



**BULLETIN  
1986-1987**

Volume Forty

Spring 1986

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Odessa College Bulletin

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An Equal Opportunity College

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per. W. Johnson 1-6-87 - use this formula  
Clock Hours  $\div$  by 45 = Sem. Hrs.



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# Beginnings

## Odessa College: Its Past

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

Beginning with 184 students in 1946, the enrollment of the college, its programs, and its services have grown steadily through the last 40 years. The various curricula, programs, and services offered by Odessa College now enroll more than 16,000 people during a single school year. Enrollment in the university-parallel and occupational/technical credit courses in the fall of 1985 surpassed 4,500 students. During the same semester thousands of other students enrolled in continuing education courses.

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

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

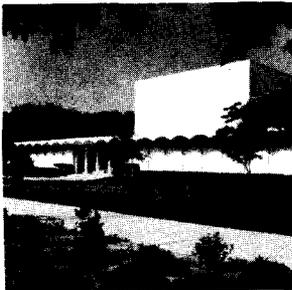
Initially housed in temporary quarters in the old Odessa High School, the first classes of Odessa College were conducted after public school hours in late afternoons and evenings. Ector county taxpayers purchased a five-acre plot in the 2500 block of the Andrews Highway and in 1949 authorized the building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

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

A new \$7 million sports center with over 110,000 square feet of floor space was opened in 1984, to house athletics, physical education and community recreation activities.

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

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



# Odessa

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## The City

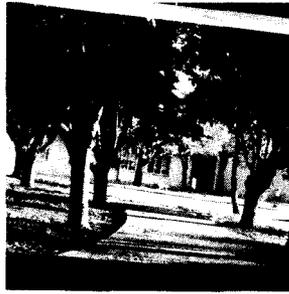
Odessa College is located in Odessa, Texas, a progressive West Texas city of over 100,000 people, about midway between Fort Worth and El Paso.

Odessa is a cultural, recreational, educational, medical, retail, and wholesale trading center for a region as large as several Eastern seaboard states combined. It lies in the Permian Basin, one of the world's greatest oilfields, and is the home of the nation's largest inland petro-chemical complex. Its two hospitals provide a wide variety of medical services for the region, and ground was broken in October, 1984 for the Texas Tech Regional Medical School adjacent to Medical Center Hospital.

Odessa boasts a daily newspaper, three television stations, 10 radio stations, and over 150 churches. It is the site of an upper-level university, The University of Texas of the Permian Basin (UTPB), providing junior, senior, and master's-level graduate studies. Numerous cultural, intellectual, and recreational activities are available for the area's citizens.

The area's healthy economy and diversified industrial and economic establishments offer part-time and full-time employment opportunities.

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 rear a family, as well as an enjoyable place to study and to work.



# Odessa College

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## Its Mission

Odessa College exists for only one reason—to provide the finest educational opportunities possible for all citizens of the Fctor County area. As a comprehensive community college, Odessa College dedicates itself to providing the full spectrum of educational services, limited only by available physical and financial resources.

The open-door admissions policy adopted by Odessa College assures each person who has the desire and capacity to profit from post-secondary education an opportunity to learn. Curricula and educational services are designed to assist people to realize more fully their individual potential, to live richer lives, and to become more responsible and productive members of society. Specifically, Odessa College intends

To provide the first two years of college and pre-professional programs to prepare students within a field of study for further education;

To offer programs in occupational/technical training and to provide students with the comprehensive skills and knowledge required in specialized fields;

To provide a general educational program for students to prepare them for more effective involvement in society;

To provide opportunities for increased personal and cultural enrichment;

To provide opportunities for adults, including non-high school graduates, who wish to begin or to continue a college education;

To offer adults in the community an opportunity to continue education which will result in upgrading their occupational skills, cultural enlightenment and personal satisfaction;

To have an educational environment which enables all students an opportunity to maximize their potential through complete student services; and

To encourage the use of facilities and programs by all citizens of the community.

Odessa College has been, is, and will continue to be an integral part of the community. Therefore, it promises to be and dedicates itself to being

A comprehensive community college dedicated to meeting the educational needs of the community;

An institution responsive to community needs by providing a wide variety of educational services to meet those needs;

A proven college dedicated to excellence in all its programs;

A student-centered college that keeps the personal touch by maintaining a highly qualified faculty and staff dedicated to helping students succeed in their pursuit of educational development;

A progressive college ever alert to innovative educational techniques and technologies that lead to constructive change;

A multi-faceted college with a wide variety of programs in university-parallel areas, technical/vocational studies, developmental studies, community recreation, and continuing education responsive to student needs; and

A concerned college where students are important as individuals who can begin a promising future at any age.

1986

**MAY**

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**JUNE**

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**SEPTEMBER**

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**NOVEMBER**

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**DECEMBER**

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# College Calendar

Dates are tentative and subject to change.  
**Summer, 1986**

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

**First Term**

- Holiday ..... May 26 (Mon)
- Registration ..... May 29 (Thurs)
- Classes Begin ..... June 2 (Mon)
- Late Registration/Schedule Changes ..... June 2 & 3 (Mon & Tues)
- Fourth Class Day ..... June 5 (Thurs)
- Last Day to Drop or Withdraw with an Automatic "W" ..... June 12 (Thurs)
- Last Day to Drop or Withdraw with a "W" or "WF" ..... June 26 (Thurs)
- Final Examinations, End of Term ..... July 7 (Mon)

**Second Term**

- Registration ..... July 8 (Tues)
- Classes Begin ..... July 9 (Wed)
- Late Registration/Schedule Changes ..... July 9 & 10 (Wed & Thurs)
- Last Day to Drop or Withdraw with Automatic "W" ..... July 23 (Wed)
- Last Day to Drop or Withdraw with a "W" or "WF" ..... August 6 (Wed)
- Final Examinations, End of Term ..... August 14 (Thurs)

**Fall, 1986**

- Early Registration Begins (Returning Students Only) ..... April 28 - May 2
- (All Students) ..... July 21 - August 14
- Registration ..... August 27 (Wed)
- Labor Day Holiday ..... September 1 (Mon)
- Classes Begin ..... September 2 (Tues)
- Late Registration Begins ..... September 2 (Tues)
- Add/Drop Period Begins ..... September 4 (Thurs)
- Last Day to Register for Full Class ..... September 9 (Tues)
- Late Registration & Schedule Changes End ..... September 12 (Fri)
- Twelfth Class Day ..... September 15 (Mon)
- Last Day to Drop or Withdraw with an Automatic "W" ..... October 14 (Tues)
- Mid Semester ..... October 24 (Fri)
- Deadline for Fall Degree Application ..... October 31 (Fri)
- Last Day to Drop or Withdraw with a "W" or "WF" ..... November 25 (Tues)
- Thanksgiving Holiday (Begins at 5 pm, Wednesday, November 26) ..... November 27 & 28 (Thurs & Fri)
- Final Examinations ..... December 15-18 (Mon-Thurs)
- End of Semester ..... December 19 (Fri)

**Midwinter Session, 1986-87**

- Early Registration ..... November 17-December 12
- Registration, Classes Begin ..... December 29 (Mon)
- Holiday ..... January 1 (Thurs)
- Final Examinations, End of Term ..... January 9 (Fri)

# 1986-1987

## Spring, 1987

Early Registration.....November 17-December 12  
 Offices Reopen after Holidays.....January 5 (Mon)  
 Registration.....January 12 (Mon)  
 Classes Begin.....January 14 (Wed)  
 Late Registration Begins.....January 15 (Thurs)  
 Schedule Changes Begin.....January 19 (Mon)  
 Last Day to Register for Full  
     Class Load.....January 20 (Tues)  
 Late Registration/Schedule  
     Changes End.....January 23 (Fri)  
 Twelfth Class Day.....January 27 (Tues)  
 Application Deadline for Spring  
     Degrees and Graduation.....February 2 (Mon)  
 Last Day to Drop or Withdraw with an  
     Automatic "W".....February 25 (Wed)  
 Mid-semester.....March 4 (Wed)  
 Spring Break.....March 23-27 (Mon-Fri)  
 Last Day to Drop or Withdraw with a  
     "W" or "WF".....April 15 (Wed)  
 Holiday.....April 17 (Fri)  
 Early Registration for Summer Session I.....April 27-May 1 ✓  
 Early Registration for Returning  
     Students Only for Fall.....April 27-May 1  
 Final Exams.....May 4-7 (Mon-Thurs)  
 Graduation.....May 8 (Fri)

## Summer, 1987

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

### First Term

Holiday.....May 25 (Mon)  
 Registration.....May 28 (Thurs)  
 Classes Begin.....June 1 (Mon)  
 Late Registration and Schedule  
     Changes.....June 1 & 2 (Mon & Tues)  
 Fourth Class Day.....June 4 (Thurs)  
 Last Day to Drop or Withdraw with an  
     Automatic "W".....June 11 (Thurs)  
 Last Day to Drop or Withdraw with a  
     "W" or "WF".....June 25 (Thurs)  
 Final Examinations, End of Term.....July 6 (Mon)

### Second Term

Registration.....July 7 (Tues)  
 Classes Begin.....July 8 (Wed)  
 Late Registration and Schedule  
     Changes.....July 9 & 13 (Thurs & Mon)  
 Early Registration for Fall.....July 20-Aug 13  
 Last Day to Drop or Withdraw with an  
     Automatic "W".....July 22 (Wed)  
 Last Day to Drop or Withdraw with a  
     "W" or "WF".....August 5 (Wed)  
 Final Examinations, End of Term.....August 13 (Thurs)

*Full page 1-1-87*

## 1987

### JANUARY

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### FEBRUARY

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### MARCH

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### APRIL

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### MAY

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### JUNE

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### JULY

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### AUGUST

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# Instructional Programs



# Art

**Faculty:** Delmos Hickmott, Chairman; Barry Phillips.

The Department of Art provides an opportunity for all members of the community to explore and develop their creative potential. Art courses are designed to provide quality instruction for those students seeking professional and semi-professional art degrees and careers. The Department of Art utilizes the core curriculum of art instruction recommended and approved by the Texas Association of Schools of Art and the Texas College and University Coordinating Board. These core courses are freely transferable to all accredited Texas colleges and universities as they apply to the student's particular art major. In addition to a professionally active art faculty, the art program includes well equipped labs for all areas of studio art—drawing, painting, ceramics, sculpture, and jewelry.

## Course of Study for Associate in Arts Degree

| First Year      |         |                 |         |
|-----------------|---------|-----------------|---------|
| First Semester  |         | Second Semester |         |
| Course          | Sem Hrs | Course          | Sem Hrs |
| Art 1301 .....  | 3       | Art 1312 .....  | 3       |
| Art 1311 .....  | 3       | Art 1331 .....  | 3       |
| Art 1321 .....  | 3       | Art 1372 .....  | 3       |
| Art 1371 .....  | 3       | Engl 1312 ..... | 3       |
| Engl 1311 ..... | 3       | Science .....   | 4       |
| Science .....   | 4       | PE .....        | 1       |
| PE .....        | 1       |                 |         |

| Second Year                  |         |                              |         |
|------------------------------|---------|------------------------------|---------|
| Third Semester               |         | Fourth Semester              |         |
| Course                       | Sem Hrs | Course                       | Sem Hrs |
| Art 1322 .....               | 3       | Art 2321 or 2322 .....       | 3       |
| Art 2321 .....               | 3       | Art 2361 .....               | 3       |
| Art 2341, 2381 or 2391 ..... | 3       | Art 2381, 2391 or 2341 ..... | 3       |
| Engl (Sophomore Level) ..... | 3       | Engl (Sophomore Level) ..... | 3       |
| Govt 2301 .....              | 3       | Govt 2302 .....              | 3       |
| Hist 2301 .....              | 3       | Hist 2302 .....              | 3       |
| PE .....                     | 1       | PE .....                     | 1       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

- Art 1300 Art Appreciation (Self Paced)** ..... **3 hours**  
 (3-0).....  
 Open to all college students. Does not apply to degree plans for art majors. Introduces visual arts. Presents psychological foundations of creative behavior, aesthetic theory and philosophy. Analyzes principles, problems, and techniques of the artists. Prerequisite: None.
- Art 1301 Studies in Contemporary Art (Self Paced)** ..... **3 hours**  
 (3-0).....  
 Required for all art majors. Examines current concerns and practices of the visual arts. Designed to give the student the ability to sense, perceive, and conceptualize expressive purposes and importance of contemporary art forms. Prerequisite: None.
- Art 1311 Drawing I** ..... **3 hours**  
 (2-4).....  
 Develops skills in drawing from life and nature. Includes pictorial composition, perspective, line, value, and wash drawings in a variety of media. Emphasizes development of hand-eye coordination. Prerequisite: None.
- Art 1312 Drawing II** ..... **3 hours**  
 (2-4).....  
 A continuation of Drawing 1311 with additional emphasis on developing sensitivity to art elements in the environment. Prerequisite: Art 1311.

## 10 Art

- Art 1321 Design I**  
(2-4)..... 3 hours  
Introduces principles and elements of design. Develops sensitivity to principles and elements of design as they exist in the environment. Prerequisite: None.
- Art 1322 Design II**  
(2-4)..... 3 hours  
A continuation of Design 1321. Emphasizes creation of three-dimensional art products. Prerequisite: Art 1321.
- Art 1331 Figure Drawing I**  
(2-4)..... 3 hours  
Develops skill in drawing the human figure. Stresses handling of form, movement, and proportion. Presents a variety of drawing techniques and media. Prerequisite: Art 1311 or its equivalent.
- Art 1332 Figure Drawing II**  
(2-4)..... 3 hours  
A continuation of Art 1331. Emphasizes aesthetic factors, style, and creative approaches. Prerequisite: Art 1331.
- Art 1371 Art History Survey I**  
(3-0)..... 3 hours  
Surveys Western man's art heritage from the prehistoric era through the Middle Ages. Stresses relationship of great works of art to their respective culture and civilization. Uses variety of audio-visual media to illustrate various periods, styles, and personalities. Prerequisite: None.
- Art 1372 Art History Survey II**  
(3-0)..... 3 hours  
A continuation of Art History 1371. Includes Western man's art heritage from the Renaissance to the present. Emphasizes gaining understanding of varied forms of modern art through their relationship to contemporary society. Prerequisite: None.
- Art 2311 Watercolor Painting I**  
(2-4)..... 3 hours  
Explores various watercolor techniques and their applications to a wide range of subject matter. Stresses development of basic skills in watercolor expression. Prerequisite: Art 1311 or its equivalent.
- Art 2312 Watercolor Painting II**  
(2-4)..... 3 hours  
A continuation of Art 2311. Emphasizes aesthetic factors, style, and creative approaches. Prerequisite: Art 2311.
- Art 2321 Painting I**  
(2-4)..... 3 hours  
Introduces various painting media (acrylic or oils) and modes of expression. Emphasizes development of basic painting skills and aesthetic sensibilities. Prerequisite: Art 1311 or Art 1321 or their equivalent.
- Art 2322 Painting II**  
(2-4)..... 3 hours  
A continuation of Art 2321. Emphasizes aesthetic factors. Prerequisite: Art 2321 or its equivalent.
- Art 2341 Art Metals and Jewelry I**  
(2-4)..... 3 hours  
Gives the student the opportunity to create original, functional jewelry. Uses a variety of techniques, media, and shop practices. Prerequisite: None.
- Art 2342 Art Metals and Jewelry II**  
(2-4)..... 3 hours  
Designed to further the student's ability to produce original jewelry by emphasizing the exploration of jewelry techniques, casting, and more complex construction. Prerequisite: Art 2341.
- Art 2361 Printmaking I**  
(2-4)..... 3 hours  
Introduces woodcut, drypoint, collograph, etching, and silk screen printing techniques and media. Prerequisites: Art 1311 and Art 1321 or consent of the instructor.
- Art 2362 Printmaking II**  
(2-4)..... 3 hours  
A continuation of Art 2361. Emphasizes aesthetic factors, style, and creative approaches. Prerequisite: Art 2361.
- Art 2381 Pottery I**  
(2-4)..... 3 hours  
Includes coil, slab, and wheel methods of creating original pottery form and refining of native clays. Also includes bisque and glaze firings, plus raku sawdust firings and mixing and applying of pottery glazes. Prerequisite: None.

- Art 2382 Pottery II**  
 (2-4)..... **3 hours**  
 A continuation of Art 2381. Emphasizes aesthetic factors, style, and advanced wheel work. Prerequisite: Art 2381.
- Art 2391 Sculpture I**  
 (2-4)..... **3 hours**  
 Concerns basic instruction in principles and techniques of sculpture. Explores a variety of materials including clay, metal, wood, and plastics, as well as basic techniques of casting, welding, moulding, and assembling. Prerequisite: Art 1321 or consent of the instructor.
- Art 2392 Sculpture II**  
 (2-4)..... **3 hours**  
 A continuation of Art 2391. Emphasizes advanced sculpture techniques and design concepts. Prerequisite: Art 2391.

## Auto Body Repair

**Faculty:** Dave Atherton, Chairman.

The auto body repairman has before him a challenge which constantly affords variety and interest. With the increasing costs of automobiles, higher insurance rates and required coverage, and traffic congestion, the auto body repairman can be assured of an excellent income as well as a multitude of job opportunities.

Employment opportunities exist with automotive dealers, independent auto body repair shops, leasing agencies, insurance firms, airlines, and other companies that maintain car or truck fleets.

The program emphasizes development of necessary skills and knowledge to function successfully in the auto body repair field. The use of modern materials, the application of advanced techniques, and the development of unique craftsmanship to express individual talents are just a few of the many factors which favor the auto body repair student.

### Course of Study for Associate in Applied Science Degree

| <b>First Year</b>                |         |   |         |
|----------------------------------|---------|---|---------|
| First Semester                   |         | Second Semester                             |         |
| Course                           | Sem Hrs | Course                                      | Sem Hrs |
| AB 1401 .....                    | 4       | AB 1402 .....                               | 4       |
| AB 1404 .....                    | 4       | AB 1403 .....                               | 4       |
| AT 2601 .....                    | 6       | DT 1401 or Engr 1301 .....                  | 4 or 3  |
| Math 1313 or More Advanced ..... | 3       | Engl 1311 or 1311 (Technical Writing) ..... | 3       |
| *PE .....                        | 1       | *PE .....                                   | 1       |
| <b>Second Year</b>               |         |   |         |
| Third Semester                   |         | Fourth Semester                             |         |
| Course                           | Sem Hrs | Course                                      | Sem Hrs |
| AB 1405 .....                    | 4       | AB 2403 .....                               | 4       |
| AB 2401 .....                    | 4       | AB 2404 .....                               | 4       |
| AB 2402 .....                    | 4       | AB 2405 .....                               | 4       |
| Engl 1312 or Spch 1310 .....     | 3       | AB 2406 .....                               | 4       |
| Govt 2301 or 2302 .....          | 3       |   |         |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 44 semester hours in AB courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

## 12 Auto Body Repair

- AB 1401 Auto Body Repair I**  
(2-6)..... 4 hours  
Teaches skill in the use of tools, equipment, and materials of the body shop. Emphasizes metal working techniques and shop safety. Prerequisite: None.
- AB 1402 Auto Body Repair II**  
(2-6)..... 4 hours  
A continuation of Auto Body Repair I. Emphasizes sheet metal replacement and gas and arc welding. Prerequisite: AB 1401 or consent of the department chairman.
- AB 1403 Auto Paint Refinishing I**  
(2-6)..... 4 hours  
Emphasizes use of sandpapers, primers, thinners, solvents, and paint in refinishing methods and techniques. Includes study of chemical properties of refinishing materials. Stresses safety. Prerequisite: None.
- AB 1404 Auto Body Replacement and Alignment I**  
(2-6)..... 4 hours  
Presents automotive body component assembly procedures. Emphasizes methods used to join parts and assemblies to body shell, sub-assemblies, and frame. Stresses component alignment. Prerequisite: None.
- AB 1405 Auto Paint Refinishing II**  
(2-6)..... 4 hours  
A continuation of Auto Paint Refinishing I. Stresses techniques and procedures for applying paints. Prerequisite: AB 1403 or consent of the department chairman.
- AB 2401 Auto Body Replacement and Alignment II**  
(2-6) ..... 4 hours  
A continuation of Auto Body Replacement and Alignment I. Emphasizes procedures for mechanical component replacement, for checking frame and suspension damage, and for repair methods. Prerequisite: AB 1404 or consent of the department chairman.
- AB 2402 Auto Body Replacement and Alignment III**  
(2-6) ..... 4 hours  
A continuation of Auto Body Replacement and Alignment II. Presents techniques for tie down and for pulling auto frames and quarters. Emphasizes clip panels and frame replacement. Prerequisites: AB 1404, AB 2401, or consent of the department chairman.
- AB 2403 Auto Paint Refinishing III**  
(2-6) ..... 4 hours  
A continuation of Auto Paint Refinishing II. Emphasizes color mixing, color matching, special painting procedures, and pre-delivery detailing. Prerequisites: AB 1403, AB 1405, or consent of the department chairman.
- AB 2404 Auto Body Repair Estimating**  
(2-6) ..... 4 hours  
Presents procedures used in determining accurate repair cost estimates. Emphasizes proper use of auto body crash books and methods of preparing and presenting estimates. Prerequisites: AB 1401, AB 1403, AB 1404, or consent of the department chairman.
- AB 2405 Auto Body Shop Maintenance and Management**  
(2-6)..... 4 hours  
Presents shop layout, inventory control and maintenance, personnel management, and legal aspects of management's relationship to employee safety and welfare. Prerequisites: AB 1401, AB 1403, AB 2404 or consent of the department chairman.
- AB 2406 Advanced Auto Body**  
(2-6)..... 4 hours  
An individualized special project course that offers latest auto body repair techniques. Custom painting and lettering practiced. Prerequisites: All AB courses or consent of the department chairman.

## Automotive Technology

**Faculty:** Steve Mapes, Chairman; Jurl O. Davis.

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

The Associate in Applied Science Degree provides the necessary educational background for advancing to positions of even greater responsibility in the industry.

Course of Study for Associate in Applied Science Degree

First Year

| First Semester                   |         | Second Semester                  |         |
|----------------------------------|---------|----------------------------------|---------|
| Course                           | Sem Hrs | Course                           | Sem Hrs |
| AT 1501 .....                    | 5       | AT 1503 .....                    | 5       |
| AT 1502 .....                    | 5       | AT 1504 .....                    | 5       |
| Math 1313 or More Advanced ..... | 3       | Math 1335 or More Advanced ..... | 3       |
| *PE .....                        | 1       | Mgt 1301 .....                   | 3       |
| Read 1301 .....                  | 3       | *PE .....                        | 1       |

Second Year

| Third Semester                              |         | Fourth Semester                |         |
|---|---------|--------------------------------|---------|
| Course                                      | Sem Hrs | Course                         | Sem Hrs |
| AT 2501 .....                               | 5       | AT 1505 .....                  | 5       |
| AT 2502 .....                               | 5       | AT 2503 .....                  | 5       |
| Engl 1311 or 1311 (Technical Writing) ..... | 3       | AT 2504 .....                  | 5       |
| Govt 2302 .....                             | 3       | Engl 1312 or Speech 1310 ..... | 3       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 45 semester hours in AT courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**AT 1501 Introduction to Automotive Technology**

(2-6)..... **5 hours**  
 Introduces basic automobile maintenance schedules and procedures necessary for reliability and dependability. Presents instruction on how to recognize unsafe operating conditions as related to the automobile. Emphasizes fundamentals of efficiency and economy of most automobile systems. Prerequisite: None.

**AT 1502 Automotive Engines**

(2-6)..... **5 hours**  
 Presents theory and practice in basic principles of repair and maintenance of internal combustion engines. Design characteristics of engines plus their supporting systems studied. Engines rebuilt utilizing proper machining operations. Tool usage emphasized. Prerequisite: None.

**AT 1503 Transmissions and Power Trains**

(2-6)..... **5 hours**  
 Provides technical studies and practice in repair and maintenance of automotive transmissions, differentials, and related assemblies. Prerequisite: None.

**AT 1504 The Automotive Chassis**

(2-6)..... **5 hours**  
 Emphasizes repair procedures related to brakes, front-end alignment, and suspension systems. Includes use of brake lathes, wheel balancing equipment, and front-end alignment equipment. Includes theory as a primary element of the course. Prerequisite: None.

**AT 1505 Automotive Diesel**

(2-6)..... **5 hours**  
 Involves theory and practice in basic principles for repair and maintenance of the automotive diesel engine. Contrasts automotive and commercial diesels. Prerequisite: None.

**AT 2501 Automotive Electrical Systems**

(2-6)..... **5 hours**  
 Presents most elementary to most advanced electrical systems. Emphasizes testing and diagnostic procedures. Uses diagnostic equipment, ohmmeters, test lights, and oscilloscopes. Prerequisite: None.

**AT 2502 Heating and Air-Conditioning**

(2-6)..... **5 hours**  
 Presents physics of temperature change applicable to the automobile. Designed to instruct students in current diagnostic principles and repair procedures. Prerequisite: None.

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### AT 2503 Automotive Fuel and Emissions

(2-6)..... 5 hours  
Emphasizes fuels and emissions related to tune-up procedures. Various fuel system components and emission control systems studied. Emphasizes carburetor overhaul and adjustment. Exhaust emission test equipment used in conjunction with engine analyzer. Prerequisite: None.

### AT 2504 Automotive Electronics

(4-4)..... 5 hours  
Introduces fundamentals of solid state devices such as FETS, bipolar and unijunction transistors, zener diodes, LED's, solid state regulators, electronic spark control and timing, linear amplifiers, buffers, SCR's, PROMS, EPROMS, RAMS, microprocessors, their use and application in modern automobiles. Prerequisite: AT 2501.

### Automotive Technology (Open-Entry, Clock-Hour Program)

The open-entry, clock-hour program is a personalized instructional system designed to offer the student a concentrated individualized curriculum in basic skills. Block time programs meet 20 to 40 hours per week depending upon the course and the personal schedule of the individual. A student may register for the following program on any week day. Classes start each Monday. Enrollment may be limited to available space. An Associate Degree option is available. Detailed information and admission and registration forms are available in the office of the program director or in the Counseling Center.

| Course Number | Course Name                                   | Clock Hours | Sem Hrs | Weeks |
|---------------|---|-------------|---------|-------|
| AT 1441       | Shop Procedures and Safety                    | 100         | 4       | 5     |
| AT 1842       | Automotive Tune-up                            | 200         | 8       | 10    |
| AT 1443       | Automotive Emissions                          | 100         | 4       | 5     |
| AT 1844       | Engine Overhaul                               | 200         | 8       | 10    |
| AT 1445       | Electrical Systems and Control Circuits       | 160         | 4       | 8     |
| AT 1846       | Transmissions, Power Trains,<br>& Accessories | 240         | 8       | 12    |
| AT 1447       | Air Conditioning and Heating                  | 100         | 4       | 5     |
| AT 1848       | Handling and Roadability                      | 200         | 8       | 10    |
| AT 1449       | Automotive Diesel                             | 100         | 4       | 5     |

Books and safety equipment will cost approximately \$100.

Students desiring the A.A.S. degree must take the following academic courses: Engl 1311, Engl 1312 or Spch 1310, Govt 2302, Math six hours (Math 1313 or more advanced), Mgt 1301, Read 1301, and two hours of PE or HEd 1301.

### AT 1441 Shop Procedures and Safety

[(3-17) for 5 weeks]..... 4 hours  
Introduces automotive technology. Stresses safety practices in the shop as well as in the use of equipment, shop procedures, use of tools, use of special equipment, and shop management. Prerequisite: None.

### AT 1443 Automotive Emissions

[(3-17) for 5 weeks]..... 4 hours  
Consists of history of emissions, diagnosis of emissions problems, and use of special equipment. Emphasizes practical work on the automobile. Prerequisite: None.

### AT 1445 Electrical Systems and Control Circuits

[(3-17) for 8 weeks]..... 4 hours  
Introduces electricity and emphasizes its language, usage, testing, and repair. Includes all areas of D.C. circuitry used in a vehicle. Stresses starting, charging, and lighting systems, as well as instrumentation, accessories, troubleshooting, testing, and safety. Prerequisite: None.

### AT 1447 Air Conditioning and Heating

[(3-17) for 5 weeks]..... 4 hours  
Presents physics of temperature change applicable to the automobile. Designed to instruct students in current diagnostic principles and repair procedures. Prerequisite: None.

### AT 1449 Automotive Diesel

[(3-17) for 5 weeks]..... 4 hours  
Involves theory and practice in basic principles for repair and maintenance of the automotive diesel engine. Automotive and commercial diesels contrasted. Prerequisite: None.

- AT 1842 Automotive Tune-Up**  
 [(4-16) for 10 weeks] ..... 8 hours  
 Presents diagnosis of performance problems related to ignition and fuel systems. Emphasizes hands-on tune-ups using tune-up equipment. Prerequisite: None.
- AT 1844 Engine Overhaul**  
 [(4-16) for 10 weeks] ..... 8 hours  
 An engine overhaul course consisting of design, problem diagnosis, service procedures, and special tool information. Prerequisite: None.
- AT 1846 Transmissions, Power Trains, and Accessories**  
 [(2-18) for 12 weeks] ..... 8 hours  
 Presents power trains, drive line components, and accessories. Requires removing, disassembling, inspecting, evaluating, repairing and/or rebuilding, reassembling, and testing all components. "Live" work used when possible. Stresses safety in both the laboratory and the classroom. Prerequisite: None.
- AT 1848 Handling and Roadability**  
 [(4-16) for 10 weeks] ..... 8 hours  
 Emphasizes repair procedures related to brakes, front-end alignment, suspension systems, and wheel balancing. Characteristics of "handling" and "roadability" studied. Prerequisite: None.

