cycle utilizing legal, ethical, sociological, biological and psychological perspectives. Course incorporates current research and theories to explore the impact of social and cultural expectations on human sexual behavior. (SCANS 6, 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 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 or MATH 1314; PSYC 2301 or SOCI 1301. 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. Background checks are required on all students.

Applicants or other interested persons seeking additional information should contact the radiologic technology program director or the counseling center 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	3

Summer Session II

SPCH 1321 Business and Professional Speech	3

Second Year

First Semester

COSC 1301 Introduction to Computer Systems	3
PHED (one-hour activity course)	1
XRAY 2201 Special Imaging	2
XRAY 2321 Clinical Practicum IV	3
XRAY 2401 Advanced Radiographic Procedures	4

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. (SCANS 1, 4, 5, 6, 7, 8, 9, 10, 11) 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, venipuncture, 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

(0-24) ..... 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 catheterization. (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
(3-3) ..... 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, male and female studies, pediatric radiography, 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 catheterization, 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 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

(2-7) ..... 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.

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, foreign body localization, stereoradiography, and interventional procedures. (SCANS 1, 2, 6) Prerequisite: XRAY 1402 or consent of the department chair. 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.

Reading

Faculty: Pam Williamson, chair; Mona Sandlin, paraprofessional.

An effective citizen must read well; therefore, reading courses develop efficient tools for use in both the academic and workplace environment. Most professional fields require above-average abilities in reading.

Developing awareness of the competencies underlying effective reading and insight into the psychology of reading will be excellent preparation for those interested in reading as an academic major. Reading specialists, reading supervisors and reading clinicians are all in great demand at all levels of education.

These courses implement multimedia, including computerized instruction, and support the philosophy that a person's ultimate reading potential is never reached. Because effective study skills predominately 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 student they may be, can improve their reading skills.

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. Students who enroll for Basic English (0370) and have not taken and passed the reading section of TASP must enroll in a reading class. Students should check their TASP liability before enrolling in reading.

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 individual reading strengths and weaknesses for placement in multilevel course that includes computer exercises, timed reading practices and vocabulary study. Lab fee required. (SCANS 1, 9, 10). Prerequisite: None or placement by counselors.

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, reading rate, and study skills. The student monitors and corrects ineffective behavior as he assesses himself accurately, sets personal goals, and monitors progress. Lab fee required. (SCANS 1, 7, 9, 10) Prerequisite: READ 0372 passed with a "C" or better, satisfactory placement score or reading faculty approval.

College Reading Techniques

The college reading techniques course provides an alternative reading program with structured, individualized, self-paced instruction in a multimedia and multilevel environment that includes computer instruction. Regardless of present reading ability, students can expect to increase vocabulary and reading rate, and improve comprehension. Effective study techniques offer opportunities to improve performance in both academic and vocational-technical courses. This course also is offered for non-credit for students who have completed the fifth grade and beyond.

Diagnostic tests are administered 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 in person immediately upon registration to arrange meeting times for this one-hour flexible entry course.

READ 0171 Improving Reading Skills (32.0108.5235)
(0-2) ..... 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, which ultimately can result in higher self-esteem. Through independent learning activities, the student learns to validate his understanding of reading materials, increase vocabulary with various written activities and gain in individual reading rates. Lab fee required. (SCANS 1, 4, 7, 10) Prerequisite: None.

Refrigeration/Air Conditioning *(see Heating, Ventilation and Air Conditioning)*

Religion *(see Social Sciences)*

Respiratory Care

Faculty: Shelia Butler, chair; Tonya Edwards, clinical coordinator; 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 2401 Anatomy and Physiology I	4
*PHED 1100 Lifestyle Assessment	1
RESP 1111 Clinical Practice I	1
RESP 1301 Respiratory Care Sciences	3
RESP 1400 Fundamentals of Respiratory Care I	4
SPCH 1321 Business and Professional Speech	3

Second Semester

BIOL 2402 Anatomy and Physiology II	4
COSC 1301 Introduction to Computer Systems	3
RESP 1115 Respiratory Pharmacology	1
RESP 1405 Fundamentals of Respiratory Care II	4
RESP 1322 Clinical Practice II	3
RESP 1332 Cardiopulmonary Pathophysiology	3

Summer Sessions

RESP 1310 Fundamentals of Respiratory Care III	3
RESP 1333 Clinical Practice III	3

Second Year

Third Semester

GOVT 2301 U.S. and Texas Government or	
GOVT 2302 American National Government	3
*PHED (any one-hour activity course)	1
RESP 2315 Advanced Patient Assessment	3
RESP 2352 Clinical Practice IV	3
RESP 2364 Neonatal/Pediatric Respiratory Care	3

Fourth Semester

BIOL 2420 Microbiology	4
PSYC 2301 Introduction of Psychology	3
RESP 2320 Advanced Respiratory Care	3
RESP 2362 Clinical Practice V	3

Total Hours **72**

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

Course of Study for Certificate of Completion

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 2401 Anatomy and Physiology I 4
*PHED 1100 Lifestyle Assessment and Modification 1
RESP 1111 Clinical Practice I 1
RESP 1400 Fundamentals of Respiratory Care I 4
RESP 1301 Respiratory Care Sciences 3
SPCH 1321 Business and Professional Speech 3

Second Semester

BIOL 2402 Anatomy and Physiology II 4
COSC 1301 Introduction to Computer Systems 3
RESP 1115 Respiratory Pharmacology 1
RESP 1322 Clinical Practice II 3
RESP 1332 Cardiopulmonary Pathophysiology 3
RESP 1405 Fundamentals of Respiratory Care II 4

Summer Session

RESP 1310 Fundamentals of Respiratory Care III 3
RESP 1333 Clinical Practice III 3

Total Semester Hours 46

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

Respiratory Care Courses

RESP 1111 Clinical Practice I

(0-6) ..... 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. Equipment fee required. (SCANS 1, 5, 6, 8, 9, 11) Prerequisite: Admission to Respiratory Care Program. Corequisites: RESP 1400 and RESP 1301.

RESP 1115 Respiratory Pharmacology

(1-1) ..... 1 hour
Prepares the student to identify pharmacological classifications of medications, usage, side effects and toxic effects. This course specializes in respiratory care pharmacology. Lab fee required. (SCANS 3, 6, 7, 8, 9, 11) Prerequisites: RESP 1111, RESP 1301 and RESP 1400. Corequisites: RESP 1322, RESP 1332 and RESP 1405.

RESP 1301 Respiratory Care Sciences

(2-4) ..... 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. This course includes laboratory time. Lab fee required. (SCANS 2, 3, 6, 8, 9, 11) Prerequisite: Admission to respiratory care program. Corequisites: RESP 1111 and RESP 1400.

RESP 1310 Fundamentals of Respiratory Care III

(2-4) ..... 3 hours
An in-depth presentation of mechanical ventilation. Presents advanced concepts of mechanical ventilation and the management and clinical presentation of pathophysiology. This course includes laboratory time. Lab fee required. (SCANS 3, 6, 8, 9) Prerequisites: RESP 1115, RESP 1322 and RESP 1332. Corequisite: RESP 1333.

RESP 1322 Clinical Practice II

(0-16) ..... 3 hours

Applies, in a clinical setting, skills learned in RESP 1400. 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) Prerequisites: RESP 1111, RESP 1301 and RESP 1400. Corequisites: RESP 1115, RESP 1332 and RESP 1405.

RESP 1332 Cardiopulmonary Pathophysiology

(2-4) ..... 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. This course includes laboratory time. Lab fee required. (SCANS 1, 3, 6, 8) Prerequisites: RESP 1111, RESP 1301 and RESP 1400. Corequisites: RESP 1115, RESP 1322 and RESP 1405.

RESP 1333 Clinical Practice III

(0-16) ..... 3 hours

Applies, to patients, the techniques learned in RESP 1405. 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, 6, 7, 8, 9, 10, 11) Prerequisites: RESP 1115, RESP 1322, RESP 1332 and RESP 1405. Corequisite: RESP 1310.

RESP 1400 Fundamentals of Respiratory Care I

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

An in-depth presentation of oxygen therapy. Presents the technology, calculations and equipment associated with respiratory care modalities, IPPB and chest physiotherapy. This class includes laboratory time. Lab fee required. (SCANS 3, 8) Prerequisite: Admission to respiratory care program. Corequisites: RESP 1111 and RESP 1301.

RESP 1405 Fundamentals of Respiratory Care II

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

Introduces the theory, equipment and formulas necessary for the application of positive pressure technology and airway management. This class includes laboratory time. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RESP 1111, RESP 1301 and RESP 1400. Corequisites: RESP 1115, RESP 1322 and RESP 1332.