## Biology

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

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.

### Course of Study for Associate in Science Degree

| First Year                       |         |                                  |         |
|----------------------------------|---------|----------------------------------|---------|
| First Semester                   |         | Second Semester                  |         |
| Course                           | Sem Hrs | Course                           | Sem Hrs |
| Biol 1401 .....                  | 4       | Biol 1402 .....                  | 4       |
| Chem 1301 and 1101 .....         | 4       | Chem 1302 and 1102 .....         | 4       |
| Engl 1311 .....                  | 3       | Engl 1312 .....                  | 3       |
| Math 1341 or More Advanced ..... | 3       | Math 1343 or More Advanced ..... | 3       |
| Phys 1401 .....                  | 4       | Phys 1402 .....                  | 4       |
| PE .....                         | 1       | PE .....                         | 1       |

| Second Year                  |         |                              |         |
|------------------------------|---------|------------------------------|---------|
| Third Semester               |         | Fourth Semester              |         |
| Course                       | Sem Hrs | Course                       | Sem Hrs |
| *Biology Elective .....      | 3/4     | *Biology Elective .....      | 3/4     |
| Chem 2301 and 2101 .....     | 4       | Chem 2302 and 2102 .....     | 4       |
| Engl (Sophomore Level) ..... | 3       | Engl (Sophomore Level) ..... | 3       |
| Govt 2301 .....              | 3       | Govt 2302 .....              | 3       |
| Hist 2301 .....              | 3       | Hist 2302 .....              | 3       |
| PE .....                     | 1       | PE .....                     | 1       |

\*Second-year requirements for Biology electives may be fulfilled by taking any combination of the following courses: Biol 2301, Biol 2302, Biol 2401, Biol 2402, Biol 2403, or Biol 2404. Choice of an elective may depend upon students' plans for future study. Students should consult with the Biology faculty for information regarding these courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Dentistry\*\***

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

**Medicine\*\***

Most colleges of medicine recommend that a student complete a baccalaureate degree before entering the college of medicine. Since there is no baccalaureate degree in "Pre-Med," no particular major is specified so long as the courses required for entrance to the college of medicine are included. A student may complete specified courses in the first two years of college and qualify for the Associate Degree in Science following the suggested degree plan.

**Optometry\*\***

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

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

**Pharmacy\*\***

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

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

**Veterinary Medicine\*\***

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

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

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

**Biol 1100 Medical Terminology**

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

**Biol 1300 Principles of Biology**

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

- Biol 1401 General Biology I**  
(3-3)..... 4 hours  
A study of cellular and organ activities of representative plants and animals. Provides students with an overall picture of the living world, the organizational and functional aspects of living matter. Prerequisite: None.
- Biol 1402 General Biology II**  
(3-3)..... 4 hours  
A continuation of Biol 1401. Instruction oriented toward analysis rather than description in dealing with the operational character of living matter. Prerequisite: Biol 1401 or consent of the instructor.
- Biol 1403 Human Anatomy & Physiology**  
(3-3)..... 4 hours  
A one-semester course dealing with functional anatomy and basic principles of different systems of the body and their physiological activities. Prerequisite: None.
- Biol 1404 Anatomy & Physiology I**  
(3-3)..... 4 hours  
First of a two-semester course presented in an integrated manner. Demonstrates relationship between form and function. Includes study of the cell, basic chemistry, tissues, and some of the body systems. Prerequisite: None.
- Biol 1405 Anatomy & Physiology II**  
(3-3)..... 4 hours  
A continuation of Biol 1404 that assumes foundations laid therein. Prerequisite: Biol 1404 or consent of the instructor.
- Biol 2301 General Ecology**  
(3-2)..... 3 hours  
Presents concepts of plant and animal communities and population dynamics. Includes community classification, environmental sampling methods, and effects of chemicals on the biome. Requires field trips, group discussions, and a written theme. Prerequisite: One semester of either biology or geology or consent of the instructor.
- Biol 2302 Introductory Entomology**  
(2-3)..... 3 hours  
Introduces the study of classification, structure, physiology, ecology, and evolution of insects. Gives special attention to insects of economic significance, their identification, life cycles, and relationships to man, including interactions and controls. Requires collections and field trips. Prerequisite: Consent of the instructor.
- Biol 2303 Marine Ecology**  
[[24-36] for 2 weeks]..... 3 hours  
A field course in marine ecology at Cholla Bay, Puerto Penasco, Sonora, Mexico. A 10-day course offered between spring semester and first summer session, as well as during Midwinter Session. Emphasizes field observation and identification of shore and reef animals. Shore fish, planktonic forms, and marine algae also studied. Field collection, identification, and preservation techniques presented along with systemic, life history, and ecological information. Prerequisite: Consent of the instructor.
- Biol 2401 Comparative Anatomy**  
(3-4)..... 4 hours  
Undertakes a comparative study of the anatomy of type chordates. Includes lectures on progressive development of organs and organ systems. Requires laboratory dissection of representative animals from the Vertebrata. Prerequisites: Biol 1401 and 1402.
- Biol 2402 Introductory Genetics**  
(3-3)..... 4 hours  
Presents physical and chemical bases of hereditary variation in the living world. Stresses application of genetic principles. Requires laboratory problem involving identification of inheritance of several mutations in an experimental organism. Prerequisites: Biol 1401 and 1402 or consent of the instructor. (Math 1341 useful but not required.)
- Biol 2403 Microbiology**  
(3-3)..... 4 hours  
Deals with structure, cultivation, classification, and ecology of microorganisms. Emphasizes life activities of bacteria and their effects on man and his environment. Prerequisite: One semester of biology or consent of the instructor.
- Biol 2404 General Botany**  
(3-3)..... 4 hours  
Surveys plant kingdom from procaryotic algae through flowering plants. Emphasizes plants of West Texas. Stresses life histories, form, function, and structure of plant organs and the plant in relation to its environment. Applies basic botanical science to agronomy, horticulture, forestry, physiology, taxonomy, and paleobotany. Recommended for students planning careers in the biological sciences such as biology teaching, research, extension, or in one of the more applied areas. Prerequisites: Biol 1401 and 1402 or consent of the instructor.

# Broadcasting

**Faculty:** John McCarroll, Chairman; Tom Barnett, television; Bruce Drushel, Dr. Robert Wakefield, radio.

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

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

## Course of Study for Associate in Applied Science Degree

| First Year                      |         |                 |         |
|---------------------------------|---------|-----------------|---------|
| First Semester                  |         | Second Semester |         |
| Course                          | Sem Hrs | Course          | Sem Hrs |
| Engl 1311.....                  | 3       | Engl 1312.....  | 3       |
| Math 1313 or More Advanced..... | 3       | Hist 2302.....  | 3       |
| Radio 1111.....                 | 1       | Radio 1112..... | 1       |
| R/TV 1310.....                  | 3       | R/TV 1320.....  | 3       |
| Spch 1310.....                  | 3       | Spch 2320.....  | 3       |
| TV 1131.....                    | 1       | TV 1132.....    | 1       |

| Second Year                 |         |                             |         |
|-----------------------------|---------|-----------------------------|---------|
| Third Semester              |         | Fourth Semester             |         |
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| Radio 2111.....             | 1       | Govt 2301 or 2302.....      | 3       |
| R/TV 2310.....              | 3       | Jour 1313.....              | 3       |
| R/TV 2360.....              | 3       | Radio 2112.....             | 1       |
| Th 1310.....                | 3       | R/TV 2320.....              | 3       |
| TV 2131.....                | 1       | R/TV 2330.....              | 3       |
| Approved Elective.....      | 3       | TV 2132.....                | 1       |

Approved Electives: Art 1300, BA 1301, Jour 2350, Mu 1328, OE 1401, R/TV 2340, and Span 1311.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

### **R/TV 1310 Survey of Radio and Television**

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

Surveys American system of broadcasting. Includes personnel, equipment, terms, and station and network organization. Offers practical experience in station operational procedures. Prerequisite: None.

### **R/TV 1320 Fundamentals of Radio and Television**

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

A continuation of R/TV 1310. Emphasizes inside station operational procedures. Prerequisite: None.

### **R/TV 2310 Announcing for Radio and Television**

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

Designed to prepare the student for a career in voice talent for radio and television. Begins with discussions of proper pronunciation and articulation. Moves to applications—such as interviewing, reading news and commercial copy, and announcing music and sports. Prerequisite: None.

### **R/TV 2320 Writing for Radio and Television**

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

Concerns effective communication of messages through radio and television. Presents techniques for writing commercial, public service, and promotional announcements. Includes newscasts, dramatic scripts, and documentaries. Prerequisite: None.

- R/TV 2330 Radio and Television Production**  
 (3-0)..... **3 hours**  
 Emphasizes radio production problems posed by the documentary, panel, special event, music programs, and announcements. Emphasizes television production techniques and creative aspects of the producer's problems. Prerequisite: None.
- R/TV 2340 Advertising for Radio and Television**  
 (3-0)..... **3 hours**  
 Introduces advertising terminology, methods, and strategies applicable to radio and television. Includes units on conducting audience research, reading rating books, purchasing radio and television time, formulating advertising campaigns, and producing commercials. Presents advertising ethics and law. Prerequisite: None.
- R/TV 2360 Voice and Diction for Radio and Television**  
 (3-0)..... **3 hours**  
 Presents basic principles of diction, voice development, and interpretation. Designed to meet individual vocal needs and professional objectives through intensive application via classroom exercises and special projects. Requires mastery of international Phonetic Alphabet. Prerequisite: None.
- Radio 1111, 1112, 2111, 2112 Radio Laboratory**  
 (0-5)..... **1 hour each**  
 Provides framework for student participation at the college radio station, KOCV-FM. Requires working a minimum of five hours per week at the station and attending a weekly staff meeting designed to keep students abreast of happenings at the station and in the industry. Prerequisite or Corequisite: Another R/TV course. With instructor approval, may enroll for lab more than four semesters.
- TV 1131, 1132, 2131, 2132 Television Laboratory**  
 (0-5)..... **1 hour each**  
 Designed for students who participate intensively in basic television production. Includes production of educational, informational, and instructional television programs on cable television. Prerequisite: Consent of the instructor.

## Building Trades

**Faculty:** Tom Wilburn, Chairman.

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

### Course of Study for Associate in Applied Science Degree

| <b>First Year</b>                          |         |                             |         |  |
|--|---------|-----------------------------|---------|--|
| First Semester                             |         | Second Semester             |         |  |
| Course                                     | Sem Hrs | Course                      | Sem Hrs |  |
| BT 1601 .....                              | 6       | BT 1603 .....               | 6       |  |
| BT 1602 .....                              | 6       | BT 1604 .....               | 6       |  |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312 or Spch 1310..... | 3       |  |
| R/AC 1302 .....                            | 3       | *PE.....                    | 1       |  |
| *PE.....                                   | 1       |                             |         |  |
| <b>Second Year</b>                         |         |                             |         |  |
| Third Semester                             |         | Fourth Semester             |         |  |
| Course                                     | Sem Hrs | Course                      | Sem Hrs |  |
| BT 2601 .....                              | 6       | BT 2603 .....               | 6       |  |
| BT 2605 .....                              | 6       | BT 2604 .....               | 6       |  |
| Math 1313 or More Advanced.....            | 3       | Govt 2301 or 2302.....      | 3       |  |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

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

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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- BT 1601 Principles of Residential Construction I**  
(2-8)..... 6 hours  
Introduces principles of basic residential construction. Includes introduction to hand tools, power tools, building materials, blueprint reading, specifications, surveying, and related mathematics. Stresses safety. Prerequisite: None.
- BT 1602 Carpentry I**  
(2-8)..... 6 hours  
Includes all carpentry skills, selection and use of materials, carpentry equipment, and framing and industrial safety. Prerequisite: None.
- BT 1603 Principles of Residential Construction II**  
(2-8)..... 6 hours  
A continuation of BT 1601. Emphasizes foundations and form work, concrete forming, and framing. Prerequisite: BT 1601.
- BT 1604 Carpentry II**  
(2-8)..... 6 hours  
A continuation of BT 1602. Emphasizes energy conservation. Includes actual erection of walls, ceiling joists and rafters, installation of doors, windows, wall and roof sheathing, roofing materials and insulation. Prerequisite: BT 1602 or consent of the department chairman.
- BT 2408 National Electrical Code**  
(3-3)..... 4 hours  
An applied course covering the National Electrical Code for residential and manufactured housing. Prerequisite: None.
- BT 2601 Principles of Residential Construction III**  
(2-8)..... 6 hours  
Designed for the second-year student and/or the student with prior carpentry experience. Emphasizes residential remodeling. Includes a study of plumbing and electrical trades. Introduces basic code applications and requirements for each trade area. Prerequisites: BT 1603 and BT 1604 or consent of the department chairman.
- BT 2603 Cabinet Making**  
(2-8)..... 6 hours  
Involves principles of cabinet construction. Presents plan making, layout, wood selection, joints, machine practices and techniques, door and drawer construction, sanding, finishing, and laminate laying. Prerequisite: None.
- BT 2604 Special Problems**  
(2-8)..... 6 hours  
Includes erection of residential buildings in modules, construction cost analysis, bidding procedures, estimating, and current research and development related to individual fields of interest. Emphasizes preparation, procedures, and techniques for securing employment in building trades. Prerequisite: Consent of the department chairman.
- BT 2605 Residential Interior Finishes**  
(2-8)..... 6 hours  
Includes interior finishes such as sheetrocking, taping, bedding, texturing, and painting. Emphasizes methods and procedures involved in installation of vinyl, wood and ceramic tile, flooring, techniques for hanging doors and cabinets, and application of interior molding and wood trim. Prerequisites: BT 1603 and 1604 or consent of the department chairman.
- Plumbing Fundamentals - See R/AC 1402.**

## Business Administration

**Faculty:** Jack Felts, Chairman; Sue Blair, James Camp, Larry Duval, Sharon Lipham, 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 in 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 which may be directly applicable to those who are already 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**

**First Year**

| First Semester          |         | Second Semester           |         |
|-------------------------|---------|---------------------------|---------|
| Course                  | Sem Hrs | Course                    | Sem Hrs |
| BA 1301 .....           | 3       | Engl 1312.....            | 3       |
| Engl 1311.....          | 3       | Hist 2302.....            | 3       |
| Hist 2301.....          | 3       | Math 1303.....            | 3       |
| Math 1302 or 1341 ..... | 3       | Psy 1301 or Soc 1301..... | 3       |
| *Science.....           | 4       | *Science.....             | 4       |
| PE.....                 | 1       | PE.....                   | 1       |

**Second Year**

| Third Semester               |         | Fourth Semester         |         |
|------------------------------|---------|-------------------------|---------|
| Course                       | Sem Hrs | Course                  | Sem Hrs |
| BA 2311 .....                | 3       | BA 2402 .....           | 4       |
| BA 2401 .....                | 4       | CIS 1400.....           | 4       |
| Engl (Sophomore level) ..... | 3       | Eco 2301 or 2302 .....  | 3       |
| Govt 2301 .....              | 3       | Govt 2302 .....         | 3       |
| Math 1304 or 2401 .....      | 3 or 4  | Spch 1310 or 2340 ..... | 3       |
| PE.....                      | 1       | PE.....                 | 1       |

\*Natural Science, Chemistry, Biology, Geology, or Physics. (The science chosen must have a laboratory requirement.)

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Core Curriculum for Business Administration**

The following course of study includes those core courses approved by the Texas Coordinating Board for students intending to pursue a degree at an upper-level college or university in Business Administration.

**First Year**

| First Semester |         | Second Semester         |         |
|----------------|---------|-------------------------|---------|
| Course         | Sem Hrs | Course                  | Sem Hrs |
| BA 1301 .....  | 3       | Engl 1312.....          | 3       |
| Engl 1311..... | 3       | Hist 2302.....          | 3       |
| Hist 2301..... | 3       | Math 1303.....          | 3       |
| Math 1302..... | 3       | *Science.....           | 4       |
| *Science.....  | 4       | Spch 1310 or 2340 ..... | 3       |
| PE.....        | 1       | PE.....                 | 1       |

**22 Business Administration**

**Second Year**

| Third Semester            |         | Fourth Semester |         |
|---------------------------|---------|-----------------|---------|
| Course                    | Sem Hrs | Course          | Sem Hrs |
| BA 2401 .....             | 4       | BA 2311 .....   | 3       |
| Eco 2301 .....            | 3       | BA 2402 .....   | 4       |
| Govt 2301 .....           | 3       | CIS 1400 .....  | 4       |
| Math 1304 or 2401 .....   | 3 or 4  | Eco 2302 .....  | 3       |
| Psy 1301 .....            | 3       | Govt 2302 ..... | 3       |
| **Approved Elective ..... | 3       | Soc 1301 .....  | 3       |
| PE .....                  | 1       | PE .....        | 1       |

\*Natural Science: Chemistry, Biology, Geology, or Physics. The science chosen must have a laboratory requirement.

\*\*Approved Electives: BA 2312, CIS 1403, CIS 2402, CIS 2404.

**Accounting**

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

Students should check with the college or university which they plan to transfer to about the transferability of the course. Some courses not designated as core courses may not transfer.

**Course of Study for Certificate of Completion  
(Accounting)**

**First Year**

| First Semester  |         | Second Semester             |         |
|-----------------|---------|-----------------------------|---------|
| Course          | Sem Hrs | Course                      | Sem Hrs |
| BA 1301 .....   | 3       | BA 2311 .....               | 3       |
| BA 2401 .....   | 4       | BA 2402 .....               | 4       |
| Engl 1311 ..... | 3       | CIS 1400 .....              | 4       |
| Math 1301 ..... | 3       | Engl 1312 .....             | 3       |
| PE .....        | 1       | Psy 1301 or Spch 2340 ..... | 3       |
| Science .....   | 4       | PE .....                    | 1       |

**Second Year**

| Third Semester           |         | Fourth Semester          |         |
|--------------------------|---------|--------------------------|---------|
| Course                   | Sem Hrs | Course                   | Sem Hrs |
| BA 2303 .....            | 3       | BA 2304 .....            | 3       |
| BA 2305 or BA 2310 ..... | 3       | BA 2306 .....            | 3       |
| Eco 2301 .....           | 3       | Eco 2302 .....           | 3       |
| Govt 2301 .....          | 3       | Govt 2302 .....          | 3       |
| Hist 2301 .....          | 3       | Hist 2302 .....          | 3       |
| Math 1302 .....          | 3       | *Approved Elective ..... | 3       |

\*Approved Electives: BA 2312, CIS 2402, CIS 2404, Engl (Sophomore level), Math 1303, Math 2401, and Spch 1310.

**General Business**

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

**Accounting**

- BA 1304 Elementary Accounting**  
 (3-0)..... **3 hours**  
 For non-business and non-accounting majors. Introduces basic theory of double-entry accounting in single proprietorship. Emphasizes complete accounting cycle: forms and procedures, analysis of transactions, and financial statements. (May not be accepted for credit by all senior colleges.) Prerequisite: None.
- BA 2303 Intermediate Accounting I**  
 (3-0) ..... **3 hours**  
 Presents reporting process. Emphasizes accounting principles underlying balance sheet, income statement, and statement of retained earnings. Includes matching costs and revenues; intangible and deferred assets; and cash, receivables, inventory valuation, and investments. Prerequisite: BA 2402. (May not transfer to upper level institutions.)
- BA 2304 Intermediate Accounting II**  
 (3-0)..... **3 hours**  
 A continuation of BA 2303. Explores financial statement reporting and disclosure. Includes intangible assets; current, contingent and long-term liabilities; paid-in capital and retained earnings; statement of changes in financial position; earnings per share statements; uses of comparative data and special measurements and analysis; statements from incomplete records; and errors and their correction. Prerequisite: BA 2303. (May not transfer to upper level institutions.)
- BA 2305 Federal Income Tax Accounting**  
 (3-0)..... **3 hours**  
 Presents theory and practice of preparing income tax returns for individuals and small businesses. Prerequisite: BA 2402 or consent of the department chairman.
- BA 2306 Cost Accounting**  
 (3-0) ..... **3 hours**  
 Introduces fundamentals of cost accounting, including accounting for labor, materials, and manufacturing expenses. Prerequisite: BA 2402 or consent of the department chairman.
- BA 2310 Managerial Accounting**  
 (3-0) ..... **3 hours**  
 Emphasizes use of accounting information for management decision making in the planning and controlling of business enterprises. Stresses preparation and internal use of financial statements for business management. Prerequisite: BA 2402 or consent of the department chairman.
- BA 2401 Principles of Accounting I**  
 (3-3)..... **4 hours**  
 Presents introduction to principles and concepts of financial accounting for sole proprietorships. Includes the accounting cycle and merchandising inventories, current and plant assets, deferrals, accruals, payables, receivables, and payroll systems. Requires minimum of one practice set, manual or computerized, during the semester. Prerequisite: None.
- BA 2402 Principles of Accounting II**  
 (3-3)..... **4 hours**  
 Presents the application of accounting concepts and principles for partnerships and corporations. Introduces managerial and cost accounting through cost behavior, budgeting, responsibility accounting, cost systems, product costing, and incremental analysis. Requires a minimum of one practice set, manual or computerized, during the semester. Prerequisite: BA 2401.

**Business Law**

- BA 2311 Business Law I**  
 (3-0)..... **3 hours**  
 Provides understanding of legal framework of business and basic principles of law impacting on business and society. Gives special attention to legal environment of business and government; the nature and source of legal systems; law of contracts, personal property, bailments, and sales; and to selected civil law topics. Prerequisite: None.
- BA 2312 Business Law II**  
 (3-0)..... **3 hours**  
 A continuation of BA 2311. Emphasizes legal principles of commercial paper, agency, secured transactions, bankruptcy, business organization, real property, wills, estates, and trusts. Prerequisite: None.

**Mathematics for Business Administration****Math 1301 Elementary Mathematics of Finance**

(3-0)..... 3 hours  
 Develops skill and accuracy in fundamental mathematical problems of business. Studies cash sales, customer and payroll records, aliquot parts, percentage, interest, annuities, insurance, stocks, bonds, and graphs. Prerequisite: None.

**Math 1302 College Algebra—Business**

(3-0)..... 3 hours  
 Provides introduction to sets, functions, and the algebraic number system. Includes inequalities, variation, logarithms, probability, determinants, and quadratics. Presents problem solving by using business and decision-making techniques. Prerequisite: Math 1313 or demonstrated proficiency in algebra.

**Math 1303 Mathematical Analysis for Business I**

(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. Prerequisite: Math 1302 or demonstrated proficiency in college algebra.

**Math 1304 Mathematical Analysis for Business II**

(3-0)..... 3 hours  
 Includes elementary calculus of differentiation, integration, and application. Emphasizes application to business and economic problems. Prerequisite: Math 1303.

**Math 2401 Business Statistics**

(3-3)..... 4 hours  
 Provides introduction to techniques of collection, presentation analysis, and interpretation of numerical data. Stresses application of correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models, and programming. Prerequisite: Math 1302.

## Chemistry

**Faculty:** Dr. E. Don Taylor, Chairman; Kim Floyd, Dr. Jeanne Russell.

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, pre-medicine, and elementary education. A co-objective is to prepare students for careers in chemical technology, where emphasis is placed on applied chemistry for modern laboratory instrumentation.

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

**Course of Study for Certificate of Completion**

| First Year               |         |                          |         |
|--------------------------|---------|--------------------------|---------|
| First Semester           |         | Second Semester          |         |
| Course                   | Sem Hrs | Course                   | Sem Hrs |
| Chem 1301 and 1101 ..... | 4       | Chem 1201 .....          | 2       |
| CIS 2406 .....           | 4       | Chem 1302 and 1102 ..... | 4       |
| Engl 1311 .....          | 3       | Engl 1312 .....          | 3       |
| Hist 2301 .....          | 3       | Hist 2302 .....          | 3       |
| Math 1345 .....          | 3       | Math 2331 .....          | 3       |
| PE .....                 | 1       | Phys 1403 .....          | 4       |
|                          |         | PE .....                 | 1       |

## Second Year

| Third Semester           |         | Fourth Semester          |         |
|--------------------------|---------|--------------------------|---------|
| Course                   | Sem Hrs | Course                   | Sem Hrs |
| Chem 2201 .....          | 2       | Chem 2302 and 2102 ..... | 4       |
| Chem 2301 and 2101 ..... | 4       | Chem 2303 and 2103 ..... | 4       |
| Govt 2301 .....          | 3       | Govt 2302 .....          | 3       |
| Lang 1411 .....          | 4       | Lang 1412 .....          | 4       |
| Math 2333 .....          | 3       | Phys 2402 .....          | 4       |
| Phys 2401 .....          | 4       | PE .....                 | 1       |
| PE .....                 | 1       |                          |         |

To receive the Associate in Science Degree, students must complete 12 semester hours of English.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Chem 1101 Fundamentals of Chemistry Laboratory I**

(0-3)..... 1 hour

A laboratory course which illustrates and reinforces principles and concepts of Chem 1301 by use of quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Corequisite or Prerequisite: Chem 1301.

**Chem 1102 Fundamentals of Chemistry Laboratory II**

(0-4)..... 1 hour

A laboratory course which illustrates and reinforces principles and concepts of Chem 1302 by use of qualitative and quantitative experiments. Emphasizes interpreting and reporting of data. Stresses facility in handling scientific equipment. Corequisite or Prerequisite: Chem 1302.

**Chem 1201 Chemical Calculations**

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

A lecture course designed as a calculations course for chemistry and chemical engineering majors. Reviews mathematics necessary for basic chemistry courses. Applies mathematical techniques to solving chemical problems. Prerequisite: Chem 1301.

**Chem 1301 General Inorganic Chemistry I**

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

A lecture course designed as a first college-transfer course for students with some background in physical science. Covers such topics as atomic structure, bonding, formulas, equations, gas laws, solution, acids and bases, etc. Prerequisite: None. (Credit probably not transferable until Chem 1101 is successfully completed. A basic understanding of high school algebra is essential.)

**Chem 1302 General Inorganic Chemistry II**

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

A lecture course which is a continuation of Chem 1301. Includes chemical kinetics, equilibrium, electrochemistry, thermodynamics, coordination chemistry, nuclear chemistry, and organic. Prerequisite: A minimum grade of C in Chem 1301. (Credit probably not transferable until Chem 1102 is successfully completed. A basic understanding of college algebra is essential.)

**Chem 2101 Organic Chemistry Laboratory I**

(0-4)..... 1 hour

A laboratory course that illustrates and reinforces principles and concepts of Chem 2301. Uses preparative experiments of organic compounds. Corequisite or Prerequisite: Chem 2301.

**Chem 2102 Organic Chemistry Laboratory II**

(0-4)..... 1 hour

A laboratory course that illustrates and reinforces principles and concepts of Chem 2302. Uses preparative experiments of organic compounds. Covers NMR and IR as applicable to organic molecules identification. Corequisite or Prerequisite: Chem 2302.

**Chem 2103 Analytical Chemistry Laboratory I**

(0-4)..... 1 hour

A laboratory course that illustrates and reinforces principles and concepts of Chem 2303. Uses quantitative experiments. Corequisite or Prerequisite: Chem 2303.

**Chem 2201 Organic Nomenclature**

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

A lecture course that presents a systematic study of rules of nomenclature for organic molecules. Emphasizes International Union of Pure and Applied Chemistry rules. Covers common names. Prerequisite: Chem 1302. Corequisite: Chem 2301 or consent of the instructor.

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### Chem 2301 Organic Chemistry I

(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. Corequisite: Chem 2201 or consent of the instructor. Prerequisite: A minimum grade of C in Chem 1302. (Credit probably not transferable until Chem 2101 is successfully completed.)

### Chem 2302 Organic Chemistry II

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

A lecture course that is a continuation of Chem 2301. A mechanistic approach to an integrated study of organic compounds with functional groups. Includes an introduction to biochemistry. Prerequisite: A minimum grade of C in Chem 2301. (Credit probably not transferable until Chem 2102 is successfully completed.)

### Chem 2303 Analytical Chemistry

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

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

## Child Development

**Faculty:** MaryIn Hair, Chairman; Mary Joyce Harding.

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

The Associate Degree program in Child Development will provide an opportunity for an in-depth study of the whole child. In the certificate program, the specialization is in Child Development. In both programs, at least 50 percent of course content will include an actual lab experience with children.

### Course of Study for Associate in Applied Science Degree

#### First Year

| First Semester         |         | Second Semester |         |
|------------------------|---------|-----------------|---------|
| Course                 | Sem Hrs | Course          | Sem Hrs |
| CD 1301.....           | 3       | CD 1303.....    | 3       |
| CD 1302.....           | 3       | CD 1306.....    | 3       |
| CD 1305.....           | 3       | CD 1307.....    | 3       |
| CD 1308.....           | 3       | CD 1309.....    | 3       |
| Spch 2340 or 2360..... | 3       | Engl 1311.....  | 3       |

#### Second Year

| Third Semester                  |         | Fourth Semester        |         |
|---------------------------------|---------|------------------------|---------|
| Course                          | Sem Hrs | Course                 | Sem Hrs |
| CD 2303.....                    | 3       | CD 1304.....           | 3       |
| CD 2304.....                    | 3       | CD 2301.....           | 3       |
| CD 2305.....                    | 3       | CD 2306.....           | 3       |
| Math 1313 or More Advanced..... | 3       | CD 2410.....           | 4       |
| *PE.....                        | 1       | Govt 2301 or 2302..... | 3       |
| **Approved Elective.....        | 3       | *PE.....               | 1       |

\*PE 1303 recommended. HEd 1301 may be substituted.