RESP 2315 Advanced Patient Assessment

(2-4) ..... 3 hours

Presents advanced concepts, including interpretation of electrocardiography and hemodynamic monitoring information and the calculations associated with this technology. The student will demonstrate an understanding of fluid and electrolytes and advanced pulmonary function testing. This class includes laboratory time. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RESP 1310 and RESP 1333. Corequisites: RESP 2352 and RESP 2364.

RESP 2320 Advanced Respiratory Care

(2-4) ..... 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. This course includes laboratory time. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RESP 2315, RESP 2352 and RESP 2364. Corequisites: RESP 2362 and RESP 2420.

RESP 2352 Clinical Practice IV

(0-16) ..... 3 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) Prerequisites: RESP 1310 and RESP 1333. Corequisites: RESP 2315 and RESP 2364.

RESP 2362 Clinical Practice V

(0-16) ..... 3 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 performance of others. (SCANS 2, 4, 5, 6, 7, 8, 9) Prerequisites: RESP 2315, RESP 2352 and RESP 2364. Corequisite: RESP 2320.

RESP 2364 Neonatal/Pediatric Respiratory Care

(2-4) ..... 3 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. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RESP 1310 and RESP 1333. Corequisites: RESP 2315 and RESP 2352.

Safety *(see Occupational Safety and Health Technology)*

Social Sciences

Faculty: Dr. Dick Kennedy, chair; Dr. Brian Dille, Daphne Eastman, Glen Findley, Dr. Tom Heiting, Truett Hilliard, Mike Myers, 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	**52**
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	**64**

***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 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 macroeconomic 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, postwar 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, postwar problems and prospective solutions. (SCANS 6, 9) Prerequisite: None.

HIST 2381 Afro-American History (45.1101.5342)
(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 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.

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; J. Deanne Causey, Vicki Patrick, Joe Willis.

The speech department recognizes that effective communication is an essential skill in college, industry and daily life. Students must be able to organize their ideas logically, 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 1307 Introduction to Mass Communication or COMM 1335 Survey of Radio and Television	3
COMM 2331 Announcing for Radio and Television	3
**SPCH 1144, 1145, 2144 and 2145: Forensic Laboratory	4
SPCH 1315 Public Speaking	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 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, interviewing, presentational address, listening, and group work. 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 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 sterile instruments and supplies, 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. A course in first aid also is completed. During the second semester, applied psychology is presented, 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 and a program application by the July 15 deadline. Prerequisites to the program include: BIOL 2401, Anatomy and Physiology I; BIOL 2402, Anatomy and Physiology II (completed within the last five years); official high school transcript or GED; and satisfactory scores on the Allied Health Aptitude Test. Also included are a current CPR certification in Basic Life Support from the American Heart Association or the American Red Cross Basic Life Support for Professionals.

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.

The student is expected to have proof of professional liability insurance through the college and current health and accident insurance.

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).

Students wishing to apply for admission or other persons seeking additional information should contact the Counseling Center at Odessa College.

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 Clinical 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 Clinical II	6

Summer Session I

SURG 1615 Surgical Technology Clinical 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 Technology

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 Clinical 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 Clinical II	6

Summer Session I

SURG 1615 Surgical Technology Clinical III	6

Total hours **43**

Surgical Technology Courses

SURG 1411 Surgical Technology Clinical 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
(5-3) ..... 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 control, 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 caregiver 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
(5-3) ..... 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.