\*\*Approved Electives: BA 2311, CD 1310, CD 2302, or Th 2355.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Certificate of Technology in Child Development**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| CD 1301.....   | 3       | CD 1303.....    | 3       |
| CD 1302.....   | 3       | CD 1304.....    | 3       |
| CD 1305.....   | 3       | CD 1306.....    | 3       |
| CD 1308.....   | 3       | CD 1307.....    | 3       |
| CD 2305.....   | 3       | CD 1309.....    | 3       |

**CD 1301 Parenting**  
 (3-0)..... **3 hours**  
 Investigates marriage, family planning, physical and psychological preparation for parenthood, pregnancy, and delivery. Presents various ways of helping children grow toward emotional, social, and intellectual maturity. Discusses methods of helping children develop self-confidence, competence, and integrity. Explores special problems of infants, preschoolers, school-age children, and adolescents. Prerequisite: None.

**CD 1302 Introduction to Child Development**  
 (2-3)..... **3 hours**  
 Introduces profession of teaching in the preschool. Emphasizes the adult-child relationship and guidance techniques. Explores career opportunities in child development and related fields. Prerequisite: None.

**CD 1303 Child Health Care**  
 (2-3)..... **3 hours**  
 Concentrates on general principles of personal and community health. Emphasizes health supervision of the child during infancy, preschool, and school years to protect against communicable diseases and accidents. Also includes relation of socio-economic problems to child health. Prerequisite: None.

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

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

**CD 1306 Child Nutrition**  
 (2-3)..... **3 hours**  
 Emphasizes effect of nutrition and mental growth and development. Includes planning, selecting, and serving food to meet children's needs at all levels of development. Presents desirable eating habits for children and examines and judges merits of nutritive foods. Stresses purchasing, storing, and practicing proper sanitation. Introduces cooking and other activities related to nutrition. Prerequisite: None.

**CD 1307 Discipline and Classroom Management**  
 (2-3)..... **3 hours**  
 Provides opportunity to understand individual's expectations regarding discipline and classroom management. Develops techniques of communication with children and co-workers. Offers opportunity to learn theories of behavior-shaping. Requires student to develop and demonstrate methods of individual and group management. Prerequisite: None.

**CD 1308 Child Growth and Development of Infants and Toddlers**  
 (3-2)..... **3 hours**  
 Emphasizes development processes and environmental factors shaping personality and affecting achievement from birth to three years of age. Laboratory requires observation, participation, and performance in relation to planned projects geared toward infants and toddlers. Prerequisite: None.

**CD 1309 Growth and Development of the Preschool Child**  
 (3-2)..... **3 hours**  
 Introduces influence of environment on personality and development of preschool child. Emphasizes physical, mental, and emotional development of child from three to six years of age. Presents needs of children in a preschool, day care, kindergarten, or home setting. Requires laboratory observation of and participation with preschool children. Prerequisite: None.

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

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### **CD 2301 Personal and Family Management**

**(3-0)**..... **3 hours**  
Presents development and relationships of individual family members. Includes changing role of men and women in society. Discusses stages of family life cycle. Introduces management techniques applicable to the individual and the family, including time management, money management, and related topics. Prerequisite: None.

### **CD 2302 Management Systems in Preschool Centers**

**(3-0)**..... **3 hours**  
Emphasizes practical aspects of managing a preschool center. Requires each student to develop a management system for a center—including budgeting, record keeping, personnel practices, and food, health and referral services. Prerequisite: None.

### **CD 2303 Planning and Teaching Methods in Early Childhood**

**(2-3)**..... **3 hours**  
Emphasizes planning and teaching curriculum for children three to five years of age. Includes assessing of children's developmental level and planning of yearly to daily curriculums. Also includes involving parents, creating physical environments, and managing classrooms. Prerequisites: CD 1302 and a minimum of two of the following courses: CD 1303, CD 1305, CD 1306, CD 2305, CD 2306, or consent of the department chairman.

### **CD 2304 The Special Child**

**(2-3)**..... **3 hours**  
Presents techniques to identify and serve children with special needs. Includes studies of physical, emotional, language, and/or mental disabilities. 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. Prerequisite: None.

### **CD 2305 Children's Literature and Language Development**

**(2-3)**..... **3 hours**  
Introduces techniques for development of early childhood language experiences in listening, speaking, and reading and writing readiness. Includes criteria for selecting and using children's literature in preschool environment. Introduces methods of story telling with and without audiovisual aids (such as puppets, flannel graphs, and story rolls). Includes introduction to bilingual language development. Prerequisite: None.

### **CD 2306 Science and Math Activities for Children**

**(2-3)**..... **3 hours**  
Applies scientific approach to a child's world. Includes lectures and laboratory activities designed to acquaint child with nature, ecology, and the world around him. Includes such math concepts as shapes, counting sets, etc. Prerequisite: None.

### **CD 2307 Special Problems I**

**(2-3)**..... **3 hours**  
Provides leadership and guidance for students involved with special projects. May include movement through CDA modules, portfolio construction, and/or other special assignments. Prerequisite: Consent of the department chairman.

### **CD 2308 Special Problems II**

**(2-3)**..... **3 hours**  
A continuation of CD 2307. May include completion of CDA modules, the assessment process, and/or special assignments. Prerequisite: Consent of the department chairman.

### **CD 2309 Special Problems III**

**(1-4)**..... **3 hours**  
Serves special, identified needs of staff members of day care or preschool programs. Allows student and instructor to formulate objectives on an individual basis and to agree on strategies to meet the objectives. Prerequisite: Written consent of the department chairman.

### **CD 2410 Application of Learning Theories**

**(1-8)**..... **4 hours**  
Requires evidence of competency as a child care worker and/or director before a passing grade can be awarded. Prerequisites: 24 hours of Child Development including CD 1302, CD 1308, CD 1309, and CD 2303 as well as consent of the instructor. A grade of "C" or better is required.

# Clinical Laboratory Sciences

## (Medical Laboratory Technology)

**Faculty:** Joel Smith, Chairman: Anita Lau, Susan Wetherell,  
Dr. Kris Challapalli, Medical Advisor.

Medical Laboratory Technology is a special program of combined academic and clinical training which, during a 22-month period, prepares students with entry skills in medical laboratory techniques, completes prerequisites for certification by examination in the category of Medical Laboratory Technician, and leads to an Associate of Applied Science Degree. The laboratory practicum is under the full-time supervision of a qualified educational coordinator at an affiliated clinical laboratory, and the entire program is directed by a pathologist certified by the American Society of Clinical Pathologists and the College of American Pathologist. The Odessa College MLT Program is Council Allied Health Education Accreditation (CAHEA) accredited.

Because practicum space is limited, students will be admitted on a selected basis. To be admitted to the program, a student must be a high school graduate or equivalent, must achieve a satisfactory score on selected college entrance examinations, and must show evidence of good physical and mental health. Applicants are encouraged to submit their applications by June 15.

Students must maintain an average grade of "C" or better for all courses taken and must attain no grade lower than "C" in any Medical Laboratory Technology course. Students failing to meet these scholastic requirements will be dropped from the program.

Students wishing to apply for admission or seeking additional information should contact the Chairman, Clinical Laboratory Sciences Department, Odessa College, 201 West University, Odessa, Texas 79764.

### Course of Study for Associate in Applied Science Degree

#### First Year

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Biol 1401..... | 4       | Biol 1402.....  | 4       |
| Engl 1311..... | 3       | Engl 1312.....  | 3       |
| MLT 1211.....  | 2       | MLT 1212.....   | 2       |
| MLT 1221.....  | 2       | MLT 1222.....   | 2       |
| MLT 1601.....  | 6       | MLT 1602.....   | 6       |
|                |         | *PE.....        | 1       |

#### Summer Session (First Term)

| Course                          | Sem Hrs |
|---------------------------------|---------|
| Math 1313 or More Advanced..... | 3       |
| MLT 1123.....                   | 1       |

#### Second Year

| Third Semester          |         | Fourth Semester         |         |
|-------------------------|---------|-------------------------|---------|
| Course                  | Sem Hrs | Course                  | Sem Hrs |
| Chem 1301 and 1101..... | 4       | Chem 2303 and 2103..... | 4       |
| MLT 2211.....           | 2       | MLT 2212.....           | 2       |
| MLT 2221.....           | 2       | MLT 2222.....           | 2       |
| MLT 2601.....           | 6       | MLT 2602.....           | 6       |
| *PE.....                | 1       |                         |         |

#### Summer Session (First Term)

| Course                 | Sem Hrs |
|------------------------|---------|
| Govt 2301 or 2302..... | 3       |
| MLT 2123.....          | 1       |

\*HEd 1301 or EMT 1401 may be substituted for the two one-hour PE courses.

### 30 Clinical Laboratory Sciences

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

- MLT 1123 Clinical Practicum**  
(0-20)..... 1 hour  
Consists of 20 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a Medical Technologist and Pathologist. Prerequisite: MLT 1602.
- MLT 1211 Urinalysis and Hematology Lab**  
(0-8)..... 2 hours  
Illustrates and reinforces content of MLT 1601. Emphasizes theory, principles, procedure, and performance of selected techniques employed in urinalysis, hematology, and coagulation for diagnosing and/or monitoring disease processes. Stresses laboratory safety. Corequisite: MLT 1601.
- MLT 1212 Immunology and Immunochemistry Lab**  
(0-8)..... 2 hours  
Illustrates and reinforces content of MLT 1602. Emphasizes theory, principle, procedure, and performance of selected techniques employed in immunodiagnosis. Includes procedures for donor screening, antibody identification, and crossmatching of blood for transfusion. Stresses laboratory safety. Corequisite: MLT 1602.
- MLT 1221 Clinical Practicum**  
(0-12)..... 2 hours  
Consists of 12 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 1601.
- MLT 1222 Clinical Practicum**  
(0-12)..... 2 hours  
Consists of 12 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 1602.
- MLT 1601 Urinalysis and Hematology**  
(6-0)..... 6 hours  
Introduces fundamentals of Medical Laboratory Technology. Stresses professional ethics and nursing arts essential to the medical laboratory. Emphasizes theory and practical application of urinalysis, hematology, and coagulation procedures and their interpretation. Prerequisite: Admission to the Medical Laboratory Technology Program or consent of the department chairman. Corequisites: MLT 1211 and MLT 1221.
- MLT 1602 Immunology and Immunochemistry**  
(6-0)..... 6 hours  
Consists of study of immunology and immunochemistry. Emphasizes study of antigen-antibody reactions and their use in serological testing and blood banking procedures. Prerequisite: MLT 1601 or consent of the instructor. Corequisites: MLT 1212 and MLT 1222.
- MLT 2123 Clinical Practicum**  
(0-20)..... 1 hour  
Consists of 20 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a Medical Technologist and a Pathologist. Prerequisite: MLT 2602.
- MLT 2211 Clinical Microbiology Lab**  
(0-8)..... 2 hours  
Illustrates and reinforces content of MLT 2601. Emphasizes theory, principle, procedure, and performance of selected techniques employed in clinical microbiology for the isolation and identification of microorganisms pathogenic to man. Stresses laboratory safety. Corequisite: MLT 2601.
- MLT 2212 Clinical Chemistry Lab**  
(0-8)..... 2 hours  
Illustrates and reinforces content of MLT 2602. Emphasizes theory, principle, procedure, and performance of selected techniques employed in clinical chemistry for diagnosing and/or monitoring disease processes of a metabolic nature. Stresses laboratory safety. Corequisite: MLT 2602.
- MLT 2221 Clinical Practicum**  
(0-12)..... 2 hours  
Consists of 12 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 2601.
- MLT 2222 Clinical Practicum**  
(0-12)..... 2 hours  
Consists of 12 hours per week in an assigned department of an affiliated clinical laboratory performing procedures under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 2602.

**MLT 2601 Clinical Microbiology**

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

**MLT 2602 Clinical Chemistry**

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

## Communication and Theatre

**Faculty:** Paula Thompson, theatre, Chairman; Marsha Gephart, speech; Steven Goff, photography; Wallace Jackson, radio/speech; Dr. Don Nichols, forensics/speech; Paul Roberts, journalism.

The Department of Communication and Theatre acknowledges those arts and skills fundamental to the human potential. Its purpose is to illuminate the impact of communication and theatre arts on contemporary behavior and to promote the successful functioning of individuals within a complex cultural milieu. Fields in this department are inherent to virtually all of man's occupational, political, and social endeavors. Therefore, the department seeks primarily to further the nature of man as an educated and cultured being, one capable of adjusting and contributing to the world in which he lives.

### Journalism

The journalism program at Odessa College fulfills a dual purpose. One course of study prepares students to transfer to a senior college where they will work toward a bachelor's degree in any of several journalism areas. Also, Odessa College has established a unique certificate program to prepare journalists to go directly to work in community journalism.

The journalism program offers a variety of courses. Students gain knowledge and experience through taking such courses as mass communications, reporting, editing, feature and editorial writing, photojournalism, advertising, and public relations. In the various publications laboratories, students learn to produce and create under deadline pressures and to see their finished product in the hands of the Odessa College student body.

Journalism courses prepare interested students for a career in journalism; they also serve as useful electives for non-journalism majors.

### Course of Study for Associate in Arts Degree

| First Semester |         | First Year     |         | Second Semester |         |
|----------------|---------|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course         | Sem Hrs | Course          | Sem Hrs |
| Engl 1311..... | 3       | Engl 1312..... | 3       | Engl 1312.....  | 3       |
| Hist 2301..... | 3       | Hist 2302..... | 3       | Hist 2302.....  | 3       |
| Jour 1111..... | 1       | Jour 1112..... | 1       | Jour 1112.....  | 1       |
| Jour 1311..... | 3       | Jour 1131..... | 1       | Jour 1131.....  | 1       |
| Jour 1313..... | 3       | Jour 1312..... | 3       | Jour 1312.....  | 3       |
| Lang 1411..... | 4       | Lang 1412..... | 4       | Lang 1412.....  | 4       |
| PE.....        | 1       | PE.....        | 1       | PE.....         | 1       |

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**Second Year**

| Third Semester              |         | Fourth Semester                  |         |
|-----------------------------|---------|----------------------------------|---------|
| Course                      | Sem Hrs | Course                           | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level).....      | 3       |
| Govt 2301 .....             | 3       | Govt 2302 .....                  | 3       |
| Jour 2111 .....             | 1       | Jour 2112 .....                  | 1       |
| Jour 2131 .....             | 3       | Jour 2132 .....                  | 1       |
| Jour 2310 .....             | 3       | Jour 2330 .....                  | 3       |
| Lang 2311 .....             | 3       | Lang 2312 .....                  | 3       |
| Phot 1331 .....             | 3       | Spch 1310, Spch 2340 or Approved |         |
| PE .....                    | 1       | Elective .....                   | 3       |
|                             |         | PE .....                         | 1       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Certificate  
(Community Journalism)**

**First Year**

| First Semester  |         | Second Semester |         |
|-----------------|---------|-----------------|---------|
| Course          | Sem Hrs | Course          | Sem Hrs |
| Jour 1111 ..... | 1       | Jour 1112 ..... | 1       |
| Jour 1131 ..... | 1       | Jour 1132 ..... | 1       |
| Jour 1311 ..... | 3       | Jour 1312 ..... | 3       |
| Jour 1313 ..... | 3       | Jour 2310 ..... | 3       |
| Jour 2330 ..... | 3       | Jour 2350 ..... | 3       |
| Phot 1331 ..... | 3       | Phot 1350 ..... | 3       |

**Second Year**

| Third Semester  |         | Fourth Semester |         |
|-----------------|---------|-----------------|---------|
| Course          | Sem Hrs | Course          | Sem Hrs |
| Jour 2112 ..... | 1       | Jour 2601 ..... | 6       |
| Jour 2131 ..... | 1       |                 |         |
| Jour 2320 ..... | 3       |                 |         |
| Jour 2340 ..... | 3       |                 |         |
| Jour 2350 ..... | 3       |                 |         |

**Jour 1111, 1112, 2111, 2112 Newspaper Laboratory**

(0-2)..... 1 hour each  
Grants credit for working on staff of campus newspaper, "The Roundup." Required of Jour 1311, 1312, 2310, and 2340 students. Registration open to other students with consent of the instructor. Prerequisite: None.

**Jour 1131, 1132, 2131, 2132 Magazine Laboratory**

(0-2)..... 1 hour each  
Grants credit for working on staff of campus magazine. Participation required of Jour 1312 and 2310 students. Registration open to other students with consent of the instructor. Prerequisite: None.

**Jour 1311 News Gathering and Writing I**

(3-3)..... 3 hours  
Introduces fundamentals of news writing. Emphasizes development of news judgment and a clear, concise writing style. Provides deadline-pressure training in writing a variety of basic news stories through lecture, discussion, and in-laboratory work. Corequisite: Jour 1111. Prerequisite: None.

**Jour 1312 News Gathering and Writing II**

(3-3)..... 3 hours  
Emphasizes specialized areas of news writing. Encourages sharpened skills in writing and interpreting news. Emphasizes philosophy of news selection and recognition of limitations and responsibilities in reporting. Corequisite: Jour 1112. Prerequisite: Jour 1311 or consent of instructor.

- Jour 1313 Introduction to Mass Communications**  
 (3-0)..... 3 hours  
 Surveys basic facets affecting human interaction through mass communication. Examines evolution of today's concepts in mass communication. Prerequisite: None.
- Jour 1350 Photojournalism**  
 (2-4)..... 3 hours  
 Introduces basic aspects of newspaper photography. Emphasizes photojournalism. Practice gained through working on campus newspaper and college magazine. Prerequisite: Phot 1331 or consent of the instructor.
- Jour 2310 Editing, Layout, and Headline Writing**  
 (3-3)..... 3 hours  
 Presents comprehensive study of copy editing for errors of fact and newspaper style. Stresses page makeup, proof-reading and headline writing. Corequisite: Jour 2111 or Jour 2131. Prerequisite: Jour 1312 or consent of the instructor.
- Jour 2320 Graphic Arts**  
 (3-3)..... 3 hours  
 Introduces history of printing, typography, and advertising design. Experience gained through designing publications for distribution on campus. Corequisite: Jour 1111 or Jour 1131. Prerequisite: None.
- Jour 2330 Feature and Editorial Writing**  
 (3-0)..... 3 hours  
 Stresses writing "soft" news, features, columns, reviews, and editorials. Focuses on forms, techniques, styles, and needs of newspapers and magazines. Presents overview of journalism and how these articles fit into overall scheme. Requires writing and submitting for publication representative articles for student and general publications. Prerequisite: None.
- Jour 2340 Principles of Advertising**  
 (3-2)..... 3 hours  
 Presents an overview of advertising techniques for mass media. Bulk of course work comprised of preparing advertisements. Presents appeals, copy writing, layout techniques, and typography, as well as techniques in preparing broadcast commentary. Corequisite: Jour 1111 or Jour 1131. Prerequisite: None.
- Jour 2350 Public Relations**  
 (3-0)..... 3 hours  
 Offers overview of public relations principles and practices. Combines journalistic and human relations principles. Introduces practical experience in dealing with public relations questions through readings, lectures, and projects. Prerequisite: Jour 1312 or consent of the instructor.
- Jour 2601 Application of Learning Theories**  
 (1-6)..... 6 hours  
 Requires evidence of mastery of certain skills of journalism for award of Certificate in Community Journalism. Employment for qualified professionals in field of community journalism corequisite. Grade based on seminar participation and employer assessment. Grade of "B" or better required for certificate to be awarded. Prerequisite: Completion of 28 semester hours in journalism courses and consent of the instructor.

**Commercial Photography**

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

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

**Course of Study for Associate in Applied Science Degree**

|                  |         | First Year                  |         |        |                 |
|------------------|---------|-----------------------------|---------|--------|-----------------|
|                  |         | First Semester              |         |        | Second Semester |
| Course           | Sem Hrs | Course                      | Sem Hrs | Course | Sem Hrs         |
| BA 1301 .....    | 3       | BA 1304 or 1305.....        | 3       |        |                 |
| Engl 1311 .....  | 3       | Engl 1312 or Spch 2340..... | 3       |        |                 |
| *Phot 1331 ..... | 3       | OE 1201 and OE 1202 .....   | 4       |        |                 |
| *Phot 1332 ..... | 3       | *Phot 1361 .....            | 3       |        |                 |
| Spch 1310.....   | 3       | *Phot 1362 .....            | 3       |        |                 |
| **PE.....        | 1       | **PE.....                   | 1       |        |                 |

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**Second Year**

| Third Semester              |         | Fourth Semester             |         |
|-----------------------------|---------|-----------------------------|---------|
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| BA 2311 .....               | 3       | Phil 2302 .....             | 3       |
| Govt 2301 or 2302 .....     | 3       | Phot 2372 .....             | 3       |
| Phot 2371 .....             | 3       | ***Approved Electives ..... | 9       |
| ***Approved Electives ..... | 6       |                             |         |

\*Both courses may be taken in the same semester.

\*\*HEd 1301 may be substituted for the two one-hour physical education courses.

\*\*\*Approved electives: Jour 1313, Mgt 1301 or Mgt 2303, Phot 1350, Phot 2200, Phot 2311, Phot 2312, Phot 2331, Phot 2332, Phot 2340, Phot 2360, Phot 2370, Phot 2380, Phot 2390, and Phot 2399.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Phot 1331 Basic Photography I**  
 (2-4)..... **3 hours**  
 Introduces basic applied and aesthetic aspects of photography. Includes basic theories of film, exposure, development, filters, and printing. Prerequisite: None.

**Phot 1332 Basic Photography II**  
 (2-4)..... **3 hours**  
 A continuation of Phot 1331. Designed for additional experience in the photographic medium. Prerequisite: Phot 1331.

**Phot 1350 Photojournalism**  
 (2-4)..... **3 hours**  
 Introduces basic aspects of newspaper photography. Emphasizes photojournalism. Practice gained through working on campus newspaper and college magazine. Prerequisite: Phot 1331 or consent of the instructor.

**Phot 1361 Photo Lab Technique I**  
 (2-4)..... **3 hours**  
 Designed to give experience in darkroom printing and developing procedures. Successful completion qualifies student to work as a black and white lab technician in the photographic industry. Includes projection printing, contact printing, black and white print finishing, toning, and mixing photographic chemistry. Prerequisite: Phot 1332.

**Phot 1362 Photo Lab Technique II**  
 (2-6)..... **3 hours**  
 A continuation of Phot 1361. Designed to give additional experience in photo lab work. Prerequisite: Phot 1361 or consent of the instructor.

**Phot 2200 Print Finishing and Negative Retouching**  
 (1-2)..... **2 hours**  
 Concerned with print finishing and negative retouching. Majority of time spent in color work since major emphasis of present-day studio work is in color. Prerequisite: None.

**Phot 2311 Commercial Photography I**  
 (2-6)..... **3 hours**  
 Gives the student working knowledge in specialized field of commercial photography. Emphasizes use of large negative format and the view camera. Includes such photographic problems as magazine article illustration, product photography, fashion, architectural studies, and window displays. Prerequisites: Phot 1332 and Phot 1362.

**Phot 2312 Commercial Photography II**  
 (2-6)..... **3 hours**  
 A continuation of Phot 2311. Provides additional experience in commercial field. Prerequisite: Phot 2311.

**Phot 2331 Portrait Photography I**  
 (2-4)..... **3 hours**  
 Deals basically with professional studio-type portraits. Practice gained by making photographs through actual work with adult and child models. Prerequisite: Phot 1332.

- Phot 2332 Portrait Photography II**  
 (2-4)..... 3 hours  
 A continuation of Phot 2331. Offers additional experience in area of studio portraiture. Emphasizes outdoor portraiture. Prerequisite: Phot 2331.
- Phot 2340 Salon Photography**  
 (2-4)..... 3 hours  
 Requires extensive portfolio of semester's work. Includes making salon prints. Uses landscapes, classical portraits, environmental photography, character studies, and documentary photography as subjects. Prerequisite: Phot 1332.
- Phot 2360 Expressive Photography**  
 (2-4)..... 3 hours  
 Offers opportunity to explore formal, personal, and individual uses of photography. Aims at goal of personal development of the art of seeing and capturing that seen in photographic process. Prerequisite: Phot 1332.
- Phot 2370 History of Photography**  
 (3-0)..... 3 hours  
 A survey course that emphasizes technical and aesthetic developments in a historical perspective. Includes beginning of the medium, inventors, development of photographic equipment, styles of creative masters, aesthetic trends, and social impact of photography. Prerequisite: None.
- Phot 2371 Color Photography I**  
 (2-4)..... 3 hours  
 Consists of taking photographs with color film, both negative and transparency. Introduces basics of color printing. Prerequisite: Phot 1332.
- Phot 2372 Color Photography II**  
 (2-4)..... 3 hours  
 A continuation of Phot 2371. Includes additional work in sensitometry and advanced lab technique. Prerequisite: Phot 2371.
- Phot 2380 Photographic Problems**  
 (1-5)..... 3 hours  
 Allows, with approval by and under supervision of the instructor, pursuit of a particular project or theme utilizing the photographic process. Weekly progress reports mandatory. Offered alternately with Phot 2340 and Phot 2360. Prerequisites: Phot 1332 and Phot 1362.
- Phot 2390 Graphics**  
 (2-4)..... 3 hours  
 A one-semester course designed to teach advanced copying work and use of special copy cameras. Includes copying continuous tone and line drawings. Includes layout, makeup, and use of specialized films and developers. Prerequisite: Phot 1332.
- Phot 2399 Special Topics in Photography**  
 (2-20)..... 3 hours  
 Photography internship program which provides photography majors with practical experience in specialized applications of photography. Areas covered include such topics as ophthalmic photography which presents fluorescein angiography, fundus photography, slit lamp photography, external photography, surgical photography, and audiovisual production. Prerequisites: Phot 1331 and consent of the instructor.

**Speech**

Because of their relevance to all professional and social endeavors, speech courses are designed primarily to strengthen the oral communication abilities of students from all disciplines and fields of interest. A range of courses is offered to provide the theory, principles, and practice necessary to meet a wide variety of communication needs. In addition, courses fulfill the fundamental academic requirements for speech majors and minors as well as requirements and elective options for students from other departments.

Speech 1300 is designed to help students develop skills in various areas of oral communication. This course, which receives institutional credit only, should be taken for personal growth in communication skills and as a preparatory course for other college courses.

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****First Year**

| First Semester  |         | Second Semester |         |
|-----------------|---------|-----------------|---------|
| Course          | Sem Hrs | Course          | Sem Hrs |
| Engl 1311.....  | 3       | Engl 1312.....  | 3       |
| Hist 2301.....  | 3       | Hist 2302.....  | 3       |
| PE.....         | 1       | PE.....         | 1       |
| Science.....    | 3       | Science.....    | 3       |
| *Spch 1131..... | 1       | *Spch 1132..... | 3       |
| Spch 1310.....  | 3       | Spch 2360.....  | 3       |

**Second Year**

| Third Semester              |         | Fourth Semester             |         |
|-----------------------------|---------|-----------------------------|---------|
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| Govt 2301.....              | 3       | Govt 2302.....              | 3       |
| Lang 1411.....              | 4       | Lang 1412.....              | 4       |
| PE.....                     | 1       | PE.....                     | 1       |
| R/TV 1310.....              | 3       | *Spch 2132.....             | 1       |
| *Spch 2131.....             | 1       | Spch 2320.....              | 3       |
| Spch 2330.....              | 3       |                             |         |

\*This laboratory prepares students for intercollegiate participation in various types of speech contests. Participation in tournaments is required in order to receive credit.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Spch 1300 Basic Speech Communication Skills**

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

**Spch 1310 Introduction to Speech Communication**

(3-0)..... 3 hours  
Includes theory and practice of speech communication in interpersonal, small group, and public speaking situations. Prerequisite: None.

**Spch 1131, 1132, 2131, 2132 Forensics Laboratory**

(0-2)..... 1 hour each  
Prepares students for intercollegiate participation in various speech contests. Requires tournament participation for credit to be earned. Prerequisite: None.

**Spch 2320 Introduction to Oral Interpretation**

(3-0)..... 3 hours  
Includes both theory and technique of oral interpretation of literature. Includes preparation and presentation of prose, poetry, and dramatic literature. Prerequisite: None.

**Spch 2330 Argumentation and Debate**

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

**Spch 2340 Business and Professional Speech Communication**

(3-0)..... 3 hours  
Includes theories and skills of speech communication applicable to business and professional situations. Prerequisite: None.

**Spch 2360 Voice and Diction**

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

**Theatre**

The Theatre Program of the college offers fundamental courses in theatre arts to three types of students: those preparing to teach drama, those preparing for careers in professional theatre, and those wishing to expand their avocational interests in the arts and literature of the theatre.

While the course work done in the program is basically the same as that taken during the first two years of senior colleges and universities, it is the responsibility of the student to become aware of the particular requirements of the school to which he will transfer.

The department is a member of the American Educational Theatre Association, the Texas Educational Theatre Association, and the Southwest Theatre Conference.

Each year the college theatre presents a season of major and studio productions in which all theatre students participate.

**Course of Study for Major in Theatre**

| <b>First Year</b> |         |                  |         |  |
|-------------------|---------|------------------|---------|--|
| First Semester    |         | Second Semester  |         |  |
| Course            | Sem Hrs | Course           | Sem Hrs |  |
| Engl 1311.....    | 3       | **Engl 1312..... | 3       |  |
| Th 1111.....      | 1       | Th 1112.....     | 1       |  |
| Th 1123.....      | 1       | Th 1124.....     | 1       |  |
| Th 1310.....      | 3       | Th 1315.....     | 3       |  |
| Th 1314.....      | 3       | Th 1340.....     | 3       |  |
| Th 1330.....      | 3       | Th 2360.....     | 3       |  |
| ***Elective.....  | 3       | ***Elective..... | 3       |  |

| <b>Second Year</b>          |         |                             |         |  |
|-----------------------------|---------|-----------------------------|---------|--|
| Third Semester              |         | Fourth Semester             |         |  |
| Course                      | Sem Hrs | Course                      | Sem Hrs |  |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |  |
| Govt 2301.....              | 3       | Govt 2302.....              | 3       |  |
| Hist 2301.....              | 3       | Hist 2302.....              | 3       |  |
| Th 1125.....                | 1       | Th 1126.....                | 1       |  |
| Th 2111.....                | 1       | Th 2112.....                | 1       |  |
| Th 2330.....                | 3       | Th 2340.....                | 3       |  |
| ****Elective.....           | 3       | Th 2370 or Th 1320.....     | 3       |  |

Students wishing to fulfill requirements for the Associate in Arts Degree or the Associate in Fine Arts Degree should consult Degree Requirements listed in this catalog.

\*\*Engl 1312 (Film) recommended.

\*\*\*Foreign Language, Math, or Science.

\*\*\*\*Spch 2320 recommended.

**Course of Study for Minor in Theatre**

| <b>First Year</b> |         |                 |         |  |
|-------------------|---------|-----------------|---------|--|
| First Semester    |         | Second Semester |         |  |
| Course            | Sem Hrs | Course          | Sem Hrs |  |
| Th 1111.....      | 1       | Th 1112.....    | 1       |  |
| Th 1310.....      | 3       | Th 1340.....    | 3       |  |
| Th 1330.....      | 3       | Th 2360.....    | 3       |  |

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### Second Year

| Third Semester |         | Fourth Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Th 1314.....   | 3       | Th 1315.....    | 3       |
| Th 2111.....   | 1       | Th 2112.....    | 1       |
| Th 2330.....   | 3       | Th 2340.....    | 3       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

#### Th 1111, 1112, 2111, 2112 Rehearsal and Performance

(0-2)..... 1 hour each  
Required of students registered for any other theatre course. Also requires assignment to the cast or crew of each show. Prerequisite: None.

#### Th 1123, 1124, 1125, 1126 Modern Dance: Theatre Dance Form

(0-3)..... 1 hour each  
Teaches dance for the theatre. Prerequisite: None.

#### Th 1310 Introduction to the Theatre

(3-0)..... 3 hours  
A general survey of theatre art. Introduces various styles and types of dramas. Requires practical experience in play production. Prerequisite: None.

#### Th 1314 Acting I

(3-0)..... 3 hours  
Develops basic skills and techniques of acting via work of voice, body, and imagination. Practices exercises in creative play, improvisation, and pantomime. Prerequisite: None.

#### Th 1315 Acting II

(3-0)..... 3 hours  
A continuation of Th 1314. Introduces beginning character study, period acting styles, and advanced scene work for student actor. Prerequisite: Th 1314.

#### Th 1320 Stage Makeup

(0-3)..... 3 hours  
Introduces basic principles of applying theatrical makeup. Open to all theatre students. Prerequisite: None.

#### Th 1330 Stagecraft I

(3-3)..... 3 hours  
Covers basic aspects of stagecraft, costuming, and make-up in three lectures per week. Lab hours arranged for practical experience in production crews. Prerequisite: None.

#### Th 1340 Stagecraft II

(3-3)..... 3 hours  
A continuation of Th 1330. Presents advanced aspects of stagecraft and design. Includes make-up, production of sets, costumes, and props. Lab hours to be arranged. Prerequisite: Th 1330.

#### Th 1350 Theatre Workshop I

(1-5)..... 3 hours  
Includes all phases of production activities—acting, stage managing, scenery, properties, lighting, costumes, publicity, and box office. Requires actual work in a play from rehearsal to production. Prerequisite: None.

#### Th 2330 History of the Theatre I

(3-0)..... 3 hours  
Surveys the theatre from its beginning to the 18th Century. Presents drama as part of total culture of the time. Requires reading plays of important authors. Prerequisite: None.

#### Th 2340 History of the Theatre II

(3-0)..... 3 hours  
Surveys the theatre from the 18th Century to Ibsen. Includes American, English, and Continental drama. Prerequisite: None.

#### Th 2345 Modern Drama

(3-0)..... 3 hours  
Surveys modern theatre from Ibsen to the present. Includes American, English, and Continental drama. Prerequisite: None.

#### Th 2350 Theatre Workshop II

(1-5)..... 3 hours  
Includes special phases of theatrical participation: Children's Theatre, creative dramatics, advanced scene study, and design projects. Offered to meet special needs of advanced students. Prerequisites: Th 1314, Th 1315, and Th 1330.

**Th 2355 Creative Dramatics**

**(3-0)..... 3 hours**  
 Designed to help teachers develop skills to enable them to work with the whole child through improvised drama. Special attention given to story dramatization, dramatic play situations, storytelling, and using these skills with the pre-school, elementary, and special education child. Open to all majors and non-majors. Prerequisite: None.

**Th 2360 Voice and Diction**

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

**Th 2370 Training the Actor's Voice**

**(3-0)..... 3 hours**  
 Includes vocal production, beginning work in stage dialects, and practical application of audition techniques. Prerequisite: Spch 2360, Th 2360, or R/TV 2360.

**Options**

**Th 2151 Children's Theatre Workshop**

**(1-5)..... 1 hour**  
 Designed to meet special needs of actors performing for children. Entails actual presentation and study of play written for children. Prerequisites: Th 1314, Th 1315, and Th 1330.

**Th 2152 Advanced Scene Study**

**(1-5)..... 1 hour**  
 A five-week course for advanced study of characterization, play analysis, and scene portrayal for selected audiences. Prerequisites: Th 1314, Th 1315, and Th 1330.

**Th 2153 Design Project**

**(1-5)..... 1 hour**  
 A five-week supervised design project in costuming, lighting, and/or set design. Prerequisites: Th 1314, Th 1315, and Th 1330.

**Computer Information Systems**

**Faculty:** Rayford Ball, Chairman; Stewart Bailey, Rochelle Holmes, Dr. Thom Luce, Duane Moody.

The development and use of electronic digital computers in business and industry have created a need for many data processing technicians in the Permian Basin. The Computer Information Systems curriculum places special emphasis upon the processing of business and industry data and the use of machine and electronic equipment in finding solutions to business and industrial problems. Experiences on computer equipment will be supplemented with technical information and study designed to give students an understanding of their professional responsibilities and the occupational skill necessary for today's society. The central purpose of the program, however, is to develop occupational competency. Students completing the two-year program should be able to (1) apply current programming techniques with a minimum of supervision, (2) understand and operate practically any data processing equipment after a brief orientation period, (3) properly document programming decisions and communicate in a satisfactory manner with other personnel concerned, and (4) direct their educational background and ability toward mastering new and special techniques as the need occurs.

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**Course of Study for Associate in Applied Science Degree  
(Business Programming Option)**

| First Year                                  |         |                               |         |
|---|---------|-------------------------------|---------|
| First Semester                              |         | Second Semester               |         |
| Course                                      | Sem Hrs | Course                        | Sem Hrs |
| BA 1301 or Eco 1301 .....                   | 3       | CIS 1400, 1404, or 2400 ..... | 4       |
| CIS 1200 .....                              | 2       | CIS 1402 .....                | 4       |
| CIS 1401 .....                              | 4       | CIS 1403 .....                | 4       |
| Engl 1311 or 1311 (Technical Writing) ..... | 3       | Engl 1312 or Spch 1310 .....  | 3       |
| Math 1341 or 1302 .....                     | 3       | *PE .....                     | 1       |
| *PE .....                                   | 1       |                               |         |

| Second Year            |         |                            |         |
|------------------------|---------|----------------------------|---------|
| Third Semester         |         | Fourth Semester            |         |
| Course                 | Sem Hrs | Course                     | Sem Hrs |
| BA 2401 .....          | 4       | BA 2402 .....              | 4       |
| CIS 2112 .....         | 1       | CIS 2410 .....             | 4       |
| CIS 2402 or 2404 ..... | 4       | CIS 2411 .....             | 4       |
| CIS 2403 .....         | 4       | Govt 2301 or 2302 .....    | 3       |
| CIS 2405 .....         | 4       | **Approved Electives ..... | 4       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

\*\*Approved Electives: ET 1402, Engl 1321, Mgt 1301, Mgt 1303, Mgt 2302, Mgt 2303, Math 1341 or more advanced, any sophomore BA, Phys, Engr, Chem, or any CIS course not already required (CIS 2401 strongly recommended).

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Year                         |         |                              |         |
|------------------------------------|---------|------------------------------|---------|
| First Semester                     |         | Second Semester              |         |
| Course                             | Sem Hrs | Course                       | Sem Hrs |
| CIS 1200 .....                     | 2       | CIS 1400 .....               | 4       |
| CIS 1401 .....                     | 4       | CIS 1402 .....               | 4       |
| CIS 2210 (Eight Weeks) .....       | 2       | CIS 1423 .....               | 4       |
| CIS 2215 (Eight Weeks) .....       | 2       | CIS 2220 (Eight Weeks) ..... | 2       |
| Engl 1311 .....                    | 3       | Engl 1312 or Spch 1310 ..... | 3       |
| Math 1313 (or More Advanced) ..... | 3       | *PE .....                    | 1       |
| *PE .....                          | 1       |                              |         |

| Second Year                  |         |                              |         |
|------------------------------|---------|------------------------------|---------|
| Third Semester               |         | Fourth Semester              |         |
| Course                       | Sem Hrs | Course                       | Sem Hrs |
| CIS 1404 .....               | 4       | CIS 2240 (Eight Weeks) ..... | 2       |
| CIS 2400 .....               | 4       | CIS 2241 (Eight Weeks) ..... | 2       |
| CIS 2230 (Eight Weeks) ..... | 2       | CIS 2245 (Eight Weeks) ..... | 2       |
| CIS 2231 (Eight Weeks) ..... | 2       | CIS 2451 .....               | 4       |
| *Approved Elective .....     | 4       | Govt 2301 or 2302 .....      | 3       |
|                              |         | *Approved Electives .....    | 4       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

\*Approved Electives: BA 1301, BA 2401, BA 2402, any CIS course not already required, ET 1402, and ET 1408 (CIS 2401 and one of the following are strongly suggested: BA 1301, BA 2401, or BA 2402.)

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Associate in Applied Science Degree  
(Scientific Programming Option)**

**First Year**

| First Semester                             |         | Second Semester             |         |
|--|---------|-----------------------------|---------|
| Course                                     | Sem Hrs | Course                      | Sem Hrs |
| Chem 1101 .....                            | 1       | CIS 1403 .....              | 4       |
| Chem 1301 .....                            | 3       | Engl 1312 or Spch 1310..... | 3       |
| CIS 1200 .....                             | 2       | Math 1345 .....             | 3       |
| CIS 1401 .....                             | 4       | Math 2331 .....             | 3       |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Phys 1401 .....             | 4       |
| Math 1343 .....                            | 3       | *PE .....                   | 1       |
| *PE .....                                  | 1       |                             |         |

**Second Year**

| Third Semester  |         | Fourth Semester           |         |
|-----------------|---------|---------------------------|---------|
| Course          | Sem Hrs | Course                    | Sem Hrs |
| CIS 2112 .....  | 1       | CIS 2411 .....            | 4       |
| CIS 2405 .....  | 4       | Govt 2301 or 2302.....    | 3       |
| CIS 2406 .....  | 4       | Math 2351 or 2334 .....   | 3       |
| Math 2333 ..... | 3       | Math 2335 .....           | 3       |
| Phys 1402 ..... | 4       | **Approved Elective ..... | 3       |

\*Hed 1301 may be substituted for the two one-hour physical education courses.

\*\*Approved Electives: ET 1402; Eco 1301; Engl 1321; Math 1341 or more advanced, any Phys, Engr, Chem, or CIS course not already required.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**CIS 1200 Programming Logic**

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

**CIS 1400 Programming in BASIC Language**

(3-3)..... **4 hours**  
Introduces beginning techniques of BASIC programming. Includes BASIC syntax, flowcharting, and program design. Introduces disk operating systems. Requires writing and executing BASIC programs on microcomputer systems. Note: Prepares students to take state computer literacy examination for public school teachers. Prerequisite: Math 1313.

**CIS 1401 Introduction to Computer Information Systems**

(3-3)..... **4 hours**  
Presents terminology, concepts, and techniques needed to begin study of Computer Information Systems. Stresses history, number systems, hardware fundamentals, software design and use, problem definition, introduction to structured programming, and comparison of languages. Includes data entry, flowchart and program design, and BASIC programming. Also includes introduction to word processing and electronic spreadsheets on microcomputers (DPMA CIS-1) in lab work. Note: Prepares students to take state computer literacy examination for public school teachers. Prerequisite: None.

**CIS 1402 Computer Operations**

(3-3)..... **4 hours**  
Presents a study of various operation systems in a typical data processing installation, including duties and responsibilities of various departments, operation of actual machinery, and some of the more important concepts utilized in a system. Lab time will be spent operating the college's mainframe and microcomputer system. Prerequisites: CIS 1401 and CIS 1200.

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- CIS 1403 COBOL Programming I**  
(3-3)..... 4 hours  
Introduces computer programming in a business environment. Emphasizes fundamentals of structured program design, development, testing, implementation, and documentation using COBOL. Includes language system, data, file structures, and input and output of on-line business system in ANS-1974 COBOL. (DPMA CIS-2). Prerequisites: CIS 1401 and CIS 1200.
- CIS 1404 Programming in PASCAL**  
(3-3)..... 4 hours  
Introduces beginning techniques of PASCAL programming using a microcomputer system. Includes PASCAL syntax, introduction to disk operating system, and structured program design techniques. Requires writing and executing PASCAL programs on a microcomputer disk. Prerequisite: CIS 1200, CIS 1401, or consent of the department chairman.
- CIS 1423 Micro COBOL**  
(3-3)..... 4 hours  
Introduces COBOL language using microcomputer based ANSI standard COBOL. Emphasizes business applications in a microcomputer environment. Presents file organization, screen layouts, record formats, printed report generation, and program design. Designing and implementing COBOL programs on a microcomputer system included in lab. Prerequisites: CIS 1200 and CIS 1401 or consent of the department chairman.
- CIS 2112 Seminar in Computer-Related Topics**  
(1-0)..... 1 hour  
Presents literature of current topics in data processing and computer science. Requires research and presentation of at least two oral reports on such topics as professionalism, ethics, computer law, data security, networking, telecommunications, and distributed data processing. May be repeated once for credit. Prerequisite: CIS 1401.
- CIS 2188 Internship Program**  
(1-10)..... 1 hour  
Allows elective credit for working in an approved computer site. Requires supervised employment and periodic observation by an Odessa College CIS Department faculty member. Grants one-hour credit for each 10 hours worked per week throughout the semester. Prerequisites: Consent of the department chairman based on student's suitability for a specific employer's needs.
- CIS 2210 Data Processing Management**  
[(4-0) for 8 Weeks] ..... 2 hours  
Emphasizes use of a computer system for business purposes. Includes guidelines to arrive at a final hardware or software acquisition decision. Uses several case studies for developing selected topics. Prerequisite: None.
- CIS 2215 Electronic Text Processing**  
[(4-0) for 8 Weeks] ..... 2 hours  
Presents concepts of a word processing system on a microcomputer. Introduces terminology and operation of a microcomputer including text entry, editing, formatting, and printing both document and non-document files, block operations, tab setting, and text reformatting. Prerequisite: None.
- CIS 2220 Electronic Spreadsheet**  
[(4-0) for 8 Weeks] ..... 2 hours  
Introduces concepts of spreadsheet applications on a microcomputer. Emphasizes acquainting student with developing spreadsheet solutions to various problems. Includes built-in commands, formatting the worksheet, headings, formula building, financial sheets, "what if" forecasting, printing, and disk operations. Prerequisite: None.
- CIS 2230 Integrated Software I**  
[(4-0) for 8 Weeks] ..... 2 hours  
Presents various techniques for sharing data among several software application programs such as spreadsheets, word processing, database, outline processing, graphing, and communications packages. Critically examines some methods used in attempting to achieve integration of software. Provides hands-on experience with currently popular and historically significant commercial products. Prerequisite: None.
- CIS 2231 Integrated Software II**  
[(4-0) for 8 Weeks] ..... 2 hours  
A continuation of CIS 2230. Critically examines advanced methods used to achieve integration. Provides hands-on experience with currently popular commercial products. Prerequisite: CIS 2230 or consent of the department chairman.
- CIS 2240 Micro Database I**  
[(3-3) for 8 Weeks] ..... 2 hours  
Designed to introduce dBASE III database language. Course divided into two sections: first, designing and using dBASE III databases for information storage and retrieval; and, second, designing and writing procedures in dBASE III. Reinforces commands and techniques introduced in lecture with hands-on lab experiences using IBM/PC version of dBASE III. Prerequisite: None.

- CIS 2241 Micro Database II**  
**[(3-3) for 8 Weeks] ..... 2 hours**  
 Designed as an extension of database concepts introduced in CIS 2240. Course divided into two sections: first, introduction to dBASE III; and, second, introduction and use of RBASE 5000. Reinforces commands and techniques introduced in lecture with hands-on lab experiences using IBM/PC version of dBASE III and RBASE 5000. Prerequisite: CIS 2240 or consent of the department chairman.
- CIS 2245 Advanced Microcomputer Topics**  
**[(4-0) for 8 Weeks] ..... 2 hours**  
 Designed to give broad exposure to many current microcomputer topics through literature research. Requires research and oral presentation on directed topics which may include areas of microcomputer interests in hardware and software development such as data communications, networking and information services, operating systems, artificial intelligence, storage devices, graphics, data management and professional development, CAD/CAM/CAE, project managers, voice recognition, and microcomputer careers. Prerequisite: CIS 1401.
- CIS 2288 Internship Program**  
**(1-20)..... 2 hours**  
 Allows elective credit for working in an approved computer site. Requires supervised employment and periodic observation by an Odessa College CIS Department faculty member. Grants one-hour credit for each 10 hours worked per week throughout the semester. Prerequisites: Consent of the department chairman based on student's suitability for a specific employer's needs.
- CIS 2400 Advanced Programming in BASIC**  
**(3-3)..... 4 hours**  
 A continuation of CIS 1400. Introduces advanced techniques of BASIC programming on a microcomputer system. Includes random and sequential files, program chaining, graphics, screen handling, memory access methods, and microcomputer Disk Operation Systems (DOS). Requires writing and executing BASIC programs on a microcomputer system in lab. Prerequisites: CIS 1200 and CIS 1400 or consent of the department chairman.
- CIS 2401 Assembler Level Hardware/Software Concepts**  
**(3-3)..... 4 hours**  
 Surveys technical topics related to computer systems. Emphasizes relationships between hardware architecture, system software, and applications software. Includes architecture of processors and storage systems. Requires assembly level programming on main frame and microcomputer systems in lab. (DPMA CIS-8). Prerequisites: CIS 1402 and a knowledge of BASIC.
- CIS 2402 FORTRAN 77—Business**  
**(3-3)..... 4 hours**  
 Designed for majors in computer information systems. Requires solving business and scientific problems utilizing the FORTRAN 77 programming language. Prerequisites: CIS 1200 and CIS 1401.
- CIS 2403 COBOL Programming II**  
**(3-3)..... 4 hours**  
 A continuation of CIS 1403. Emphasizes structured methodology of program design, development, testing, implementation, and documentation using COBOL (ANS-1974). Includes sequential and random file access and processing techniques, COBOL subroutines, segmentation, system design, and other advanced techniques. Requires using computer to solve business problems in lab. (DPMA CIS-3). Prerequisite: CIS 1403 or consent of the department chairman.
- CIS 2404 Programming in RPG**  
**(3-3)..... 4 hours**  
 Designed to further the student's study of computers and computer applications. Solves practical business data processing problems by using the RPG programming language. Prerequisite: CIS 1401 or consent of the department chairman.
- CIS 2405 Systems Analysis Methods**  
**(3-3)..... 4 hours**  
 Presents overview of system development life cycle. Emphasizes current systems documentation through use of both classical and structured techniques. (DPMA CIS-4). Prerequisite: CIS 1403.
- CIS 2406 FORTRAN 77—Scientific**  
**(3-3)..... 4 hours**  
 Introduces programming course for science and engineering majors. Designed for familiarization of FORTRAN 77 programming. Emphasizes language and application of language to solution of problems of a scientific nature. Corequisite or Prerequisite: Math 2331. Recommended Prerequisites: CIS 1200 and CIS 1401.
- CIS 2410 Database Management Systems**  
**(3-3)..... 4 hours**  
 Designed to allow all information to be considered and processed as a whole rather than as independent files. Introduces database concepts in mainframe and microcomputer environments (DPMA CIS-5). Prerequisite: CIS 1403 or consent of the department chairman.

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|   |                |
|---|----------------|
| <b>CIS 2411 Structured Systems Analysis and Design</b><br>(3-3).....  | <b>4 hours</b> |
| Offers advanced study of structured system development. Emphasizes strategies and techniques of structured analysis and design for producing logical methodologies useful in development of information systems. (DPMA CIS-5). Prerequisite: CIS 2405.  |                |
| <b>CIS 2451 Microsystems Analysis, Design, and Selection</b><br>(3-3).....  | <b>4 hours</b> |
| Provides a realistic view of process and products of systems development in the microcomputer environment. Covers all four stages of systems development cycle, using a combination of traditional and current methodologies (e.g. prototyping). Special emphasis placed on use of off-the-shelf programs and general purpose user developed and custom developed systems. Prerequisites: CIS 2210, CIS 2215, CIS 2220, CIS 2231, CIS 2241, and CIS 2400. |                |
| <b>CIS 2499 Special Problems</b><br>(0-6).....  | <b>4 hours</b> |
| <b>CIS 2399 Special Problems</b><br>(0-4.5).....  | <b>3 hours</b> |
| <b>CIS 2299 Special Problems</b><br>(0-3).....  | <b>2 hours</b> |
| <b>CIS 2199 Special Problems</b><br>(0-1.5).....  | <b>1 hour</b>  |
| Allows students to work on an approved special project of their choosing to receive a maximum of four semester hours CIS elective credit. Requires consent of the department chairman for project and semester hours credit. Prerequisite: Consent of the department chairman.  |                |

## Cosmetology

**Faculty:** Faye Morgan, Chairman; Sylvia Blain, Linda Corbin, Lou Ann Hitt, Donna Rogers.

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 is also available for the cosmetologist seeking an instructor's license.

Requirements for admission to the cosmetology program, in addition to the Odessa College admission requirements, are having a personal interview with the department chairman, getting a physical examination including a tuberculin test by a licensed physician, and sending a \$10 fee and two 1 1/2 x 1 1/2 pictures to the Texas Cosmetology Commission for a student permit. Students also are required to purchase a cosmetology kit. For admission, applicants should apply to Odessa College and to the chairman of the Cosmetology Department.

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

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

**Course of Study for Associate in Applied Science Degree  
(Cosmetology Operator Option)**

**First Year**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Cos 2601.....  | 6       | Cos 2604.....   | 6       |
| Cos 2602.....  | 6       | Cos 2605.....   | 6       |
| Cos 2603.....  | 6       | Cos 2606.....   | 6       |

Students successfully completing the first year are eligible to take the Texas Cosmetology Commission examination for licensure.

**Second Year**

| First Semester           |         | Second Semester                 |         |
|--------------------------|---------|---------------------------------|---------|
| Course                   | Sem Hrs | Course                          | Sem Hrs |
| Engl 1311.....           | 3       | Engl 1312.....                  | 3       |
| Govt 2301.....           | 3       | Math 1313 or More Advanced..... | 3       |
| Psy 1301.....            | 3       | Mgt 2344.....                   | 3       |
| *Approved Electives..... | 4       | Psy 2301.....                   | 3       |
| **PE.....                | 1       | **PE.....                       | 1       |

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 36 semester hours in Cosmetology courses.

\*Electives must be approved by the department chairman.

\*\*HEd 1301 or EMT 1401 may be substituted for the two one-hour physical education courses.

- Cos 2601 Orientation**  
(5-27.5)..... **6 hours**  
Introduces field of cosmetology. Emphasizes basic principles and practices involving hair dressing, personality development, visual poise, good grooming, sanitation, and safety habits. Prerequisite: None.
- Cos 2602 Introduction to Cosmetology**  
(5-27.5)..... **6 hours**  
Develops fundamental knowledge and understanding of technical and related sciences and mathematics which find practical application in cosmetology. Requires learning safe work habits and orderly, systematic procedures for performing tasks related to the field. Corequisite or Prerequisite: Cos 2601.
- Cos 2603 Cosmetology I**  
(5-27.5)..... **6 hours**  
Provides preparatory instruction in development of manipulative skills, knowledge and desirable attitudes to equip students for gainful employment. Stresses rules, regulations, and preparation for the Texas Cosmetology Commission Licensure test. Prerequisite: Cos 2602.
- Cos 2604 Cosmetology II**  
(5-27.5)..... **6 hours**  
Provides manipulative skills for rendering personal beauty services. Includes all skills pertaining to hair-dressing, nail care, and skin care. Emphasizes selection, care, and proper use of commercial beauty products. Prerequisite: Cos 2603.
- Cos 2605 Cosmetology III**  
(5-27.5)..... **6 hours**  
Emphasizes basic chemical characteristics of various cosmetics used in beauty salons. Stresses basic principles of chemistry essential to cosmetology. Introduces chemicals used to color, straighten, and curl hair. Prerequisite: Cos 2604.
- Cos 2606 Cosmetology IV**  
(5-27.5)..... **6 hours**  
Introduces principles used in planning a salon, including location, space allotment, and installation cost. Also includes financial aspects of salon operation: operating expenses, profit and loss statements, types of insurance coverage needed, and legal requirements regarding wages, working hours, and working conditions. Prerequisite: Cos 2605.

**Course of Study for Associate in Applied Science Degree  
(Cosmetology Instructor Option)**

**First Year**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Cos 2811.....  | 8       | Cos 2813.....   | 8       |
| Cos 2812.....  | 8       | Cos 2814.....   | 8       |

Students successfully completing the cosmetology instructor courses are eligible to take the Texas Cosmetology Commission examination for licensure as cosmetology instructors.

**Second Year**

| First Semester           |         | Second Semester                 |         |
|--------------------------|---------|---------------------------------|---------|
| Course                   | Sem Hrs | Course                          | Sem Hrs |
| Engl 1311.....           | 3       | Engl 1312.....                  | 3       |
| Govt 2301.....           | 3       | Math 1313 or More Advanced..... | 3       |
| Psy 1301.....            | 3       | Mgt 2344.....                   | 3       |
| *Approved Electives..... | 5       | Psy 2301.....                   | 3       |
| **PE.....                | 1       | Soc 1301.....                   | 3       |
|                          |         | **PE.....                       | 1       |

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 32 semester hours in Cosmetology courses.

\*Electives must be approved by department chairman.

\*\*HEd 1301 or EMT 1401 may be substituted for the two one-hour physical education courses.

- Cos 2811 Orientation and Lesson Plan Development**  
(8-24.5)..... 8 hours  
Develops teaching skill methods and techniques. Emphasizes basic unit planning and daily lesson plan development. Prerequisite: Cosmetology Operator's License.
- Cos 2812 Practical Clinical Management**  
(8-24.5)..... 8 hours  
Develops practical clinic management techniques. Includes supervision of student skills in classroom situations. Corequisite or Prerequisite: Cos 2811.
- Cos 2813 Classroom Teaching of Informational Theory**  
(8-24.5)..... 8 hours  
Develops methods and techniques of teaching informational theory relative to cosmetology. Prerequisite: Cos 2812.
- Cos 2814 Preparation for State Cosmetology Commission**  
(8-24.5)..... 8 hours  
Designed to prepare students to pass Texas Cosmetology Commission examination for Cosmetology Instructor's License. Prerequisite: Cos 2813.

**Specialization Programs**

**Manicurist Program  
(150 clock hours)**

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

- Cos 1301 Manicuring Specialization..... 3 hours**  
Emphasizes proper way to file nails, apply polish, and give hand and arm massages. Presents all aspects of manicures and pedicures. Prepares student to test for state licensure as manicurist upon successful completion of course. Prerequisite: None.