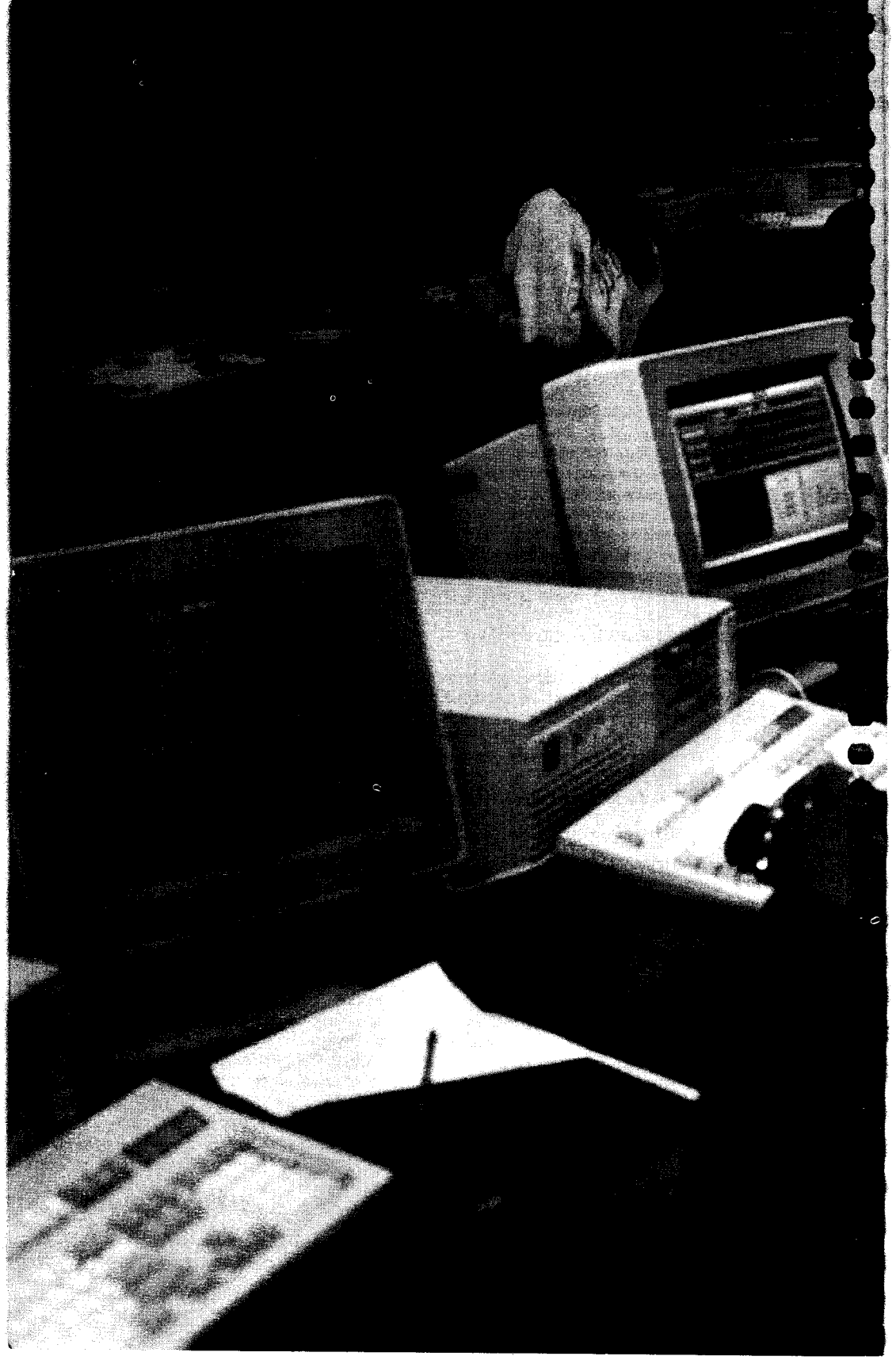
SURG 1614 Surgical Technology Clinical II
(2-19) ..... 6 hours
Assignments in the operating room environment stressing participation as a viable member of the team. Emphasis on prioritization of general surgical technique activities and use of materials. Student will understand overall intent of surgical 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.

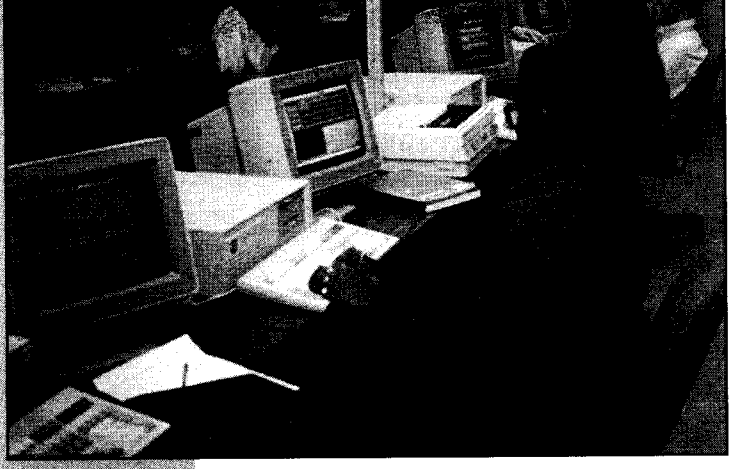
SURG 1615 Surgical Technology Clinical III
(0-32) ..... 6 hours
Presents extended clinical experience with rotations through surgical specialties with the student having the opportunity to contribute to a group effort to provide optimal care of clients. Emphasis is on working with a variety of tools 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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