### Facial Specialist Program (300 clock hours)

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

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

### Shampoo-Conditioning Specialist Program (150 clock hours)

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

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

## Developmental Studies/Reading

**Faculty:** Dr. Clayton Alred, Director; Dr. Imogene Freer, Jean McColloch, Sheryl Oates, Lynn Whitson, Pam Williamson.

Odessa College offers a Developmental Studies program for those students who need further development in or who wish to review fundamentals of mathematics, reading, writing, speech, and basic study skills. Courses available in the program are English 1101, 1102, 1103, 1104, 1105, 1106, 1300 and 1305; Math 1311; Reading 1101, 1102, 1103, 1301, and 1302; Speech 1300; and Human Development 1301. All these courses are described below in greater detail.

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

All courses listed below may or may not satisfy degree requirements on selected degree plans at Odessa College. Students who intend to transfer to another community college, senior college, or university should check with that institution to determine whether the hours earned in Developmental Studies will transfer for degree credit.

### Courses and Services Available in Developmental Studies

#### English Courses and the Writing Lab

English 1300, Basic English; English 1305, English as a second language; as well as the six one-hour Writing Lab courses, 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 English 1311, Composition and Rhetoric. The Writing Lab courses—English 1101 through 1106—provide practical help in selected areas of English. They focus specifically on principles of the simple sentence, compound and complex sentences, composition, techniques of research, and spelling. Students and other interested adults are guided into these courses according to their performance on diagnostic pre-tests which are available in the Writing Lab, second floor of the Learning Resources Center; the Testing Center, second floor of the Student Union Building; and the Literature and Language Department. Students

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may enroll in self-paced or classroom instruction for institutional credit or non-credit, but none of the English courses listed below satisfy requirements for any degree plan at Odessa College. Students enrolling in any of the six lab courses should consult with the lab instructor as early as possible to arrange a meeting time.

The Writing Lab is located in the Learning Resources Center on the second floor. It offers 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 the Developmental Studies counselor. All assistance is free of charge, but students may enroll for any or all of the one-hour writing lab courses listed below.

### **Engl 1101 The Sentence**

**(0-16)**..... **1 hour**  
Reviews parts of speech, patterns of the simple sentence, transformations of the simple sentence, and principles of agreement. Aims to improve student's ability to write grammatical sentences. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1102 Coordination and Subordination**

**(0-16)**..... **1 hour**  
Extends student's understanding of the simple sentence to more complex structures and transformations. Focuses on basic relationships between ideas. Helps student expand amount of information conveyed via embedding and combining. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1103 The Paragraph**

**(0-16)**..... **1 hour**  
Applies student's understanding of coordination and subordination to paragraph writing. Focuses on topic sentence, unity, coherence, supporting detail, organization, and general form. Prepares student to write multi-paragraph papers required in Engl 1311. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1104 Techniques of Research**

**(0-16)**..... **1 hour**  
A self-paced course to teach use of card catalog, journal and periodical indexes, footnote and bibliography form. Includes restricting a research topic, paragraphing, etc. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1105 Spelling**

**(0-16)**..... **1 hour**  
Reviews principles of spelling. Includes phonics, syllabication, spelling patterns, and prefixes and suffixes. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1106 Writing Skills for Non-native Speakers**

**(0-16)**..... **1 hour**  
A partially self-paced course. Designed to meet special needs of non-native speakers with standard written English. Focuses on selected aspects of grammar, correct forms of words, proper syntax, accurate use of idioms, and use of article adjectives. Requires writing paragraphs about abstract subjects in both timed and untimed settings. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1300 Basic English**

**(3-0)**..... **3 hours**  
A compensatory course designed to improve basic English skills. Emphasizes sentence structure, agreement, usage, and paragraph development. Prepares student for Engl 1311. Credit probably not transferable. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### **Engl 1305 English as a Second Language**

**(3-0)**..... **3 hours**  
Intended for non-native speakers of the English language who have little or no background in English. Uses textbooks, tapes, class drills, and handouts. Focuses on hearing, understanding, reading, and writing of English. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

## **Math Courses and the Math Lab**

Math 1311, Basic Math, addresses the four fundamental operations of mathematics and additional topics. The course is designed to prepare students for Math 1313, Introductory Algebra, and should be taken as a preparatory course. Students are guided into the course on the basis of diagnostic pre-tests which are available in the Mathematics Department, third floor of the Learning Resources Center, and the Testing Center, second floor of the Student Union Building.

The Math Lab, located on the second floor of the Learning Resources Center, offers tutoring to Odessa College students and has extensive supplemental materials that parallel the basic math course, Math 1311. An audio-tutorial program demonstrates the relationships between mathematics and every-day situations involving mathematics in addition to presenting materials on the four basic mathematical operations. Materials and assistance are also available to students wishing to review mathematical concepts related to vocational course work. All assistance is free of charge to Odessa College students and arrangements can be made by contacting the Developmental Studies Director or the Developmental Studies Lab Coordinator.

**Math 1311 Basic Mathematics**

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

**Reading Courses and the Reading Lab**

The fundamental purpose of College Reading Techniques is to provide immediate help in reading and learning skills. Open registration is provided for all college students and interested adults who may enroll for non-credit or for one, two, or three hours of credit. Non-credit enrollment is also available for junior and senior high school students. Standardized tests are given to determine the reading performance level and to determine specific areas for improvement. These tests are available by appointment, in the Reading Lab, Deaderick Hall room 213; and in the Testing Center, the second floor of the Student Union Building. After diagnosis, a self-paced plan of action is developed through student-instructor conferences to set immediate and long-range goals. Students enrolling in any of the three lab courses should consult with the lab instructor as early as possible to arrange a meeting time.

Materials covered and skills learned in the three one-hour Reading Lab courses—Read 1101, 1102, 1103—equate to Read 1301, College Reading.

**Read 1101 Improving Reading Skills**

**(0-24)..... 1 hour**  
 Functions to improve student's ability to understand his relationship with the academic demands of the college. Diagnostic testing determines student's need for the following skills: vocabulary, rapid reading, listening, and spelling. Taught in an individualized setting. Prerequisite: None.

**Read 1102 Improving Reading Flexibility**

**(0-12)..... 1 hour**  
 Aims to make student aware of importance of vocabulary and degree of comprehension expected when reading in a variety of materials at a variety of speeds. Prerequisite: Consent of the instructor.

**Read 1103 Improving Reading Rate and Comprehension**

**(0-12)..... 1 hour**  
 Provides student opportunity to become a trained, successful reader who can handle long reading assignments. Emphasizes purpose, concentration, recall, good vocabulary, and rapid reading. Prerequisite: Consent of the instructor.

**Read 1301 College Reading**

**(3-0)..... 3 hours**  
 Aims to improve speed and comprehension on various types of materials. Includes diagnosis of reading strengths and weaknesses, timed reading practices, short lectures, study skills, and vocabulary study. Prerequisite: None.

**Read 1302 Advanced College Reading**

**(3-0)..... 3 hours**  
 Continues independent work to maintain improved speed and comprehension skills. Individualized program designed to meet specific needs. Prerequisite: Read 1301.

**Speech Communication**

Speech 1300 is designed to help students develop skills in various areas of oral communication. This institutional-credit course should be taken for personal growth in communication skills and as a preparatory course for other college courses. This Speech 1300 course explores communicating

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with self, one-to-one, small groups, and one to many by examining self-concept, nonverbal communication, listening skills, perception, use of language, and the organization and presentation of speeches.

### **Spch 1300 Basic Speech Communication Skills**

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

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

### **Human Development**

Human Development offers psychological education and personal growth experiences to promote individual effectiveness. Various Human Development courses—specifically HD 1301, College Skills Training—are designed to enhance the student's potential for success in college. The College Skills Training course carefully examines study skills, note-taking, and communications skills as well as other skill areas that help students "survive in college".

### **HD 1301 College Skills Training**

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

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

### **Tutoring Service**

The Developmental Studies program provides a tutoring service to all Odessa College students, whether they are enrolled in courses which carry only institutional credit or in courses which satisfy degree requirements. This service is provided free of charge. Arrangements for tutoring can be made by contacting the Director of Developmental Studies or the Developmental Studies Lab Coordinator.

## **Diesel Mechanics**

**Faculty:** Steve Mapes, Chairman; Charles Payne.

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

### **Course of Study for Associate in Applied Science Degree**

| <b>First Year</b>                          |                |                               |                |
|--|----------------|-------------------------------|----------------|
| <b>First Semester</b>                      |                | <b>Second Semester</b>        |                |
| <b>Course</b>                              | <b>Sem Hrs</b> | <b>Course</b>                 | <b>Sem Hrs</b> |
| DM 1601 .....                              | 6              | DM 1602 .....                 | 6              |
| DM 1503 .....                              | 5              | DM 1604 .....                 | 6              |
| DM 1505 .....                              | 5              | Engl 1312 or Speech 1310..... | 3              |
| Engl 1311 or 1311 (Technical Writing)..... | 3              | *PE .....                     | 1              |
| *PE .....                                  | 1              |                               |                |

Second Year

| Third Semester                  |         | Fourth Semester |         |
|---------------------------------|---------|-----------------|---------|
| Course                          | Sem Hrs | Course          | Sem Hrs |
| DM 2501 .....                   | 5       | DM 2502 .....   | 5       |
| DM 2603 .....                   | 6       | DM 2605 .....   | 6       |
| Math 1313 or More Advanced..... | 3       | Govt 2302 ..... | 3       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 45 semester hours in DM courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**DM 1503 Electrical Systems and Control Circuits**  
(2-6)..... 5 hours  
Introduces principles of electricity and emphasizes the uses of electrical test equipment. Stresses repair and testing procedures for batteries, electric starters, generators, alternators, warning devices, lighting systems, switches, etc. Prerequisite: None.

**DM 1505 Automotive Diesel**  
(2-6)..... 5 hours  
Includes theory and practice in principles for repair and maintenance of the automotive diesel engine. Contrasts automotive and commercial diesels. Prerequisite: None.

**DM 1601 Principles of Diesel Engines I**  
(2-8)..... 6 hours  
Introduces principles and repair of high compression gasoline and diesel engines, cooling systems, and lubricating systems. Stresses use and care of hand tools, precision instruments, and test equipment. Prerequisite: None.

**DM 1602 Principles of Diesel Engines II**  
(2-8)..... 6 hours  
A continuation of DM 1601. Emphasizes troubleshooting. Prerequisite: DM 1601.

**DM 1604 Fuel Injection, Testing and Rebuilding**  
(2-8)..... 6 hours  
Provides theory and practice in repair, maintenance, and troubleshooting of fuel injection systems and components. Emphasizes Cummins, Detroit, and Roosa-Master fuel injection systems. Prerequisite: DM 1602.

**DM 2501 Transmissions, Power Trains, and Accessories I**  
(2-6)..... 5 hours  
Provides theory and practice in repair and maintenance of transmissions, differentials, brakes, and related assemblies. Special units such as pumps, gas and air compression machinery, turbo-chargers, superchargers, and hydraulic equipment studied. Prerequisite: DM 1601.

**DM 2502 Transmissions, Power Trains and Accessories II**  
(2-6)..... 5 hours  
A continuation of DM 2501. Prerequisite: DM 2501.

**DM 2603 Caterpillar Diesel Engines**  
(2-8)..... 6 hours  
Provides extensive shop practice in major engine overhaul. Includes fuel systems analysis, troubleshooting procedures, and injection testing and timing. Prerequisite: DM 1602.

**DM 2605 Cummins Diesel Engines**  
(2-8)..... 6 hours  
Provides extensive shop practice in major engine overhaul. Includes fuel system analyzing, injection testing, and timing. Emphasizes proper troubleshooting procedures and techniques. Prerequisite: DM 1602.

**Diesel Mechanics  
(Open-Entry, Clock-Hour Program)**

The open-entry, clock-hour program is a personalized instructional system designed to offer the student a concentrated individualized curriculum in basic skills. Block time programs meet 20 to 40 hours per week depending upon the course and the personal schedule of the individual. A

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student may register for the following program on any week day. Classes start each Monday. Enrollment may be limited to available space. An Associate Degree option is available. Detailed information and admission and registration forms are available in the office of the program director or in the Counseling Center.

| Course Number | Course Name                                       | Clock | Semester |       |
|---------------|---|-------|----------|-------|
|               |   | Hours | Hours    | Weeks |
| DM 1841       | Introduction to Diesel Engines.....               | 220   | 8        | 11    |
| DM 1942       | Detroit Diesel Engines.....                       | 280   | 9        | 14    |
| DM 1943       | Cummins Diesel Engines.....                       | 280   | 9        | 14    |
| DM 1944       | Caterpillar Diesel Engines.....                   | 280   | 9        | 14    |
| DM 1445       | Electrical Systems and Control<br>Circuits.....   | 160   | 4        | 8     |
| DM 1846       | Transmissions, Power Trains &<br>Accessories..... | 240   | 8        | 12    |
| DM 1847       | Fuel Systems.....                                 | 240   | 8        | 12    |
| DM 1449       | Automotive Diesel.....                            | 100   | 4        | 5     |

Estimated cost of books and safety equipment—\$100

For those desiring the A.A.S. degree, the following academic courses are required: Engl 1311; Engl 1312 or Spch 1310; Math 1313, or more advanced; Govt 2301 or 2302; Mgt 1301; two hours PE or HED 1301.

### DM 1445 Electrical Systems & Control Circuits

[(3-17) for 8 weeks]..... 4 hours  
Introduces principles of electricity and emphasizes uses of electrical test equipment. Stresses repair and testing procedures for batteries, electric starters, generators, alternators, warning devices, lighting systems, switches, etc. Prerequisite: None.

### DM 1449 Automotive Diesel

[(3-17) for 5 weeks]..... 4 hours  
Involves theory and practice in principles for repair and maintenance of automotive diesel engines. Automotive and commercial diesels contrasted. Prerequisite: None.

### DM 1841 Introduction to Diesel Engines

[(4-16) for 11 weeks]..... 8 hours  
Provides instruction on correct use of tools and precision measuring instruments. Includes theory and operation of the many types of internal combustion engines. Emphasizes tune-ups using diagnostic methods and special tools. Safety stressed. Prerequisite: None.

### DM 1846 Transmissions, Power Trains, and Accessories

[(2-18) for 12 weeks]..... 8 hours  
Provides technical studies and practice in repair and maintenance of power trains, drive-line components, and accessories. Safety stressed. Prerequisite: None.

### DM 1847 Fuel Systems

[(4-16) for 12 weeks]..... 8 hours  
Introduces fuel injection systems, language, troubleshooting, testing, and practical applications. Includes study of Detroit, Caterpillar, Cummins, Roosa-Master, American Bosch, and C.A.V. systems. Emphasizes fuel injection pump and nozzle rebuild techniques. Safety stressed. (Fuel systems may be studied separately to meet individual student requirements. Associate degree students must study all systems.) Prerequisite: DM 1841, DM 1942, DM 1943, DM 1944, or industrial experience.

### DM 1942 Detroit Diesel Engines

[(3-17) for 14 weeks]..... 8 hours  
Introduces the Detroit Diesel Engine. Major and minor components disassembled, evaluated, repaired, and/or rebuilt according to manufacturer's specifications. Introduces operating principles and a study of the following systems: cooling, lubrication, air intake, and exhaust. Emphasizes troubleshooting and dynamometer. Use of special measuring tools a primary element of the course. "Live" engines used when possible. Safety stressed at all times. Prerequisite: DM 1841 or industrial experience.

### DM 1943 Cummins Diesel Engines

[(3-17) for 14 weeks]..... 9 hours  
Introduces the Cummins Diesel Engine. Major and minor components disassembled, evaluated, repaired, and/or rebuilt according to manufacturer's specifications. Introduces operating principles and a study of the following systems: cooling, lubrication, air intake, and exhaust. Emphasizes troubleshooting and dynamom-

eter operation. Use of special measuring tools a primary element of the course. "Live" engines used when possible. Safety stressed at all times. Prerequisite: DM 1841, DM 1942, or industrial experience.

**DM 1944 Caterpillar Diesel Engines**

**[(3-17) for 14 weeks]..... 8 hours**  
 Introduces the Caterpillar Diesel Engine. Major and minor components disassembled, evaluated, repaired, and/or rebuilt according to manufacturer's specifications. Introduces operating principles and a study of the following systems: cooling, lubrication, air intake, and exhaust. Emphasizes troubleshooting and dynamometer operation. Use of special measuring tools a primary element of the course. "Live" engines used when possible. Safety stressed at all times. Prerequisite: DM 1841, DM 1942, DM 1943, or industrial experience.

# Drafting

**Faculty:** Dr. Kenneth Hurst, Chairman.

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

## Course of Study for Associate in Applied Science Degree

### First Year

| First Semester                              |         | Second Semester                  |         |
|---|---------|----------------------------------|---------|
| Course                                      | Sem Hrs | Course                           | Sem Hrs |
| Art 1311 .....                              | 3       | DT 2408 .....                    | 4       |
| DT 1401 or Engr 1301 .....                  | 4 or 3  | Engr 1312 or Speech 1310 .....   | 3       |
| Engr 1311 or 1311 (Technical Writing) ..... | 3       | Engr 1303 .....                  | 3       |
| Math 1313 or More Advanced .....            | 3       | Math 1341 or More Advanced ..... | 3       |
| *PE .....                                   | 1       | **Approved Elective .....        | 4       |
|   |         | *PE .....                        | 1       |

### Second Year

| Third Semester                   |         | Fourth Semester           |         |
|----------------------------------|---------|---------------------------|---------|
| Course                           | Sem Hrs | Course                    | Sem Hrs |
| DT 2401 .....                    | 4       | DT 2403 .....             | 4       |
| DT 2402 .....                    | 4       | DT 2404 .....             | 4       |
| Govt 2301 or 2302 .....          | 3       | DT 2406 .....             | 4       |
| Math 1343 or More Advanced ..... | 3       | **Approved Elective ..... | 3       |
| **Approved Elective .....        | 3       |                           |         |

\*HEd 1301 can be substituted for the two one-hour physical education courses.

\*\*Approved Electives: DT 2405, DT 2411, 2412, 2413, 2415, Phys 1401, Engr 2303, 2304, Mgt 1301, 2302, MT 1601, WT 1601, any advanced math, and any CIS course.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**DT 1401 Technical Drafting I**

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

**DT 2401 Architectural Drawing**

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

**DT 2402 Machine Drafting**

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

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- DT 2403 Technical Illustration** (2-4)..... 4 hours  
Presents pictorial drawings used in industrial catalogs, training aids, engineering designs, assembly sheets, and promotional literature. Orthographics, axonometrics, and perspectives used extensively. Prerequisite: DT 1401 or Engr 1301.
- DT 2404 Piping Drafting** (2-4)..... 4 hours  
Study of pipes and pipe fittings, symbols, and specifications of process systems. Emphasizes drawings of flow diagrams, pumps, compressors, and various other mechanical equipment. Prerequisite: DT 1401 or Engr 1301.
- DT 2405 Electronic Drafting** (2-4)..... 4 hours  
Introduces drafting techniques as applied to the field of electronics. Emphasizes electronic symbols and their application in printed and conventional circuits. Prerequisite: DT 1401 or Engr 1301.
- DT 2406 Structural Drafting** (2-4)..... 4 hours  
Design and development of details and specifications for industrial structures. Emphasizes structural steel, pipe, and reinforced concrete. Prerequisite: DT 1401 or Engr 1301.
- DT 2408 Computer Graphics I** (2-4)..... 4 hours  
An introductory course in Computer Aided Drafting (CAD). Emphasizes preparation of drawings using a computer terminal and plotter. Prerequisite: DT 1401 or Engr 1301. (Mathematics through plane trigonometry strongly recommended.)
- DT 2411 Advanced Architectural Drafting** (2-4)..... 4 hours  
A continuation of DT 2401. Emphasizes commercial and industrial construction. Prerequisite: DT 2401.
- DT 2412 Advanced Machine Drafting** (2-4)..... 4 hours  
A continuation of DT 2402. Includes a thorough study of position dimensioning and tolerancing. Prerequisite: DT 2402.
- DT 2413 Advanced Technical Illustration** (2-4)..... 4 hours  
A continuation of DT 2403. Includes inking, shading, and airbrush rendering. Prerequisite: DT 2403.
- DT 2415 Advanced Electronic Drafting** (2-4)..... 4 hours  
A continuation of Drafting Technology 2405. Emphasizes design of printed circuits and block-logic diagrams. Prerequisite: DT 2405.

## Educational Aide

**Faculty:** Maryln Hair, Chairman; Mary Joyce Harding.

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

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

### Course of Study for Associate in Applied Science Degree

| First Year                      |         |                          |         |
|---------------------------------|---------|--------------------------|---------|
| First Semester                  |         | Second Semester          |         |
| Course                          | Sem Hrs | Course                   | Sem Hrs |
| CD 1305.....                    | 3       | CD 1303.....             | 3       |
| EA 1300.....                    | 3       | CD 1306 or CD 2306.....  | 3       |
| Engr 1311.....                  | 3       | CD 1307.....             | 3       |
| Math 1313 or More Advanced..... | 3       | CD 1309 or Psy 2302..... | 3       |
| *Approved Elective.....         | 4/3     | **PE 1303.....           | 3       |

**Second Year**

| Third Semester          |         | Fourth Semester |         |
|-------------------------|---------|-----------------|---------|
| Course                  | Sem Hrs | Course          | Sem Hrs |
| CD 2304.....            | 3       | CD 1304.....    | 3       |
| EA 2300.....            | 3       | CD 2305.....    | 3       |
| EA 2301.....            | 3       | EA 2600.....    | 6       |
| Govt 2301 or 2302.....  | 3       | Soc 2302.....   | 3       |
| Spch 2340 or 2360.....  | 3       |                 |         |
| *Approved Elective..... | 3       |                 |         |

\*Approved Electives: CD 1301, CD 2301, CD 2306, HEd 1301, Engl 1312, Span 1411, Span 1412, Span 2311, Span 2312.

\*\*Counts as PE activity credit.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Associate in Applied Science Degree  
(Special Education Option)**

**First Year**

| First Semester                  |         | Second Semester          |         |
|---------------------------------|---------|--------------------------|---------|
| Course                          | Sem Hrs | Course                   | Sem Hrs |
| CD 2304.....                    | 3       | CD 1303.....             | 3       |
| EA 1300.....                    | 3       | CD 1307.....             | 3       |
| Engl 1311.....                  | 3       | CD 1309 or Psy 2302..... | 3       |
| Math 1313 or More Advanced..... | 3       | EA 2302.....             | 3       |
| *Approved Elective.....         | 4/3     | **PE 1303.....           | 3       |

**Second Year**

| Third Semester         |         | Fourth Semester |         |
|------------------------|---------|-----------------|---------|
| Course                 | Sem Hrs | Course          | Sem Hrs |
| CD 1305.....           | 3       | CD 1304.....    | 3       |
| CD 2305.....           | 3       | CD 2306.....    | 3       |
| EA 2300.....           | 3       | EA 2600.....    | 6       |
| EA 2301.....           | 3       | Soc 2302.....   | 3       |
| Govt 2301 or 2302..... | 3       |                 |         |
| Spch 2340 or 2360..... | 3       |                 |         |

\*Approved Electives: CD 1301, CD 1306, CD 2301, HEd 1301, Engl 1312, Span 1411, Span 1412, Span 2311, Span 2312.

\*\*Counts as PE activity credit.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Year                      |         |                          |         |
|---------------------------------|---------|--------------------------|---------|
| First Semester                  |         | Second Semester          |         |
| Course                          | Sem Hrs | Course                   | Sem Hrs |
| EA 1300.....                    | 3       | CD 1303.....             | 3       |
| Math 1313 or More Advanced..... | 3       | CD 1309 or Psy 2302..... | 3       |
| OE 1401.....                    | 4       | Engl 1311.....           | 4       |
| Spch 2340.....                  | 3       | OE 1402.....             | 4       |
| *CD (Approved Elective).....    | 3       | **PE 1303.....           | 3       |

| Second Year            |         |                     |         |
|------------------------|---------|---------------------|---------|
| Third Semester         |         | Fourth Semester     |         |
| Course                 | Sem Hrs | Course              | Sem Hrs |
| CD 1301 or 1304.....   | 3       | CD 2306.....        | 3       |
| EA 2300.....           | 3       | EA 2600.....        | 6       |
| Govt 2301 or 2302..... | 3       | ***OE Elective..... | 3       |
| OE 1406.....           | 4       | Soc 2302.....       | 3       |
| Spch 2360.....         | 3       |                     |         |

\*CD Approved Electives: Any CD course not already required.

\*\*Counts as PE activity credit.

\*\*\*OE Electives: Any other OE course not already required.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Year                       |         |                          |         |
|----------------------------------|---------|--------------------------|---------|
| First Semester                   |         | Second Semester          |         |
| Course                           | Sem Hrs | Course                   | Sem Hrs |
| CD 1301 or 2301.....             | 3       | CD 1303.....             | 3       |
| CD 2304.....                     | 3       | CD 1309 or Psy 2302..... | 3       |
| EA 1300.....                     | 3       | CD 2306.....             | 3       |
| Math 1313, or More Advanced..... | 3       | Engl 1311.....           | 3       |
| *Span 1411.....                  | 4       | *Span 1412.....          | 4       |
| Spch 2340.....                   | 3       | **PE 1303.....           | 3       |

| Second Year            |         |                             |         |
|------------------------|---------|-----------------------------|---------|
| Third Semester         |         | Fourth Semester             |         |
| Course                 | Sem Hrs | Course                      | Sem Hrs |
| CD 1305.....           | 3       | CD 1301, 1306, or 2301..... | 3       |
| CD 2305.....           | 3       | EA 2600.....                | 6       |
| EA 2300.....           | 3       | Soc 2302.....               | 3       |
| EA 2301.....           | 3       | Span 2312.....              | 3       |
| Govt 2301 or 2302..... | 3       | Spch 2360.....              | 3       |
| Span 2311.....         | 3       | ***Approved Elective.....   | 3       |

\*May test out if proficient in Spanish.

\*\*Counts as PE activity credit.

\*\*\*Approved Electives: CD 1301, CD 2301, HEd 1301, Engl 1312.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 31 hours in core courses. Options are also available in Special Education, 25 hours; Clerical, 33 hours; and Bilingual, 32 hours.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

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

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

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

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

## Electrical and Electronics

**Faculty:** Dr. George Willis, Chairman; Larry Brown.

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

### Course of Study for Associate in Applied Science Degree

| Course                                     | First Year     |                                  |
|--|----------------|----------------------------------|
|  | First Semester | Second Semester                  |
| Engl 1311 or 1311 (Technical Writing)..... | 3              | Engl 1312 or Spch 1310.....3     |
| ET 1401 .....                              | 4              | ET 1403 .....                    |
| ET 1402 .....                              | 4              | ET 1404 .....                    |
| Math 1321 or More Advanced.....            | 3              | ET 1408 .....                    |
| Mgt 1301 .....                             | 3              | Math 1323 or More Advanced.....3 |

**Second Year**

| Third Semester             |         | Fourth Semester             |              |
|----------------------------|---------|-----------------------------|--------------|
| Course                     | Sem Hrs | Course                      | Sem Hrs      |
| DT 1401 or Engr 1301 ..... | 4 or 3  | **ET Electives .....        | Minimum of 6 |
| ET 2400 .....              | 4       | ***Approved Electives ..... | 6            |
| ET 2410 .....              | 4       | *PE .....                   | 1            |
| Govt 2301 or 2302 .....    | 3       |                             |              |
| *PE .....                  | 1       |                             |              |

\*HEd 1301 may be substituted for the two one-hour Physical Education courses. Veterans may receive PE credit for military duty and should contact the registrar for details.

\*\*To satisfy the six-plus semester hour ET elective requirement, second-year students should choose ET electives based on their need. ET electives are any ET course not specifically required in the degree plan.

\*\*\*To satisfy the six semester-hour approved elective requirement students should select from the approved elective list those courses which will provide training most closely related to their occupational objective. Approved electives are: AT 2501; BA 1301, 2311, and 2312; DM 1503; DT 2405; Eco 1301; any CIS course; any Math more advanced than the required six semester hours; Mgt 1303, 1361, 1362, 2302, and 2303; MT 1601; Phys 1401 and 1402; R/AC 1302, 2301, and 2303; WT 1601; any R/TV; PET 1370 and 1380.

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

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 34 semester hours of electronics courses and the necessary six semester hours of prerequisite math courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

✓ **ET 1401 D.C. Circuits**

**(3-3)..... 4 hours**  
 A study of the principles and applications of direct current electricity. Includes Ohm's law, series-parallel circuits, batteries, meters, magnetism, conductors, insulators, Kirchoff's Laws, Thevenin, Norton, and super position theorems, and resistor color codes. Requires a scientific calculator and basic math competency. Prerequisite: None. Corequisite: Math 1321 or more advanced.

**ET 1402 Digital Circuits I**

**(3-3)..... 4 hours**  
 Presents logic circuitry basic to computers, telemetry, and automation. Includes gates; counters; adders; I/O, D/A, & A/D converters; storage devices; binary, octal, BCD, hexadecimal systems; and an introduction to Boolean algebra. Prerequisite: None. Corequisite: Math 1321 or more advanced.

✓ **ET 1403 A.C. Circuits**

**(3-3)..... 4 hours**  
 Presents principles of alternating current and voltage. Applies basic laws and formulas to electrical circuits and testing, induction, capacitance, reactance, impedance, complex numbers, and filters. Requires a scientific calculator. Prerequisites: ET 1401 and Math 1321 or equivalent. Corequisites: ET 1404 and Math 1323 or more advanced.

**ET 1404 Electronics I**

**(3-3)..... 4 hours**  
 Introduces fundamentals of solid state devices such as diodes, bipolar and field effect transistors, and their applications in power supplies, amplifiers, regulators, and linear integrated circuits. Requires a scientific calculator. Prerequisites: ET 1401 and Math 1321 or its equivalent. Corequisites: ET 1403 and Math 1323 or more advanced.

- ET 1408 Microprocessors** (3-3)..... 4 hours  
 Control and logic handling course wherein the microprocessor and associated integrated circuits replace formerly extensive hard-wired circuitry. Involves programming, machine and assembly languages, octal and hexadecimal systems. Includes control and timing pulses and such devices as memory, UARTs, programmable and non-programmable serial and parallel parts, A/D, D/A converters. Emphasis 8080 and 6800 microprocessor chips. Prerequisites: ET 1401 and ET 1402.
- ET 2201 Rules & Regulations** (2-0)..... 2 hours  
 Presents current rules and regulations of the Federal Communications Commission on two-way radio, broadcast radio, and television. Proficiency in basic math expected. Requires a scientific calculator. Prerequisite: None. Corequisite: ET 2401 recommended.
- ET 2202 Electrical Power Technology** (2-0)..... 2 hours  
 Introduces methods and equipment for generation, transmission, and distribution of electrical power. Requires field trips to industrial locations. Prerequisites: ET 1401 and ET 1403 as well as Math 1321 or its equivalent. Corequisites: ET 2406 or ET 2407 and Math 1323 or more advanced.
- ET 2400 Electronics II** (3-3)..... 4 hours  
 A continuation of ET 1404. Includes topics of operational and differential amplifiers, oscillators, multi-vibrators, UJT, SCR, Diacs, Triacs, varactors, and RF amplifiers. Prerequisites: ET 1401, ET 1402, ET 1403, and ET 1404.
- ET 2401 Electronic Communications** (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. Emphasizes application to two-way radios. Prerequisites or Corequisites: ET 2201, ET 2400, and six semester hours of required math.
- ET 2406 Electrical Machinery** (3-3)..... 4 hours  
 Investigates the theory, principles, performance, and construction of electric motors, generators, transformers, voltage regulators, and other electrical apparatus. Explores effects of leading and lagging power factors and applies corrective methods. Laboratory work permits thorough independent study of all characteristics. Prerequisites: ET 1401, ET 1403, and Math 1321 or more advanced. Corequisite: Math 1323 or more advanced.
- ET 2407 Electrical Control Circuits** (3-3)..... 4 hours  
 Introduces study of development of circuits for controls of motors, generators, and other apparatus. Emphasizes analysis, troubleshooting, and making and reading of complex control diagrams for electromechanical controls. Prerequisites: ET 1401, ET 1403, and Math 1321 or more advanced.
- ET 2408 Microcomputers** (3-3)..... 4 hours  
 An advanced course on microcomputers. Includes topics on operating systems, bus structures, disk drives, monitors, modems, printers, and programming. Includes classroom and laboratory instruction on principles of operation and troubleshooting. Emphasizes IBM-type equipment. Prerequisites: ET 1401, ET 1402, ET 1408, and CIS 1400, but demonstrated proficiency in programming in BASIC language may be substituted for CIS 1400 with consent of the instructor.
- ET 2409 Electronic Instruments** (3-3)..... 4 hours  
 Includes classroom, laboratory, and practical applications of skills in troubleshooting and repair of various electrical and electronic instruments such as meters, oscilloscopes, power supplies, generators, counters, controls, etc. Prerequisites: ET 1401, ET 1402, ET 1403, ET 1404, ET 1408, and ET 2400.
- ET 2410 National Electrical Code** (3-3)..... 4 hours  
 An applied course covering the National Electrical Code for industrial, commercial, and residential wiring. Prerequisite: ET 1401.

# Emergency Medical Technology

**Faculty:** Phyllis Howard, Chairman; R. Ted Bohne, Lee Don Martin,  
Dr. Robert Rowntree, III, Medical Director.

Odessa College offers a cooperative program with the local hospital and 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, policeman, fireman, lifeguards, 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 National Highway Safety Bureau, U.S. Department of Transportation. The training includes both theoretical and practical applications of emergency medical care.

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

## Course of Study for Associate in Applied Science Degree

| <b>First Year</b>               |         |                 |         |
|---------------------------------|---------|-----------------|---------|
| First Semester                  |         | Second Semester |         |
| Course                          | Sem Hrs | Course          | Sem Hrs |
| Biol 1100.....                  | 1       | Biol 1402.....  | 4       |
| Biol 1401.....                  | 4       | EMT 1201.....   | 2       |
| Engl 1311.....                  | 3       | EMT 1401.....   | 4       |
| Govt 2301 or 2302.....          | 3       | Engl 1312.....  | 3       |
| Math 1313 or More Advanced..... | 3       | PE.....         | 1       |
| PE.....                         | 1       |                 |         |

Successful completion of first year will prepare the student to write the examination for Registry for Class A Basic Emergency Medical Technician.

| <b>Second Year</b>      |         |                 |         |
|-------------------------|---------|-----------------|---------|
| Third Semester          |         | Fourth Semester |         |
| Course                  | Sem Hrs | Course          | Sem Hrs |
| Biol 1403.....          | 4       | EMT 2302.....   | 3       |
| EMT 2801.....           | 8       | EMT 2802.....   | 8       |
| Nu 1201.....            | 2       | Psy 1301.....   | 3       |
| *Approved Elective..... | 3/4     | Spch 1310.....  | 3       |

\*Approved Electives: Chem 1101 and 1301, CIS 1401, and Span 1311.

Successful completion of second year will prepare the student to write the examination for Registry for Class A, Advanced Paramedic.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Certificate**

**Summer Session**

**12 weeks**

**(Courses taken concurrently)**

| Course         | Sem Hrs |
|----------------|---------|
| EMT 1201 ..... | 2       |
| EMT 1401 ..... | 4       |

Successful completion will prepare the student to write the examination for Registry for Class A, Basic Emergency Medical Technician.

| Fall Semester  |         | Spring Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| EMT 2801 ..... | 8       | EMT 2802 .....  | 8       |

**Summer Session I**

| Course         | Sem Hrs |
|----------------|---------|
| EMT 2303 ..... | 3       |

Successful completion will prepare the student to write the examination for Registry for Class A, Advanced Paramedic.

**EMT 1201 Clinical Practicum**

(0-4)..... **2 hours**  
 Designed to complement EMT 1401 and required of students wishing to write the exam for Emergency Medical Technician. Includes training in Emergency and Recovery Rooms of the hospital. Requires complete training on the ambulance. Corequisite: EMT 1401.

**EMT 1401 Emergency Care of the Sick and Injured**

(3-3)..... **4 hours**  
 Designed to define role and responsibilities of the Emergency Medical Technician. Includes medico-legal aspects, functional anatomy, medical terminology, vital sign recognition, cardiac and pulmonary problems, wounds and fractures, medical and environmental emergencies, extrication, rescue, and ambulance operation. Prepares students to write examination for State Registry as Emergency Care Attendant. To write for Emergency Medical Technician students must complete EMT 1201 as corequisite. Prerequisite: Must be 18 years of age and have consent of the instructor.

**EMT 2200 Emergency Medical Review**

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

**EMT 2302 Introduction to Human Disease**

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

**EMT 2303 Introduction into Electrocardiography**

(2-1)..... **3 hours**  
 Designed to introduce interpretation of 12-lead electrocardiography. Includes direction of electrical axis, location of infarction, basic cardiac problems, location of fascicular blocks, myocardial hypertrophy, right and left bundle branch blocks, and drug and electrolyte effects on the heart. Includes clinical experience in the Electrodiagnostic Department at Medical Center Hospital. Prerequisite: Consent of the department chairman.

**EMT 2400 Advanced Paramedic Review**

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

**EMT 2801 Advanced Emergency Care of the Sick or Injured**

(6-6)..... **8 hours**  
 Provides instruction on care of acutely ill. Emphasizes respiratory and cardiovascular care. Includes diagnostic techniques, pharmacology, and shock and fluid therapy. Requires clinical experience in Emergency, Operating, and Recovery Rooms as well as Intensive Care, in addition to the Laboratory. Also requires

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ambulance runs as required for certification. Prerequisite: Registered Class "A" EMT and consent of the department chairman.

### EMT 2802 Advanced Emergency Care of the Sick or Injured

(6-6)..... 8 hours

A continuation of EMT 2801 which emphasizes central nervous system, soft tissue, and musculoskeletal injuries. Includes medical emergencies, obstetrics, pediatrics, rescue techniques, communications, and management of emotionally disturbed. Includes clinical experience in Emergency Room, Labor Suite, Morgue, and Electrodiagnostic Unit. Requires ambulance runs as required for certification. Allows writing examination for Registry for Class "A" Advanced Paramedic upon successful completion of course. Prerequisites: EMT 2801 and consent of the department chairman.

## Engineering

**Faculty:** Dr. Charles Sweatt, Chairman; Delmos Hickmott, Dr. Kenneth Hurst, Robert Keating.

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

### Course of Study for Pre-Engineering

| First Year                                  |         |                             |         |
|---|---------|-----------------------------|---------|
| First Semester                              |         | Second Semester             |         |
| Course                                      | Sem Hrs | Course                      | Sem Hrs |
| Chem 1301 and 1101 .....                    | 4       | Chem 1302 and 1102 .....    | 4       |
| Engl 1311 or 1311 (Technical Writing) ..... | 3       | Engl 1312 .....             | 3       |
| Engr 1300 .....                             | 3       | Engr 1303 or CIS 2406 ..... | 3 or 4  |
| Engr 1301 .....                             | 3       | Math 2333 .....             | 3       |
| Math 1345 .....                             | 3       | Phys 1403 .....             | 4       |
| Math 2331 .....                             | 3       | PE .....                    | 1       |
| PE .....                                    | 1       |                             |         |

| Second Year                               |         |   |         |
|---|---------|---|---------|
| Third Semester                            |         | Fourth Semester                           |         |
| Course                                    | Sem Hrs | Course                                    | Sem Hrs |
| Engl (Sophomore Level) or Govt 2301 ..... | 3       | Engl (Sophomore Level) or Govt 2302 ..... | 3       |
| Engr 2303 .....                           | 3       | Engr 2304 .....                           | 3       |
| Hist 2301 .....                           | 3       | Hist 2302 .....                           | 3       |
| Math 2335 .....                           | 3       | Math 2351 .....                           | 3       |
| Phys 2401 .....                           | 4       | Phys 2402 .....                           | 4       |
| PE .....                                  | 1       | PE .....                                  | 1       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

Chemical Engineering majors will take Chemistry 2301, 2101 and 2302, 2102 in lieu of sophomore English during their second year. Six hours of Government and 12 hours of English are required for the Associate in Science Degree.

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

Students pursuing Engineering as a career who desire an associate degree are advised to follow the curriculum for an Associate in Science Degree.

### Engr 1300 Engineering Analysis

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

Introduces the profession of engineering. Presents overview of various disciplines within the engineering world. Includes methods of analyzing and solving engineering problems. Includes an introduction to FORTRAN. Prerequisite: None; however, algebra, trigonometry, and physics backgrounds are recommended.

- Engr 1301 Engineering Drawing**  
(2-4)..... **3 hours**  
Presents care and use of drawing instruments, free-hand lettering, geometric construction, general drafting principles, multiview projection, revolutions, auxiliary views, and sections. Includes isometric and cabinet projection, threads, bolts, rivets, helices, dimensioning, principles of working drawing, pattern development, and oblique drawing. Prerequisite: None.
- Engr 1303 Descriptive Geometry**  
(2-4)..... **3 hours**  
Introduces principles of descriptive geometry, auxiliary views, developments, inter-sections, double-curved and warped surfaces, point, line, and plane problems, and their applications to problems of engineering and architecture. Prerequisite: Engr 1301 or DT 1401.
- Engr 2303 Mechanics I**  
(3-0)..... **3 hours**  
A basic mechanics course utilizing vectors and tensors. Introduces statics, including concepts of free-body diagrams, friction forces, and virtual-work as well as motion of particles, including momenta, energy, and work concepts. Corequisite or Prerequisite: Math 2333.
- Engr 2304 Mechanics II**  
(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. Prerequisite: Engr 2303.

## Fire Technology

**Faculty:** Bill Cooksey, Chairman.

The Fire Technology program assists in the development of meaningful educational experiences for pre-service and in-service firemen. Courses emphasize practical application in understanding building designs, classification of fires, exposure protection, toxic fumes, arson investigation, hazards, 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 employment and to provide the necessary educational background for advancing into a highly responsible position in the profession.

### Course of Study for Associate in Applied Science Degree

| First Year                                  |         |                                    |         |
|---|---------|------------------------------------|---------|
| First Semester                              |         | Second Semester                    |         |
| Course                                      | Sem Hrs | Course                             | Sem Hrs |
| EMT 1201 .....                              | 2       | Eng 1312, 1321, or Spch 1310 ..... | 3       |
| EMT 1401 .....                              | 4       | Fire 1303 .....                    | 3       |
| Engl 1311 or 1311 (Technical Writing) ..... | 3       | Fire 1304 .....                    | 3       |
| Fire 1301 .....                             | 3       | Fire 1305 .....                    | 3       |
| Fire 1302 .....                             | 3       | Fire 1306 .....                    | 3       |
| PE .....                                    | 1       | Math 1313 or More Advanced .....   | 3       |
| Read 1101 .....                             | 1       | PE .....                           | 1       |
| Second Year                                 |         |                                    |         |
| Third Semester                              |         | Fourth Semester                    |         |
| Course                                      | Sem Hrs | Course                             | Sem Hrs |
| Fire 2301 .....                             | 3       | EMT 2802 or six Hours of Fire      |         |
| Fire 2302 .....                             | 3       | Electives* .....                   | 8 or 6  |
| Fire 2303 .....                             | 3       | Fire 2306 .....                    | 3       |
| EMT 2801 or six Hours of Fire               |         | Fire 2405 .....                    | 4       |
| Electives* .....                            | 8 or 6  | Govt 2301 .....                    | 3       |

\*Fire Electives: Any Fire course not already required.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 34 semester hours of Fire courses plus EMT 1201 and 1401.

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First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

### Fire 1301 Fundamentals of Fire Protection

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

Presents history and philosophy of fire protection and reviews statistics of loss of life and property by fire. Introduces agencies involved in fire protection, current legislative developments and career orientation. Includes recruitment and training for fire department personnel, position classification and pay plans, and employee organizations. Discusses current related problems, and reviews expanding future of fire protection problems. Prerequisite: None.

### Fire 1302 Industrial Fire Protection I

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

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

### Fire 1303 Industrial Fire Protection II

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

Includes development of fire and safety organizations in industry. Explains relation between private and public fire protection organizations. Discusses current trends, deficiencies and possible solutions for industrial fire problems, role of insurance and other special organizations. Presents in-depth study of specific industrial processes, equipment, facilities, and work practices to understand the potential hazards and techniques to detect and control such hazards. Requires field trips to selected plants for demonstrations of new techniques, equipment, and other innovations. Prerequisite: None.

### Fire 1304 Fire Protection Systems

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

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

### Fire 1305 Fire Prevention

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

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

### Fire 1306 Chemistry for Fire Fighters I

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

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

### Fire 1307 Chemistry for Fire Fighters II

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

A continuation of Fire 1306. Emphasizes energy, matter, reactions, compound formations, gases, and plastics. Prerequisite: Fire 1306.

### Fire 2301 Fire and Arson Investigation

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

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

### Fire 2302 Building Codes and Construction

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

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

- Fire 2303 Fire Administration I**  
 (3-0)..... 3 hours  
 Presents organization and management of a fire department, personnel administration. Includes budgeting, maintaining records and reports, managing fire department officers, distributing equipment, and other related topics. Also includes relation of various government agencies to fire protection areas. Views Fire Service Leadership from the administrative position. Prerequisite: None.
- Fire 2304 Fire Administration II**  
 (3-0)..... 3 hours  
 Includes study of insurance rates and ratings, preparation of budgets, report writing and record keeping, administration and organization of training in the fire department, and design and construction of fire department buildings. Also includes city water requirement, fire alarm and communications systems, importance of public relations, measurements of results, use of records to improve procedures, and other related topics. Stresses legal aspects relating to fire prevention and fire protection with emphasis on municipal and state agencies. Prerequisite: None.
- Fire 2306 Hazardous Materials I**  
 (3-0)..... 3 hours  
 Introduces chemical characteristics and behavior of various hazardous materials—flammable liquids, combustible solids, and gases, for example—that burn or react violently when stored or transported. Emphasizes emergency situations and most favorable methods of handling, fighting, and controlling such burning substances. Prerequisite: None.
- Fire 2307\* Fire Safety Education**  
 (3-0)..... 3 hours  
 Surveys physical, chemical, and electrical hazards and their relationship to loss of property and/or life. Presents codes, laws, problems, and cases. Presents detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Stresses safety techniques while storing, transporting, and handling to eliminate or control potential risks. Prerequisite: None.
- Fire 2308\* Fire Service Communications**  
 (3-0)..... 3 hours  
 Introduces development of fire alarm systems and the various types, installation, operation, and testing of the most common systems. Includes F.C.C. regulations; receiving, dispatching, and radio communication procedures, fire station communications and facilities, and the fire alarm operations office. Stresses mutual aid systems, response and fire ground procedures, emergency operations, code and numbering systems, required records and reports, and technological advances. Prerequisite: None.
- Fire 2309\* Urban Fire Problem Analysis**  
 (3-0)..... 3 hours  
 Presents urban fire problems caused by lack of zoning and other land use laws. Includes operation research techniques. Utilizes systems engineering as analytic procedures for the technological assessment of public fire protection—including water supply, fire alarm, and fire department traditional assessment methods. Relates socio-economic and management factors to urban analysis and city planning. Emphasizes incurred environmental problems. Prerequisite: None.
- Fire 2310\* Fire Hydraulics and Equipment**  
 (3-0)..... 3 hours  
 Applies laws of mathematics and physics to properties of fluid states, force pressure, and flow velocities. Emphasizes applying principles of hydraulics to fire fighting problems. Evaluates water supply, flow requirements of standpipes, sprinklers and appliances, and methods of determining available quantities of water for fire protection purposes. Prerequisite: None.
- Fire 2311\* Advanced Fire Loss Statistical Systems**  
 (3-0)..... 3 hours  
 Includes study of computerized systems used for storing and retrieving fire loss statistics as well as techniques and procedures for programming various types of records and reports valuable to the fire service. Explores new systems of microfilming including the modern technology of COM (Computer Output Microfilm) and of systems utilizing microfiche, as well as reduction ratios and various type readers. Reviews standards for the uniform coding for fire protection as developed by the NFPA in pamphlet 901 and 901 AM. Prerequisite: None.
- Fire 2312\* Fire Insurance Fundamentals**  
 (3-0)..... 3 hours  
 Presents relationships between fire defenses, fire losses, and insurance rates. Stresses basic insurance principles, fire loss experience, loss ratios, state regulations of fire insurance, key rate system, applying the I.S.O. grading schedule, and other topics. Includes relationship of insurance to modern business, principles of property and casualty insurance contracts, and corporate structure of insurance companies. Prerequisite: None.

**Fire 2313\* Legal Aspects of Fire Protection**

(3-0)..... **3 hours**  
 Introduces legal rights and duties, liability concerns, and responsibilities of the fire department in line of duty. Presents basic concepts of civil and criminal law, state and federal judicial structures, and cities' liability for acts of the fire department and fire prevention bureaus. Offers in-depth study of various cases concerning fire fighters, fire departments, and municipalities. Prerequisite: None.

**Fire 2314\* Hazardous Materials II**

(3-0)..... **3 hours**  
 Content covers hazardous material storage, handling, laws standards, and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, radioactive materials, rocket propellants, and other exotic fuels. Stresses formation of toxic fumes and health hazards. Emphasizes ignition and combustion characteristics of gases, liquids, and solids related to free-burning fire and explosion phenomena. Introduces radiological instruments, human exposure to radiation, decontamination procedures, common uses of radioactive materials, and operational procedures. Prerequisite: None.

**Fire 2405 Fire Fighting Tactics and Strategy**

(3-1)..... **3 hours**  
 Covers essential elements in analyzing nature of the fire and determining its requirements. Stresses efficient and effective utilization of manpower, equipment, and apparatus. Emphasizes pre-planning, study of conflagration problems, fire ground organization problem-solving related to fire, ground decision-making, and attack tactics and strategy. Includes use of Mutual Aid and large scale command problems. Prerequisite: None.

\*Approved Electives

# Geology, Anthropology, Archaeology, Geography, and Earth Science

Faculty: Brent McAfee, Chairman.

## Geology

Geology is a study of the earth, its history, materials, changing life, and the processes that have resulted in its present form. For the student who does not want to take more than a year of geology, the principal value will be primarily in an increased interest in and understanding of his environment. However, for students majoring in geology, petroleum or civil engineering, ecological studies, or some closely related subject, the first year of geology courses provides necessary background for further study. An important function of this department is to train students for work in the petroleum industry. Geology 1401 and 1402 will serve as a required physical and/or natural science at most senior colleges.

### Course of Study for Associate in Science Degree (Geology Major)

| First Semester                  |         | First Year                      |         | Second Semester |         |
|---------------------------------|---------|---------------------------------|---------|-----------------|---------|
| Course                          | Sem Hrs | Course                          | Sem Hrs | Course          | Sem Hrs |
| Chem 1101 and 1301.....         | 4       | Chem 1102 and 1302.....         | 4       |                 |         |
| Engl 1311.....                  | 3       | Engl 1312.....                  | 3       |                 |         |
| Geol 1401.....                  | 4       | Geol 1402.....                  | 4       |                 |         |
| Hist 2301.....                  | 3       | Hist 2302.....                  | 3       |                 |         |
| Math 1341 or More Advanced..... | 3       | Math 1343 or More Advanced..... | 3       |                 |         |
| PE.....                         | 1       | PE.....                         | 1       |                 |         |

**Second Year**

|                                 | Third Semester |         | Fourth Semester                 |         |
|---------------------------------|----------------|---------|---------------------------------|---------|
| Course                          |                | Sem Hrs | Course                          | Sem Hrs |
| Anth 2301.....                  |                | 3       | Engl (Sophomore Level).....     | 3       |
| Engl (Sophomore Level).....     |                | 3       | Geol 2301.....                  | 3       |
| Govt 2301.....                  |                | 3       | Govt 2302.....                  | 3       |
| Math 1345 or More Advanced..... |                | 3       | Math 2331 or More Advanced..... | 3       |
| Phys 1401 or 2401.....          |                | 4       | Phys 1402 or 2402.....          | 4       |
| PE.....                         |                | 1       | PE.....                         | 1       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Geol 1401 Physical Geology**..... **4 hours**  
(3-3).....

Presents a foundation course for all additional work in geology; a general course for cultural development. Includes study of geologic features and processes of the earth. Prerequisite: None.

**Geol 1402 Historical Geology**..... **4 hours**  
(3-3).....

Emphasizes geologic history of the earth. Provides basic knowledge required for additional study in geology or for cultural development. Prerequisite: None.

**Geol 2301 Geomorphology**..... **3 hours**  
(3-0).....

Offers geologic interpretation of the origin, development, and classification of land forms. Prerequisite: Geol 1401 or consent of the department chairman.

**Anthropology**

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

**Anth 2301 Physical Anthropology**..... **3 hours**  
(3-0).....

Introduces the study of physical characteristics of man. Compares modern man, fossil man, and higher primates. Presents physical characteristics of modern man. Prerequisite: None.

**Anth 2302 Cultural Anthropology**..... **3 hours**  
(3-0).....

Presents study of human culture in historical perspective by examining development of culture as well as by comparing present cultures. Prerequisite: None.

**Archaeology**

Archaeology is the study of the life and culture of ancient people as deduced by the excavation of dwelling sites and the study of relics, artifacts, etc.

**Arch 2301 Introduction to Archaeology**..... **3 hours**  
(3-0).....

Introduces principles and methods of archaeological investigation. Normally offered in conjunction with Midland College and UTPB. Prerequisites: 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. Geography 2301 and 2302 will fulfill social science requirements at many colleges.

- Geog 2301 Principles of Geography I**  
(3-0)..... **3 hours**  
Presents physical and cultural geography of countries of North and South America. Prerequisite: None.
- Geog 2302 Principles of Geography II**  
(3-0)..... **3 hours**  
Presents physical and cultural geography of Europe, Asia, Africa, Australia, and the more important island groups. Prerequisite: None.

### Earth Science

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

- EaSc 1401 Nature of the Earth and Universe I**  
(3-3)..... **4 hours**  
Presents a study of the planet Earth, its history, and the processes and agents that shape its surface and interior. Presents Earth's relationships to the solar system and the universe. Includes many principles of other sciences in terms of easily visualized natural processes. Prerequisite: None.
- EaSc 1402 Nature of the Earth and Universe II**  
(3-3)..... **4 hours**  
A continuation of EaSc 1401. Emphasizes the oceans, atmosphere, and weather. Prerequisite: None.

## Human Development

**Faculty:** Sherry Burke, Director of Student Development; Fred Gaither, Sherrie Lang, Betsy Ray, Rena Ventura, Dr. Clara Willis.

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

Instruction includes traditional approaches, such as lecture and class discussion, as well as innovative methods, such as structured group experiences and individualized applications of psychoeducational principles. Students who have completed fewer than 16 hours and who enroll for 12 or more hours for the first time must register for Orientation, HD 1101.

Other students are encouraged to enroll in Human Development courses to assist in their personal growth. There is no specific course of study for an Associate Degree in Human Development. However, students may elect to include Human Development courses among those required to complete the minimum 63 hours for the Associate in Arts or Associate in Science degree.

- HD 1101 Orientation**  
(1-0)..... **1 hour**  
Helps student gain skills and knowledge necessary to function effectively in college environment. Includes educational/career planning and assessing of reading ability and study skills. Familiarizes student with the catalog, handbook, and campus. Prerequisite: None.
- HD 1301 College Skills Training**  
(3-0)..... **3 hours**  
Addresses individual needs in study skills and learning preferences. Facilitates "surviving in college" by individualized study and direct skillbuilding activities in taking notes, studying for examinations, managing time, planning course schedules, listening effectively and communicating assertively, and determining academic strengths and learning needs. Individualized instruction for identified needs. Prerequisite: None.
- HD 1302 Educational and Career Planning**  
(3-0)..... **3 hours**  
Explores academic and career alternatives. Career assessment battery of tests administered to determine interests, aptitudes, and other individualized factors. Conducts guided career exploration, including specification of college educational plans. Focuses on concept of "career" as life-long learning. Individual needs receive special emphasis. Includes self-appraisal; occupational information; socio-economic, psychological, and behavioral influences; problem-solving and decision-making; job acquisition and maintenance; resume writing and job interviewing; and career advancement. Prerequisite: None.

**HD 2102 Special Topics/Directed Studies**

(1-0)..... 1 hour  
 Provides opportunities for intensive study of specialized areas according to population, problem, or technique. "Stress Management," "Women in Transition," "Behavior Modification," "Transactional Analysis," etc., warrant special attention. Directed Studies sections initiated by student and approved by faculty with expertise in proposed topic. May be repeated for credit when topics vary. Prerequisite: None.

**HD 2202 Special Topics/Directed Studies**

(2-0)..... 2 hours  
 Provides greater opportunities for intensive study of Human Development areas specialized according to population, problem, or technique. Prerequisite: None.

**HD 2301 Interpersonal Relationships**

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

**HD 2302 Special Topics/Directed Studies**

(3-0)..... 3 hours  
 Provides greater opportunities for intensive study of Human Development areas specialized according to population, problem, or technique. Offered as a special topic section. Class meets in classroom three hours weekly. Prerequisite: None.

## Humanities

**Faculty:** Delmos Hickmott, Chairman.

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

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

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

| First Year                      |         |                                 |         |
|---------------------------------|---------|---------------------------------|---------|
| First Semester                  |         | Second Semester                 |         |
| Course                          | Sem Hrs | Course                          | Sem Hrs |
| Art 1311 .....                  | 3       | Art 1300 or 1312.....           | 3       |
| Art 1321 .....                  | 3       | Engl 1312.....                  | 3       |
| Engl 1311 .....                 | 3       | Language, Math, or Science..... | 3 or 4  |
| Hum 1310 .....                  | 3       | Mu 1328.....                    | 3       |
| Language, Math, or Science..... | 3 or 4  | PE .....                        | 3       |
| Mu 1328.....                    | 3       | Phot 2370.....                  | 3       |
| PE .....                        | 1       | Th 1310.....                    | 3       |
| R/TV 1310.....                  | 3       |                                 |         |

| Second Year                  |         |                             |         |
|------------------------------|---------|-----------------------------|---------|
| Third Semester               |         | Fourth Semester             |         |
| Course                       | Sem Hrs | Course                      | Sem Hrs |
| Art 1371 .....               | 3       | Art 1372 .....              | 3       |
| Art 2321, 2341, or 2381..... | 3       | Engl (Sophomore Level)..... | 3       |
| Engl (Sophomore Level) ..... | 3       | Govt 2302 .....             | 3       |
| Govt 2301 .....              | 3       | Hist 2302.....              | 3       |
| Hist 2301.....               | 3       | Phil 2301 .....             | 3       |
| PE .....                     | 1       | PE .....                    | 1       |

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

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First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

### Hum 1310 Introduction to the Fine Arts

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

Surveys the Fine Arts areas of visual art, photography, music, theatre, and dance. Designed to interrelate aesthetic concepts common to each art form. Involves student in excitement and action of activities and personalities. Prerequisite: None.

## Human Services

Faculty: Gordon Gillette, Chairman.

Odessa College offers a program in Human Services (Alcohol and Drug Abuse) for those students who wish to be certified by the Texas Alcohol and Drug Abuse Commission in order to take employment relating to victims of alcohol and drug abuse. The core curriculum in Human Services, which meets the requirements of the Texas Alcohol and Drug Abuse Commission, can lead to an Associate in Applied Science Degree.

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

| First Year                      |         |                             |         |
|---------------------------------|---------|-----------------------------|---------|
| First Semester                  |         | Second Semester             |         |
| Course                          | Sem Hrs | Course                      | Sem Hrs |
| CD 1304.....                    | 3       | Engl 1312 or Spch 1310..... | 3       |
| Engl 1311.....                  | 3       | HuS 1302.....               | 3       |
| HuS 1301.....                   | 3       | HuS 1306.....               | 3       |
| Math 1321 or More Advanced..... | 3       | *PE.....                    | 1       |
| *PE.....                        | 1       | Psy 2301.....               | 3       |
| Psy 1301.....                   | 3       | Soc 1301.....               | 3       |

| Second Year              |         |                          |         |
|--------------------------|---------|--------------------------|---------|
| Third Semester           |         | Fourth Semester          |         |
| Course                   | Sem Hrs | Course                   | Sem Hrs |
| CD 1310.....             | 3       | Govt 2301 or 2302.....   | 3       |
| HD 2301.....             | 3       | HuS 2110.....            | 1       |
| HuS 1308.....            | 3       | HuS 2310.....            | 3       |
| HuS 2101.....            | 1       | Soc 1302.....            | 3       |
| HuS 2401.....            | 4       | Soc 2301.....            | 3       |
| **Approved Elective..... | 3       | **Approved Elective..... | 3       |

\*HEd 1301 or EMT 1401 may be substituted for the two one-hour physical education courses.

\*\*Approved electives: Any Psy course not already required, any Soc course not already required, any Spanish courses, Chem 1301 and Chem 1101, CD 1308, CD 1309, HEd 2301, and Engl 1321.

Students who wish only to qualify to take the TAADAC certification examination may do so by successfully completing the 18 semester hours of HuS courses.

The Human Services program is approved by the Texas Association of Alcohol and Drug Abuse Counselors.

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

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

- HuS 1301 Introduction to Chemical Dependency**  
 (3-0)..... 3 hours  
 Gives overview of chemical dependency, including historical and cultural attitudes, concepts of addiction, potential results of addiction, and identification of and confidentiality in recognition of chemical dependency. Prerequisite: None.
- HuS 1302 Issues in Chemical Dependency**  
 (3-0)..... 3 hours  
 Presents study of behavior patterns, lifestyles, and social relationships associated with chemical dependency. Develops awareness of possible solutions to chemical dependency as suggested by AA, Alanon, etc., and an awareness of differences between sponsoring and counseling agencies. Prerequisite: HuS 1301 or consent of the department chairman.
- HuS 1306 Basic Counseling Skills I**  
 (3-0) ..... 3 hours  
 Introduces various goals, concepts, and theories pertaining to analysis and therapy concerning substance abuse. Incorporates basic counseling skills, including concepts of empathy, active listening, processes, feedback, and individual therapy. Prerequisite: HuS 1301 or HuS 1302 or consent of the department chairman.
- HuS 1308 Basic Counseling Skills II**  
 (3-0)..... 3 hours  
 A continuation of HuS 1306. Introduces concepts of group therapy and family sculpting as well as transactional analysis and referrals. Prerequisite: HuS 1306 or consent of the department chairman.
- HuS 2101 Basic Counseling Skills III Practicum**  
 (0-3)..... 1 hour  
 A corequisite of HuS 2401. Requires engaging in supervised activities in an appropriate agency setting. Emphasizes skills and self awareness. Corequisite: HuS 2401.
- HuS 2110 Special Studies in Substance Abuse Practicum**  
 (0-3)..... 1 hour  
 A corequisite of HuS 2310. Requires engaging in supervised activities in an appropriate agency setting. Emphasizes skills and self awareness. Corequisite: HuS 2310.
- HuS 2310 Special Studies in Substance Abuse**  
 (3-0) ..... 3 hours  
 Includes special topics such as nursing issues and psychometrics in relation to the chemically-dependent person, legal aspects, prevention strategies, and NIDA reports. Prerequisite: HuS 2401 or consent of the department chairman.
- HuS 2401 Counseling Skills III**  
 (4-0)..... 4 hours  
 Presents various techniques of behavior modification, values clarifications, aversion therapy, and biofeedback. Includes techniques of helping clients to relax, be assertive, recognize reality, and improve their self image. Prerequisite: HuS 1308 or consent of the department chairman. Corequisite: HuS 2101.

## Law Enforcement/Criminal Justice

**Faculty:** Bill Cooksey, Chairman; Bobby T. Austin, Oliver Nordmarken.

Jobs in law enforcement continue to be open to both men and women, not only as law enforcement officers specifically but also as personnel in related, support positions. Criminal justice practitioners today must be versatile as well as highly professional persons, and with these qualities in mind, the law enforcement degree program at Odessa College gives students a comprehensive understanding of the law enforcement profession.

An introductory course gives an overview of the entire criminal justice system. Students study the peace officer's role in crime and delinquency, and they review the many theories as to the cause of crime. The program presents a realistic view of law enforcement to inform students about actual operations in the career field. Further, the program presents a study of state and federal laws which define what types of acts are crimes, what the punishment is for each offense, who a law enforcement officer is, what powers an officer has, how the court system operates and what its powers are, and what the rules are governing evidence that can be presented in court. The introductory course also presents the Juvenile Procedures Code.

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. In addition, all persons who wish to take the Texas Peace Officer's License Test must complete seven transfer courses and other requirements mandated by TCLEOSE. For specific information, contact the department chairman.

Course of Study for Associate in Applied Science Degree

First Year

| First Semester                             |         | Second Semester             |         |
|--|---------|-----------------------------|---------|
| Course                                     | Sem Hrs | Course                      | Sem Hrs |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312 or Spch 1310..... | 3       |
| LE 1301.....                               | 3       | LE 1303.....                | 3       |
| LE 1302.....                               | 3       | LE 1306.....                | 3       |
| Math 1313 or More Advanced.....            | 3       | LE 1307.....                | 3       |
| *Elective.....                             | 3       | *Elective.....              | 3       |
|  |         | **PE.....                   | 1       |

Second Year

| Third Semester |         | Fourth Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Govt 2301..... | 3       | Govt 2302.....  | 3       |
| LE 2312.....   | 3       | LE 2304.....    | 3       |
| LE 2313.....   | 3       | LE 2305.....    | 3       |
| LE 2303.....   | 3       | LE 2306.....    | 3       |
| *Elective..... | 4       | *Elective.....  | 3       |
|                |         | **PE.....       | 1       |

\*Approved Electives: Engl (Sophomore Level), Psy 1301, Soc 1301, Chem 1301 and 1101, Span 1311, Span 1411, PE 1149, LE 2307, LE 2308, LE 2310, LE 2311, OE 1401, and CD 1304.

\*\*HEd 1301 or EMT 1401 may be substituted for two one-hour PE courses. PE 1118 and PE 1119 are recommended for those individuals pursuing a career as a peace officer.

Any variance from prerequisites or any substitution of courses must have prior, written approval of the department chairman.

Texas accrediting agencies have designated seven Law Enforcement courses as transfer courses creditable and transferable toward any Law Enforcement/Criminal Justice degree offered in Texas. Those courses are as follows: LE 1301, LE 1302, LE 1307, LE 2304, LE 2305, LE 2312, and LE 2313. Students should receive written confirmation from the college or university to which they intend to transfer regarding the scope and extent of acceptance of these courses. In addition, all persons who apply for a peace officer's position with any law enforcement agency in Texas must demonstrate their proficiency with firearms, whether or not they meet training or educational requirements. See LE 2311.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**LE 1301 Introduction to Criminal Justice**

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

**LE 1302 Crime in America**

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

**LE 1303 Patrol Administration**

(3-0)..... 3 hours  
Presents overview of administration of the police patrol. Delineates interrelationship between first-line supervisor and the man in the car. Stresses responsibilities and significance of the operation. Prerequisite: None.

- LE 1306 Traffic Law**  
 (3-0)..... **3 hours**  
 Presents basic principles of traffic control, traffic law enforcement, and traffic court procedures in context of Texas traffic laws. Emphasizes traffic law background, problems in interpretation and application of traffic laws, and accepted procedures for enforcement. Prerequisite: None.
- LE 1307 Fundamentals of Criminal Law**  
 (3-0)..... **3 hours**  
 Establishes nature of criminal law. Includes its philosophical and historical development. Presents major concepts, definitions, classifications, elements, and penalties of crime, as well as criminal responsibility. Uses Texas statutes as illustrations. Prerequisite: LE 1301.
- LE 2303 Traffic Management and Supervision**  
 (3-0)..... **3 hours**  
 Examines police responsibilities in traffic planning. Identifies police policies and procedures in education, engineering, and enforcement. Analyzes special traffic problems, motor vehicle laws, and accident investigation techniques. Prerequisite: LE 1306.
- LE 2304 Criminal Investigation**  
 (3-0)..... **3 hours**  
 Introduces investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic sciences, and case and trial preparation. Prerequisite: LE 1301.
- LE 2305 Police Systems and Practices**  
 (3-0)..... **3 hours**  
 Presents the police profession and the organization of law enforcement systems. Includes role of the police, police discretion, ethics, police/community relations, and current and future issues. Prerequisites: LE 1301 and 1303.
- LE 2306 Juvenile Procedures**  
 (3-0)..... **3 hours**  
 Provides a study of history and philosophy of court procedures related to the handling of juveniles as opposed to adults. Emphasizes the Juvenile Court Act as applied under the laws of the State of Texas. Prerequisite: None.
- LE 2307 Probation and Parole**  
 (3-0)..... **3 hours**  
 Introduces the many faceted subject of criminal corrections. Emphasizes history as well as evolution of the field. Prerequisite: None.
- LE 2308 Penology (Jail Operation and Management)**  
 (3-0)..... **3 hours**  
 Presents basic concepts, practices, and policies applicable to the criminal justice official regarding care and custody of criminals. Emphasizes history and evolution of the prison system. Prerequisite: None.
- LE 2310 Physical Evidence and Investigation Techniques**  
 (2-1)..... **3 hours**  
 Presents scientific methods of search, identification, evaluation, preservation, and testing of physical evidence. Emphasizes fingerprinting, police photography, and crime scene technology. Corequisite or Prerequisite: LE 2304 or consent of the department chairman.
- LE 2311 Firearms Proficiency**  
 (2-3)..... **3 hours**  
 Requires weapon familiarization. Includes safety precautions, proper care of weapons, proper shooting positions, liability, and actual firing on the range. Prerequisite: Be a declared LE major, be enrolled in other LE courses, or consent of the department chairman. (Lab Fee does not include firearms and/or ammunition.)
- LE 2312 Legal Aspects of Law Enforcement**  
 (3-0)..... **3 hours**  
 Presents police authority, responsibilities, and constitutional constraints. Includes laws concerning arrest, search and seizure, and liability. Prerequisite: LE 1301.
- LE 2313 The Courts and Criminal Procedure**  
 (3-0)..... **3 hours**  
 Presents the judiciary in the criminal justice system. Includes structure of the American court system, prosecution, right to counsel, pre-trial release, grand juries, adjudication process, types and rules of evidence, and sentencing. Prerequisite: LE 1301.

**Law Enforcement  
 Basic Peace Officer Academy**

The basic course for peace officers is designed for persons interested in pursuing law enforcement as a career. The curriculum segments mandated by the Texas Commission on Law Enforcement

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Officer Standards and Education have been equated to six courses (18 semester hours) in the Law Enforcement Curriculum for Transferability. College credit for the six 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 this program, applicants must successfully complete the following examinations: (1) a reading comprehension-writing skills test and (2) a medical and psychological examination. In addition, prospective students must agree to a thorough background investigation.

For detailed admission and registration information, contact the Law Enforcement/Criminal Justice department chairman at Odessa College.

### Course of Study for Law Enforcement Academy

| Course Number | Course Name                       | Sem Hrs |
|---------------|-----------------------------------|---------|
| LEA 1306      | Traffic Law                       | 3       |
| LEA 1307      | Fundamentals of Criminal Law      | 3       |
| LEA 2304      | Criminal Investigation            | 3       |
| LEA 2311      | Firearms Proficiency              | 3       |
| LEA 2312      | Legal Aspects of Law Enforcement  | 3       |
| LEA 2313      | The Courts and Criminal Procedure | 3       |

The entire academy must be satisfactorily completed before any credit is awarded.

Those students successfully completing the Law Enforcement Academy and wishing to pursue the A.A.S. degree, must satisfactorily complete the following courses: LE 1301, LE 1302, LE 1303, LE 2303, LE 2305, LE 2306, Engl 1311, Engl 1312 or Spch 1310, Math 1313 or more advanced, Govt 2301, Govt 2302, two semester hours of PE\*, and 13 semester hours of approved electives\*\*.

\*HEd 1301 or EMT 1401 may be substituted for the two one-hour PE courses. PE 1118 and PE 1119 are recommended for those individuals pursuing a career as a peace officer.

\*\*Approved Electives: Engl (Sophomore level), Psy 1301, Soc 1301, Hist 2301, Hist 2302, Hist 2303, Chem 1301 and 1101, Span 1311, Span 1411, PE 1149, LE 2307, LE 2308, LE 2310, OE 1401, and CD 1304.

#### LEA 1306 Traffic Law

(3-0)..... 3 hours  
Presents basic principles of traffic control, traffic law enforcement, and traffic court procedures in context of Texas traffic laws. Emphasizes traffic law background, problems in interpretation and application of traffic laws, and accepted procedures for enforcement. Prerequisite: None.

#### LEA 1307 Fundamentals of Criminal Law

(3-0)..... 3 hours  
Established nature of criminal law. Includes its philosophical and historical development. Presents major concepts, definitions, classifications, elements, and penalties of crime, as well as criminal responsibility. Uses Texas statutes as illustrations. Prerequisite: None.

#### LEA 2304 Criminal Investigation

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

#### LEA 2311 Firearms Proficiency

(2-3)..... 3 hours  
Requires weapon familiarization. Includes safety precautions, proper care of weapons, proper shooting positions, liability, and actual firing on the range. Prerequisite: None.

#### LEA 2312 Legal Aspects of Law Enforcement

(3-0)..... 3 hours  
Presents police authority, responsibilities, and constitutional constraints. Includes laws concerning arrest, search and seizure, and liability. Prerequisite: None.

#### LEA 2313 The Courts and Criminal Procedure

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

# Literature and Languages

**Faculty:** Imogene Pilcher, Chairman; Lois Ball, Dr. Daniel Chapman, Dr. Judith Cornes, Jeffry Gilbreath, Dr. Elizabeth Gillette, Dr. Daryl Lane, Ned Pilcher, Matt Rees, Rosendo Reyes, Mary L. Roach, Dr. James Sanderson, Donna Smith, Dr. Michael White, Stanley Williams.

The power to communicate meaning through language in order to build a store of knowledge to pass on to succeeding generations is one of the most distinctive of human accomplishments. Science, literature, technical knowledge, and social organization would not exist without language, for language is used for making explanations, analyzing situations, or discussing relative merits of various procedures. To be successful, language activities demand precision and forcefulness. Consequently, students must learn to express themselves clearly and effectively. While learning to communicate, they should be exposed to the world's rich heritage of creative literature in order to develop a better understanding of a unified human spirit which transcends geography. This study of the great thoughts of the past should engender a generosity of mind and a magnanimity of spirit which are the foundations of democracy itself and the hope of human progress.

## The Writing Lab

The Writing Lab is located on the second floor of the LRC. The lab offers 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 or by the Developmental Studies counselor. All assistance is free of charge, but students may enroll for any or all of the one-hour writing lab courses listed below.

## Writing Lab Courses

These formal, college-prep courses provide practical review in selected areas of basic English. They focus specifically on principles of the simple sentence, the compound and complex sentences, and spelling. Students and other interested adults are guided into the courses according to their performance on diagnostic pretests. They may enroll in self-paced or classroom instruction for institutional credit or non-credit. None of these courses satisfy requirements for any degree plan at Odessa College. English 1101, 1102, and 1103, when taken in sequence, equate to English 1300, Basic English. Students who enroll in English 1101, 1102, and 1103 concurrently must take each course in sequence and have about five weeks to complete the required materials for each course.

### Engl 1101 The Sentence

(0-16) ..... 1 hour  
Reviews parts of speech, patterns of the simple sentence, transformations of the simple sentence, and principles of agreement. Aims to improve student's ability to write grammatical sentences. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### Engl 1102 Coordination and Subordination

(0-16) ..... 1 hour  
Extends student's understanding of the simple sentence to more complex structures and transformations. Focuses on basic relationships between ideas, and helps student expand amount of information conveyed via embedding and combining. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### Engl 1103 The Paragraph

(0-16) ..... 1 hour  
Applies student's understanding of coordination and subordination to paragraph writing. Focuses on the topic sentence, unity, coherence, supporting detail, organization, and general form. Prepares student to write multi-paragraph papers required in Engl 1311. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

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### Engl 1104 Techniques of Research

(0-16)..... 1 hour  
 A self-paced course to teach use of card catalog, journal and periodical indexes, and footnote and bibliography form. Includes restricting a research topic, paragraphing, etc. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### Engl 1105 Spelling

(0-16)..... 1 hour  
 Reviews principles of spelling. Includes phonics, syllabication, spelling patterns, and prefixes and suffixes. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### Engl 1106 Writing Skills for Non-native Speakers

(0-16) ..... 1 hour  
 A partially self-paced course. Designed to meet special needs of non-native speakers with standard written English. Focuses on selected aspects of grammar, correct forms of words, proper syntax, accurate use of idioms, and use of article adjectives. Requires writing paragraphs about abstract subjects in both timed and untimed settings. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### Engl 1300 Basic English

(3-0)..... 3 hours  
 A compensatory course designed to improve basic English skills. Emphasizes sentence structure, agreement, usage, and paragraph development. Prepares students for Engl 1311. Credit probably not transferable. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

### Engl 1305 English as a Second Language

(3-0)..... 3 hours  
 Intended for non-native speakers of the English language who have little or no background in English. Uses textbooks, tapes, class drills, and handouts. Focuses on hearing, understanding, reading, and writing of English. Does not apply toward any degree at Odessa College. (This course does not satisfy requirements for any degree plan at Odessa College.) Prerequisite: None.

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

### First Year

| First Semester             |         | Second Semester            |         |
|----------------------------|---------|----------------------------|---------|
| Course                     | Sem Hrs | Course                     | Sem Hrs |
| Engl 1311.....             | 3       | Engl 1312.....             | 3       |
| Hist 2301.....             | 3       | Hist 2302.....             | 3       |
| Foreign Language 1411..... | 4       | Foreign Language 1412..... | 4       |
| Science.....               | 4       | Science.....               | 4       |
| Elective.....              | 3       | Elective.....              | 3       |
| PE.....                    | 1       | PE.....                    | 1       |

### Second Year

| Third Semester          |         | Fourth Semester            |         |
|-------------------------|---------|----------------------------|---------|
| Course                  | Sem Hrs | Course                     | Sem Hrs |
| Engl 2350.....          | 3       | Engl 2360.....             | 3       |
| Govt 2301.....          | 3       | Govt 2302.....             | 3       |
| Foreign Lang 2311.....  | 3       | Foreign Language 2312..... | 3       |
| *Math 1341 or 2311..... | 3       | *Math 1343 or 2313.....    | 3       |
| Elective.....           | 3       | Elective.....              | 3       |
| PE.....                 | 1       | PE.....                    | 1       |

\*It is desirable to have Math 1341 and Math 1343 or Math 2311 and Math 2313.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

### English

#### Engl 1311 Composition and Rhetoric

(3-0)..... 3 hours  
 Consists of essentials of correctness and effectiveness in mechanics of writing. Emphasizes reading and writing expository prose. Requires critical reviews, expository essays, and collateral readings. Prerequisite: None.

- Engl 1312 Composition and Literature** ✓  
 (3-0)..... 3 hours  
 Presents research techniques and selected types of literature—drama, fiction, and poetry. Requires critical reviews and supplemental readings. Prerequisite: Engl 1311.
- Engl 1321 Report Writing**  
 (3-0)..... 3 hours  
 Consists of reading and writing precis, proposals, abstracts, summaries, correspondence, and other report forms commonly used in business and industry. Gives attention to style, paragraphing, organization, mechanics, spelling, and usage as they apply to technical writing. (Students should check with senior college regarding course transferability.) Prerequisite: Engl 1311.
- Engl 2305 Advanced Composition**  
 (3-0)..... 3 hours  
 An advanced course in English composition for students who want to polish their writing skills and to gain experience with a wide variety of expository methods. Requires writing clear, thoughtful prose with substantial content. Also requires at least one longer paper and some research. Does not fulfill sophomore English requirement. (Students should check with senior college regarding course transferability.) Prerequisite: Engl 1311, Engl 1312, or consent of the instructor.
- Engl 2310 Survey of World Literature I**  
 (3-0) ..... 3 hours  
 Presents significant works of literature of the western world from the Classical period through the Renaissance. Requires research paper or several short critiques. Prerequisite: Engl 1312.
- Engl 2320 Survey of World Literature II**  
 (3-0)..... 3 hours  
 Presents significant works of literature of the western world from the Neoclassical period through the present time. Requires research paper or several short critiques. Prerequisite: Engl 1312.
- Engl 2330 Technical Writing**  
 (3-0)..... 3 hours  
 Prepares the student for technical report writing. Offers practical experience in organization of reports and proper use of technical terms. Prerequisite: Engl 1312.
- Engl 2340 Creative Writing**  
 (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. Will transfer, perhaps, in selected majors at senior institutions. Prerequisite: Six hours of Freshman English or consent of the instructor.
- Engl 2350 Survey of British Literature I**  
 (3-0) ..... 3 hours  
 Consists of a chronological study of authors, works, and trends in British literature from its beginnings through the Neoclassical period. Required of all English majors. Prerequisite: Engl 1312.
- Engl 2360 Survey of British Literature II**  
 (3-0)..... 3 hours  
 Consists of a chronological study of authors, works, and trends in British literature from the Romantic period to the present day. Required of all English majors. Prerequisite: Engl 1312.
- Engl 2380 Survey of American Literature I**  
 (3-0)..... 3 hours  
 Introduces a brief treatment of colonial writers and writing. Centers attention on major literary figures of the first half of the nineteenth century. Includes both narrative and expository prose, along with poetry and drama. Prerequisite: Engl 1312.
- Engl 2390 Survey of American Literature II**  
 (3-0)..... 3 hours  
 A survey course of great literary movements from the Civil War to the present day. Requires collateral reading to supplement anthology. Prerequisite: Engl 1312.

### Options

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

On the sophomore level, the department offers an alternate method for completing English 2380 and 2390. In addition to the regularly scheduled three-hour sections of each class, a special two-hour time block is set aside each semester so that students can complete both courses in a single

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semester. During the first half of the semester, students complete English 2380. At this point, they may or may not choose to continue with English 2390, which will be completed in the second half of the semester.

### Foreign Languages

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.

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.

Many students major in one or more languages and teach them. 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.

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

| First Year                       |         |                                  |         |
|----------------------------------|---------|----------------------------------|---------|
| First Semester                   |         | Second Semester                  |         |
| Course                           | Sem Hrs | Course                           | Sem Hrs |
| Engl 1311.....                   | 3       | Engl 1312.....                   | 3       |
| Hist 2301.....                   | 3       | Hist 2302.....                   | 3       |
| Foreign Language 1411.....       | 4       | Foreign Language 1412.....       | 4       |
| Foreign Language 1411 (2nd)..... | 4       | Foreign Language 1412 (2nd)..... | 4       |
| Science.....                     | 4       | Science.....                     | 4       |
| PE.....                          | 1       | PE.....                          | 1       |

| Second Year                 |         |                             |         |
|-----------------------------|---------|-----------------------------|---------|
| Third Semester              |         | Fourth Semester             |         |
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| Govt 2301.....              | 3       | Govt 2302.....              | 3       |
| *Foreign Language.....      | 3/5     | *Foreign Language.....      | 3/5     |
| **Math 1341 or 2311.....    | 3       | **Math 1343 or 2313.....    | 3       |
| Elective.....               | 3       | Elective.....               | 3       |
| PE.....                     | 1       | PE.....                     | 1       |

\*Span 2211 and 2212, in addition to Span 2311 and 2312, are suggested for Spanish majors.

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

\*\*It is desirable to have Math 1341 and Math 1343 or Math 2311 and Math 2313.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

### French

#### Fr 1411 First Year French I

(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. Prerequisite: None.

- Fr 1412 First Year French II**  
**(3-2)**..... **4 hours**  
 A continuation of Fr 1411. Has same purposes and uses same techniques. Prerequisite: Fr 1411.
- Fr 2311 Second Year French I**  
**(3-0)**..... **3 hours**  
 A continuation of Fr 1411 and Fr 1412. Conducted in French. Emphasizes conversation based on reading assignments. Includes grammar and composition. Individual help available. Prerequisite: Fr 1412 or its equivalent.
- Fr 2312 Second Year French II**  
**(3-0)**..... **3 hours**  
 A continuation of Fr 2311. Has same purposes and uses same techniques. Prerequisite: Fr 2311 or its equivalent.

**German**

- Germ 1411 First Year German I**  
**(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. Prerequisite: None.
- Germ 1412 First Year German II**  
**(3-2)** ..... **4 hours**  
 A continuation of Germ 1411. Has same purposes and uses same techniques. Prerequisite: Germ 1411 or its equivalent.
- Germ 2311 Second Year German I**  
**(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. Prerequisite: Germ 1412 or its equivalent.
- Germ 2312 Second Year German II**  
**(3-0)**..... **3 hours**  
 A continuation of Germ 2311. Has same purposes and uses same techniques. Prerequisite: Germ 1412 or its equivalent.

**Latin**

- Lat 1411 First Year Latin I**  
**(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 reading selection from Roman authors. Prerequisite: None.
- Lat 1412 First Year Latin II**  
**(3-2)**..... **4 hours**  
 A continuation of Lat 1411. Has same purposes and techniques, but goes further with vocabulary building and more advanced readings. Prerequisite: Lat 1411 or its equivalent and consent of the instructor.

**Spanish**

- Span 1220 Conversation and Hispanic Culture for Travelers**  
**(12-36)**..... **2 hours**  
 Introduces basic comprehension skills, vocabulary, structure of the Spanish language, and idiomatic expressions needed for travelers in a Spanish-speaking country. Includes trip to a Spanish-speaking country where students practice and reinforce new language skills to augment classroom instruction in the civilization and history of the country visited. No previous knowledge of Spanish necessary. Prerequisite: None.
- Span 1311 Conversational Spanish I**  
**(3-0)**..... **3 hours**  
 Conducted in basic, everyday conversation in simple social contexts. Introduces sound sentence structure but emphasizes basic vocabulary, idiomatic expressions, and daily speech. Prerequisite: None.

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- Span 1312 Conversational Spanish II**  
(3-0)..... 3 hours  
A continuation of Span 1311. Increases conversational ability and structural knowledge of Spanish. Prerequisite: Span 1311, its equivalent, or consent of the instructor.
- Span 1321 Spanish for Native Speakers of Spanish I**  
(3-0)..... 3 hours  
Gives special attention to pronunciation, writing, reading, and usage for students whose native language is Spanish. Emphasizes structure of the language, generating basic sentence patterns, and reading and analyzing brief passages of prose. Prerequisite: None.
- Span 1322 Spanish for Native Speakers of Spanish II**  
(3-0)..... 3 hours  
A continuation of Span 1321. Examines structure of the language and uses advanced material for reading and writing. Prerequisite: Span 1321 or consent of the instructor.
- Span 1411 First Year Spanish I**  
(3-2)..... 4 hours  
A basic course conducted in Spanish for students without previous experience in Spanish. Emphasizes simple conversation: pronunciation, fluency, and vocabulary. Presents basic grammar and composition. May require up to two hours per week of individual practice in the Language Lab. Individual help available. Many course elements self-paced. Prerequisite: None.
- Span 1412 First Year Spanish II**  
(3-2)..... 4 hours  
A continuation of Span 1411. Prerequisite: Span 1411 or its equivalent.
- Span 2211 Intensive Practice in Spoken Spanish I**  
(2-0)..... 2 hours  
A second-year course designed to build fluency and expand vocabulary. Recommended for Spanish majors and others with practical need for spoken Spanish. Presents vocabulary and structures needed in traveling. Prerequisite: Span 1412, its equivalent, or consent of the instructor.
- Span 2212 Intensive Practice in Spoken Spanish II**  
(2-0)..... 2 hours  
A continuation of Span 2211. Provides vocabulary necessary for social and business conversation. Prerequisite: Span 2211, its equivalent, or consent of the instructor.
- Span 2311 Second Year Spanish I**  
(3-0)..... 3 hours  
Conducted in Spanish, a continuation of Span 1411 and 1412. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many elements self-paced. Prerequisite: Span 1412 or its equivalent.
- Span 2312 Second Year Spanish II**  
(3-0)..... 3 hours  
A continuation of Span 2311. Prerequisite: Span 2311 or its equivalent.
- Span 2341 Spanish Literature I**  
(3-0)..... 3 hours  
A survey course in Spanish and Latin American literature and culture. Includes reading of short prose and poetry selections for student new to Spanish literature. Includes conversation, writing, and grammar review. Prerequisite: Span 2312, its equivalent, or consent of the instructor.
- Span 2342 Spanish Literature II**  
(3-0)..... 3 hours  
A continuation of Span 2341 conducted in Spanish. Further readings include Spanish and Latin American literature and culture—along with conversation, writing, and grammar review. Prerequisite: Span 2312, its equivalent, or consent of the instructor.

## Machine Technology

**Faculty:** Bobby Butler, Chairman.

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

**Course of Study for Associate in Applied Science Degree  
(Conventional Machine Option)**

**First Year**

| First Semester            |         | Second Semester                 |         |
|---------------------------|---------|---------------------------------|---------|
| Course                    | Sem Hrs | Course                          | Sem Hrs |
| DT 1401 or Engr 1301..... | 4 or 3  | Math 1313 or More Advanced..... | 3       |
| MT 1601.....              | 6       | MT 1603.....                    | 6       |
| MT 1602.....              | 6       | MT 1604.....                    | 6       |
| *PE.....                  | 1       | *PE.....                        | 1       |

**Second Year**

| Third Semester                             |         | Fourth Semester             |         |
|--|---------|-----------------------------|---------|
| Course                                     | Sem Hrs | Course                      | Sem Hrs |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312 or Spch 1310..... | 3       |
| MT 1305.....                               | 3       | Govt 2301 or 2302.....      | 3       |
| MT 2601.....                               | 6       | MT 2603.....                | 6       |
| MT 2602.....                               | 6       | MT 2604.....                | 6       |

\*HEd 1301 may be substituted for the two one-hour physical education classes.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 51 semester hours in MT courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**MT 1305 Mathematics for Machine Technology**

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

Presents fundamentals of mathematics related to machine shop industry. Stresses technical problems involving setup and operations of all machine tools. Prerequisite: None.

**MT 1601 Basic Machine Technology**

(2-8)..... **6 hours**

Introduces machine shop practices, trade terminology, mathematics, shop safety, shop operations, semi-precision and precision measuring tools, and hand tools. Includes high-speed tooling. Requires simple lathe projects. Prerequisite: None.

**MT 1602 Precision Tools and Instruments for Machinists**

(2-8)..... **6 hours**

Presents simple and complex measuring projects in order to practice units of measure and measuring instruments. Introduces job planning, shop sketching, and blueprint reading. Stresses shop safety. Introduces mathematics for planning and estimating shop work. Emphasizes grinding and sharpening single-point cutting tools for simple lathe projects. Prerequisite or Corequisite: MT 1601.

**MT 1603 Machines and Their Operations I**

(2-8)..... **6 hours**

Requires continued practice in blueprint reading, shop sketching, shop math, units of measure, and precision measuring by continuous use of precision measuring instruments. Includes use of power hacksaw, bandsaws, and pedestal grinders. Requires student demonstration of advanced lathe set up and operation for maximum machine tool performance. Prerequisite or Corequisite: MT 1602.

**MT 1604 Machines and Their Operations II**

(2-8)..... **6 hours**

Requires continued setting up and operating all machine tools for producing simple to complex projects. Emphasizes milling machines. Requires practice in blueprint reading, precision measuring, and shop sketching in order to become industrially oriented. Prerequisite or Corequisite: MT 1603.

**MT 2601 Advanced Machine Tool Operations I**

(2-8)..... **6 hours**

A continuation of basic layout practice, bench metal work, and advanced machine tool operations related to major machine tools such as lathes and milling machines. Emphasizes shapers and grinders. Requires more complex projects and demonstrations. Prerequisite or Corequisite: MT 1604.

**MT 2602 Advanced Machine Tool Operations II**

(2-8)..... **6 hours**

Continues to stress quality of finished products. Emphasizes production turning with automatic machinery and various machinability factors. Prerequisite or Corequisite: MT 2601.

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- MT 2603 Metallurgy for Machinists** ..... 6 hours  
 (2-8) .....  
 Includes instruction in properties and uses of ferrous and nonferrous metals and alloys. Also includes forging and heat-treating steels, specification numbers of steel, and application of industrial tests to determine alloying elements. Stresses shop organization, management, and safety. Prerequisite or Corequisite: MT 2602.
- MT 2604 Special Problems** ..... 6 hours  
 (2-8) .....  
 Includes assignment of special problems to meet specific needs. Emphasizes modern machining techniques. All assignments made on individual basis. Prerequisite: MT 2603.

### Machine Technology (Open-Entry, Clock-Hour Program)

The open-entry, clock-hour program is a personalized instructional system designed to offer the student a concentrated, individualized curriculum in basic skills. Block time programs meet 20 to 40 hours per week depending upon the course and the personal schedule of the individual. A student may register for the following program on any week day. Classes start each Monday. Enrollment may be limited to available space. An Associate Degree option is available. Detailed information and admission and registration forms are available in the office of the program director or in the Counseling Center.

| Course Number | Course Name                      | Clock Hours | Sem Hrs | Weeks |
|---------------|----------------------------------|-------------|---------|-------|
| MT 1441       | Basic Machine Shop.....          | 100         | 4       | 5     |
| MT 1843       | Lathes.....                      | 260         | 8       | 13    |
| MT 1844       | Milling Machines.....            | 260         | 8       | 13    |
| MT 1445       | Grinding Machines.....           | 100         | 4       | 5     |
| MT 1446       | Drilling Equipment.....          | 100         | 4       | 5     |
| MT 1448       | Shop Math.....                   | 100         | 4       | 20    |
| MT 1449       | Blueprint Reading & Drawing..... | 100         | 4       | 20    |

Books and safety equipment will cost approximately \$60.

Those students desiring the A.A.S. degree must take the following academic courses: Engl 1311, Engl 1312 or Spch 1310, Math 1313 or more advanced, MT 2603, Govt 2301 or 2302, WT 1601, and two hours PE or HEd 1301.

- MT 1441 Basic Machine Technology**  
 [(4-16) for 5 weeks] ..... 4 hours  
 Introduces types, uses, terminology, adjustments, calibrations, care, and maintenance of measuring instruments, hand tools, power saws, and machines. Presents study of relative ease (or difficulty) and contributing factors with which different materials can be machined. Prerequisite: None.
- MT 1445 Grinding Machines**  
 [(2-18) for 5 weeks] ..... 4 hours  
 Includes internal and external surface and cylindrical grinders. Emphasizes grinding wheel selection, setup, and operation. Prerequisite: MT 1441 or industrial experience.
- MT 1446 Drilling Equipment**  
 [(2-18) for 5 weeks] ..... 4 hours  
 A continuation of feeds and speeds. Includes instruction in use of radial arm drill press and sensitive drill press. Emphasizes safety and drill bit grinding. Prerequisite: MT 1441 or industrial experience.
- MT 1448 Shop Math**  
 [(5-0) for 20 weeks] ..... 4 hours  
 Presents fundamentals of mathematics related to machine shop industry. Stresses technical problems involving setup and operations of all machine tools. Prerequisite: None.
- MT 1449 Blueprint Reading and Drawing**  
 [(1-4) for 20 weeks] ..... 4 hours  
 Presents fundamental drafting techniques used in machine shop industry. Emphasizes threaded fasteners, fabrication prints, dimensioning, sectional views, and visualization of objects in pictorial form. Requires some shop print drawing. Prerequisite: None.

**MT 1843 Metal Turning Lathes**

[(2-18) for 13 weeks]..... 8 hours

Stresses the lathe and its many facets. Includes use of single-point cutting tools, feeds and speeds, drilling, reaming, and boring. Prerequisite: MT 1441 or industrial experience.

**MT 1844 Milling Machines**

[(2-18) for 13 weeks]..... 8 hours

A continuation of feeds and speeds. Emphasizes milling cutter selection, work holding devices, and machine setup. Prerequisite: MT 1441 or industrial experience.

## Maintenance Technology

**Faculty:** Bobby Butler, Chairman.

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. Industry applications include petroleum plants, refineries, and industrial manufacturing. Facility maintenance includes schools, public and private buildings, apartment complexes, and condominiums.

A Certificate of Technology will be awarded upon successful completion of GMT 1201, General Maintenance Overview, and 46 semester hours from the following list of technical courses. The technical courses will be determined by the student and approved by the department chairman. Courses should be applicable to the student's chosen career goals.

|   |                     |
|---|---------------------|
| <b>AT 1602 Automotive Engines (2-8)</b> .....                               | <b>6 hours</b>      |
| <b>BT 1601 Principles of Residential Construction I (2-8)</b> .....         | <b>6 hours</b>      |
| <b>BT 1602 Carpentry I (2-8)</b> .....                                      | <b>6 hours</b>      |
| <b>BT 2603 Cabinet Making (2-8)</b> .....                                   | <b>6 hours</b>      |
| <b>BT 2605 Residential Interior Finishes (2-8)</b> .....                    | <b>6 hours</b>      |
| <b>DM 1601 Principles of Diesel Engines I (2-8)</b> .....                   | <b>6 hours</b>      |
| <b>DM 1602 Principles of Diesel Engines II (2-8)</b> .....                  | <b>6 hours</b>      |
| <b>DM 2603 Caterpillar Diesel Engines (2-8)</b> .....                       | <b>6 hours</b>      |
| <b>DM 2605 Cummins Diesel Engines (2-8)</b> .....                           | <b>6 hours</b>      |
| <b>DT 1401 Technical Drafting I (2-4) or</b>                                |                     |
| <b>Engr 1301 Engineering Drawing (2-4)</b> .....                            | <b>4 or 3 hours</b> |
| <b>ET 1401 D.C. Circuits (3-3)</b> .....                                    | <b>4 hours</b>      |
| <b>ET 1403 A.C. Circuits (3-3)</b> .....                                    | <b>4 hours</b>      |
| <b>ET 2407 Electrical Control Circuits (3-3)</b> .....                      | <b>4 hours</b>      |
| <b>ET 2410 National Electrical Code (3-3)</b> .....                         | <b>4 hours</b>      |
| <b>Fire 1302 Industrial Fire Protection I (3-0)</b> .....                   | <b>3 hours</b>      |
| <b>Mgt 1301 Introduction to Management (3-0)</b> .....                      | <b>3 hours</b>      |
| <b>Mgt 1362 Industrial Safety (3-0)</b> .....                               | <b>3 hours</b>      |
| <b>MT 1601 Basic Machine Technology (2-8)</b> .....                         | <b>6 hours</b>      |
| <b>MT 1602 Precision Tools and Instruments for Machinists (2-8)</b> .....   | <b>6 hours</b>      |
| <b>Pet 1370 Petroleum Instrumentation (2-2)</b> .....                       | <b>3 hours</b>      |
| <b>Pet 2350 Pipelining (2-2)</b> .....                                      | <b>3 hours</b>      |
| <b>R/AC 1302 Basic Control Theory (3-1)</b> .....                           | <b>3 hours</b>      |
| <b>R/AC 1306 Heat Pump Theory (3-1)</b> .....                               | <b>3 hours</b>      |
| <b>R/AC 1401 Refrigeration Theory (3-3)</b> .....                           | <b>4 hours</b>      |
| <b>R/AC 1402 Plumbing Fundamentals (2-4)</b> .....                          | <b>4 hours</b>      |
| <b>R/AC 1405 Fundamentals of Sheet Metal Pattern Drafting</b>               |                     |
| <b>and Layout (3-3)</b> .....   | <b>4 hours</b>      |
| <b>R/AC 2302 Air Conditioning Design (3-1)</b> .....                        | <b>3 hours</b>      |
| <b>R/AC 2303 Electronic Control Theory (3-1)</b> .....                      | <b>3 hours</b>      |
| <b>WT 1601 Basic Shielded-Metal Arc Welding (2-8)</b> .....                 | <b>6 hours</b>      |
| <b>WT 1602 Oxy-Fuel Welding (2-8)</b> .....                                 | <b>6 hours</b>      |
| <b>WT 1841 Basic Shielded-Metal Arc Welding [(4-16) for 10 weeks]</b> ..... | <b>8 hours</b>      |

A Certificate of Proficiency may be issued at the end of the first year to show the student's skill level for each course completed.

Students wishing to pursue an A.A.S. degree will be required to fulfill the additional academic requirements listed below.

**Course of Study for Associate in Applied Science Degree  
(Maintenance Technology Option)**

| First Semester                             |         | Second Semester                 |         |
|--|---------|---------------------------------|---------|
| Course                                     | Sem Hrs | Course                          | Sem Hrs |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312 or Spch 1310.....     | 3       |
| Math 1313, or More Advanced.....           | 3       | Govt 2302.....                  | 3       |
| *PE.....                                   | 1       | Math 1335 or More Advanced..... | 3       |
|  |         | *PE.....                        | 1       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**GMT 1201 General Maintenance Overview**

(2-0)..... **2 hours**

An overview of major areas in the maintenance technology industry. Emphasizes both industrial and facility maintenance. Stresses safety and first aid. Introduces Pneumatics. Prerequisite: None.

## Mathematics

**Faculty:** Dr. Charles Sweatt, Chairman; Mina Bane, George Brewer, Jim Camp, Dr. James Fields, Robert Keating, Fred Wemple.

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

**Course of Study for Associate in Science Degree**

| First Year                 |         |                            |         |
|----------------------------|---------|----------------------------|---------|
| First Semester             |         | Second Semester            |         |
| Course                     | Sem Hrs | Course                     | Sem Hrs |
| Engl 1311.....             | 3       | Engl 1312.....             | 3       |
| Foreign Language 1411..... | 4       | Foreign Language 1412..... | 4       |
| Hist 2301.....             | 3       | Hist 2302.....             | 3       |
| *Math 1345.....            | 3       | Math 2333.....             | 3       |
| Math 2331.....             | 3       | PE.....                    | 1       |
| PE.....                    | 1       | Phys 1403.....             | 4       |

| Second Year                 |         |                             |         |
|-----------------------------|---------|-----------------------------|---------|
| Third Semester              |         | Fourth Semester             |         |
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| CIS 2406.....               | 4       | Engl (Sophomore Level)..... | 3       |
| Engl (Sophomore Level)..... | 3       | Govt 2302.....              | 3       |
| Govt 2301.....              | 3       | Math 2334.....              | 3       |
| Math 2335.....              | 3       | Math 2351.....              | 3       |
| PE.....                     | 1       | PE.....                     | 1       |
| Phys 2401.....              | 4       | Phys 2402.....              | 4       |

\*Students not prepared for Math 1345 (Analytic Geometry) should enroll in Math 1343 (Plane Trigonometry) or a lower-level math course before enrolling in Math 1345. It is recommended that engineering students take Math 2334 (Linear Algebra). Pre-registration testing is available for placement aid for students planning to take Math 1311, Math 1313, Math 1335, Math 1341, or Math 1302.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

- Math 1301 (See Business Administration)
- Math 1302 (See Business Administration)
- Math 1303 (See Business Administration)
- Math 1304 (See Business Administration)

- ✓ **Math 1311 Basic Mathematics** ..... 3 hours  
 (3-0).....  
 Presents four fundamental operations of addition, subtraction, multiplication, and division of whole numbers, common fractions, decimal fractions, and signed numbers. Includes percentages, metric system, and geometric measurements. ~~This course does not satisfy requirements for any degree plan at Oberlin College and may not be accepted by all senior colleges.~~ Prerequisite: None.
- Math 1313 Introductory Algebra** ..... 3 hours  
 (3-0) .....  
 Introduces elementary algebra with some arithmetic review. Includes sets and set operations, signed numbers, polynomial multiplication and division, factoring, linear and quadratic functions, and word problems. Prerequisite: Math 1311 or equivalent competency.
- Math 1321 Technical Mathematics I** ..... 3 hours  
 (3-0) .....  
 Presents fundamentals of arithmetic, measurement, approximate numbers, plane geometry, elementary algebra, linear equations, graphs, and right angle trigonometry. Emphasizes technical problems. (This course may not be accepted for credit by all senior colleges.) Prerequisite: None.
- Math 1323 Technical Mathematics II** ..... 3 hours  
 (3-0) .....  
 A study of intermediate algebra, logarithms, and applied trigonometry. Emphasizes technical problems. (This course may not be accepted for credit by all senior colleges.) Prerequisite: Math 1321 or Math 1313.
- ✓ **Math 1335 Intermediate Algebra** ..... 3 hours  
 (3-0).....  
 A study of real number operations, linear and quadratic inequalities, exponents and radicals, rational expressions, the straight line and linear equations. Introduces conic sections, functions, logarithmic functions, sequences, and series. (This course may not be accepted for credit by all senior colleges.) Prerequisite: Math 1313 or its equivalent.
- Math 1341 College Algebra** ..... 3 hours  
 (3-0).....  
 Introduces sets, functions, and number relations; inequalities; linear and quadratic functions; and topics selected from determinants, polynomial functions, permutations, combinations, and binomial theorem. Includes mathematical induction, exponential and logarithmic functions, and algebra of ordered pairs. Prerequisite: Two years of high school algebra, or Math 1335, or its equivalent. ✓
- Math 1343 Plane Trigonometry** ..... 3 hours  
 (3-0).....  
 Presents trigonometric functions, formulas, applications of variations of functions with changes in angles, trigonometric equations, identities, solutions of right and oblique triangles, logarithmic functions, inverse functions, and complex numbers. Prerequisite or Corequisite: Math 1341 or equivalent competency.
- Math 1345 Analytic Geometry** ..... 3 hours  
 (3-0) .....  
 Presents fundamental concepts, straight line, circle, conics, simplification of equations, algebraic curves, transcendental curves, polar coordinates, parametric equations, space coordinates, surfaces, vectors, planes, and lines. Prerequisite: Math 1343 or equivalent.
- ✓ **Math 1361 Mathematic Statistics** ..... 3 hours  
 (3-0).....  
 Introduces elements of statistics. Includes frequency distributions, measures of central tendency, elementary probability, binomial distribution, measures of variation, normal distributions, random sampling, tests of significance, "t" test, and chi-square test. Recommended for students in education, social science, and physical science as well as mathematics. Prerequisite: Math 1341 or its equivalent.
- ✓ **Math 2311 Fundamentals of Mathematics I** ..... 3 hours  
 (3-0) .....  
 Presents topics from modern algebra, basic concepts of sets, number systems, relations, and applications. Includes basic concepts of elementary mathematics. Math 2311 and 2313 recommended for nonscience and nonmath majors. Prerequisite: None.

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### Math 2313 Fundamentals of Mathematics II

(3-0)..... 3 hours  
Presents topics from geometry, measurements, equivalence and congruence, position and shape, nature of proof, mathematical systems, and probability and statistics. Includes basic concepts of elementary mathematics. Prerequisite: Math 2311.

### Math 2331 Calculus I

(3-0) ..... 3 hours  
Presents study of rate of change of functions, limits, derivatives of algebraic and trigonometric functions, integration, and applications. Prerequisite or Corequisite: Math 1345.

### Math 2333 Calculus II

(3-0) ..... 3 hours  
Extends topics of Math 2331 to include differentiation and integration of a wider class of functions. To include transcendental functions. Also includes application of these processes to solutions of a wider range of problems including moments of mass. Prerequisite: Math 2331.

### Math 2334 Linear Algebra

(3-0)..... 3 hours  
Presents study of vector spaces, linear transformations, matrix algebra, eigenvalues, eigenvectors, and applications. Prerequisite: Math 2333.

### Math 2335 Calculus III

(3-0) ..... 3 hours  
Presents study of sets, functions, vector fields, partial derivatives, power series, and integration theory. Includes study of line, surface, and multiple integrals. Prerequisite: Math 2333.

### Math 2351 Differential Equations

(3-0)..... 3 hours  
A study of equations of order one, linear differential equations, nonhomogeneous equations, differential operators, the Laplace transform, inverse transforms, applications, equations of order one and higher degree, and inverse differential operators. Prerequisite: Math 2333.

Math 2401 (See Business Administration)

## Mid-Management

**Faculty:** Paul G. Tittle, Chairman; Larry Berthelsen, Clinton Forbes, Connie Nichols.

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

The primary objective of the Mid-Management program is to prepare each student for full-time employment in supervision. The program in the classroom is combined with actual on-the-job experience in the students' chosen career fields. Students are expected to be employed a minimum of 20 hours a week.

Mid-Management students may choose one of four program options available. Students who are specifically interested in careers in retailing or marketing should enroll in the Marketing Management option. Students who plan careers in the field of fashion merchandising or fashion retailing should enroll in the Fashion Merchandising option. Students who plan careers in some phase of industrial production, oil or gas production, or machine fabrication should enroll in the Industrial Supervision option. The General Management option is available for students who plan careers in some other business or industrial field and for students who have not chosen a specific career field. Students in the petroleum marketing and supermarket management fields will find specific courses available to them in addition to the courses in the Marketing Management option.

Many businesses, both large and small, actively seek graduates of Associate Degree programs. The shortage of promotable people in supervisory and middle-management ranks virtually assures the graduate a challenging career with rewarding promotional possibilities. Firms which have their own management training programs hire graduates of associate degree programs as readily as they do graduates with the baccalaureate degree. Each option offered in Mid-Management leads to the Associate in Applied Science degree.

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

**First Year**

| First Semester           |         | Second Semester                 |         |
|--------------------------|---------|---------------------------------|---------|
| Course                   | Sem Hrs | Course                          | Sem Hrs |
| Engl 1311.....           | 3       | Engl 1312.....                  | 3       |
| Govt 2301 or 2302.....   | 3       | Math 1313 or More Advanced..... | 3       |
| Mgt 1116.....            | 1       | Mgt 1117.....                   | 1       |
| Mgt 1301.....            | 3       | Mgt 2301.....                   | 3       |
| Mgt 1321.....            | 3       | Mgt 2332.....                   | 3       |
| *PE.....                 | 1       | *PE.....                        | 1       |
| **Approved Elective..... | 3       | **Approved Elective.....        | 3       |

**Second Year**

| Third Semester           |         | Fourth Semester           |         |
|--------------------------|---------|---------------------------|---------|
| Course                   | Sem Hrs | Course                    | Sem Hrs |
| CIS 1400.....            | 4       | BA 2311.....              | 3       |
| Eco 2301.....            | 3       | Mgt 2117.....             | 1       |
| Mgt 1303.....            | 3       | Mgt 2303.....             | 3       |
| Mgt 2116.....            | 1       | Mgt 2365.....             | 3       |
| Mgt 2304.....            | 3       | **Approved Electives..... | 6       |
| *Approved Electives..... | 3       |                           |         |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

\*\*Approved Electives: Any other Mgt course, any CIS course, OE 1404, BA 2312, BA 2401, Eco 1301, Eco 2302, Psy 1301, Psy 2301, Soc 1301, Soc 2301, and Soc 2303.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

**First Year**

| First Semester         |         | Second Semester                 |         |
|------------------------|---------|---------------------------------|---------|
| Course                 | Sem Hrs | Course                          | Sem Hrs |
| Govt 2301 or 2302..... | 3       | Engl 1312.....                  | 3       |
| Engl 1311.....         | 3       | Math 1313 or More Advanced..... | 3       |
| Mgt 1116.....          | 1       | Mgt 1117.....                   | 1       |
| Mgt 1301.....          | 3       | Mgt 1323.....                   | 3       |
| Mgt 1321.....          | 3       | Mgt 2301.....                   | 3       |
| Mgt 1331.....          | 3       | Mgt 2322.....                   | 3       |
| *PE.....               | 1       | *PE.....                        | 1       |

**Second Year**

| Third Semester            |         | Fourth Semester          |         |
|---------------------------|---------|--------------------------|---------|
| Course                    | Sem Hrs | Course                   | Sem Hrs |
| CIS 1400.....             | 4       | BA 2311.....             | 3       |
| Eco 2301.....             | 3       | Mgt 2117.....            | 1       |
| Mgt 1303.....             | 3       | Mgt 2303.....            | 3       |
| Mgt 2116.....             | 1       | Mgt 2332.....            | 3       |
| Mgt 2304.....             | 3       | Mgt 2365.....            | 3       |
| **Approved Electives..... | 3       | **Approved Elective..... | 3       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

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\*\*Approved Electives: Any other Mgt course, any other CIS course, OE 1404, BA 2304, BA 2312, Eco 1301, Eco 2302, Psy 1301, Psy 2301, Soc 1301, Soc 2301, and Soc 2303.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Associate in Applied Science Degree  
(Fashion Merchandising Option)**

**First Year**

| First Semester         |         | Second Semester                 |         |
|------------------------|---------|---------------------------------|---------|
| Course                 | Sem Hrs | Course                          | Sem Hrs |
| Engl 1311.....         | 3       | Engl 1312.....                  | 3       |
| Govt 2301 or 2302..... | 3       | Math 1313 or More Advanced..... | 3       |
| Mgt 1116.....          | 1       | Mgt 1117.....                   | 1       |
| Mgt 1301.....          | 3       | Mgt 1323.....                   | 3       |
| Mgt 1331.....          | 3       | Mgt 1343.....                   | 3       |
| Mgt 1341.....          | 3       | Mgt 2332.....                   | 3       |
| *PE.....               | 1       | *PE.....                        | 1       |

**Second Year**

| Third Semester |         | Fourth Semester           |         |
|----------------|---------|---------------------------|---------|
| Course         | Sem Hrs | Course                    | Sem Hrs |
| CIS 1400.....  | 4       | BA 2311.....              | 3       |
| Eco 2301.....  | 3       | Mgt 2117.....             | 1       |
| Mgt 1303.....  | 3       | Mgt 2303.....             | 3       |
| Mgt 2116.....  | 3       | Mgt 2341.....             | 3       |
| Mgt 2304.....  | 3       | **Approved Electives..... | 6       |
| Mgt 2344.....  | 3       |                           |         |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

\*\*Approved Electives: Any other Mgt course, OE 1401, BA 2310, BA 2312, Eco 1301, Eco 2302, Psy 1301, Psy 2301, Soc 1301, Soc 2301, Soc 2303.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Associate in Applied Science Degree  
(Industrial Supervision Option)**

**First Year**

| First Semester         |         | Second Semester                 |         |
|------------------------|---------|---------------------------------|---------|
| Course                 | Sem Hrs | Course                          | Sem Hrs |
| BA 2311.....           | 3       | Engl 1312.....                  | 3       |
| Engl 1311.....         | 3       | Math 1313 or More Advanced..... | 3       |
| Govt 2301 or 2302..... | 3       | Mgt 1117.....                   | 1       |
| Mgt 1116.....          | 1       | Mgt 1362.....                   | 3       |
| Mgt 1301.....          | 3       | Mgt 2301.....                   | 3       |
| Mgt 1361.....          | 3       | Mgt 2363.....                   | 3       |
| *PE.....               | 1       | *PE.....                        | 1       |

Second Year

| Third Semester           |         | Fourth Semester           |         |
|--------------------------|---------|---------------------------|---------|
| Course                   | Sem Hrs | Course                    | Sem Hrs |
| Eco 2301.....            | 3       | CIS 1400.....             | 4       |
| Mgt 1303.....            | 3       | Mgt 2117.....             | 1       |
| Mgt 1371.....            | 3       | Mgt 2303.....             | 3       |
| Mgt 2116.....            | 1       | Mgt 2365.....             | 3       |
| Mgt 2304.....            | 3       | Mgt 2371.....             | 3       |
| **Approved Elective..... | 3       | **Approved Electives..... | 3       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

\*\*Approved Electives: Any other Mgt course, Read 1301, Math 1313, or more advanced, any Accounting course, any other Eco course, Psy 1301, Soc 1301, Soc 2303, or any occupationally oriented course which has a direct bearing on the student's career plan.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

✓Mgt 1116, 1117, 2116, 2117 Mid-Management Internships

(1-20)..... 1 hour each  
Requires supervised internship program each semester for all students in Mid-Management. Focuses on specific on-the-job problems, modern business practices, human relations, and job-finding techniques. Includes a one-hour seminar and 20 internship hours each week. Prerequisite: None.

Mgt 1301 Introduction to Management

(3-0)..... 3 hours  
Presents essentials of management. Includes functions of management and application of management principles as related to the first-line supervisor. Two hours lecture-discussion and one hour seminar-discussion each week. Prerequisite: None.

Mgt 1302 Introduction to Transportation Management

(3-0)..... 3 hours  
Presents an overview of domestic transportation and traffic management. Emphasizes government regulation and economics of transportation. Includes such topics as bills of lading and checking freight rates. Stresses practical application in business and industry. Prerequisite: None.

✓Mgt 1303 Communication Management

(3-0)..... 3 hours  
Emphasizes effective methods of creating understanding with employees and with the community within management's environment. Stresses perfecting business communication techniques in various channels of communication. Presents verbal, nonverbal, and written communication media. Prerequisite: None.

Mgt 1321 Principles of Marketing

(3-0)..... 3 hours  
Introduces marketing. Analyzes economic, psychological, and sociological factors influencing marketing activities. Uses case studies to relate marketing principles to market management situations. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.

✓Mgt 1323 Principles of Personal Selling

(3-0)..... 3 hours  
Designed to expose students to techniques that will prove immediately valuable in present or future selling positions. Provides opportunities for practicing these techniques under realistic conditions. Two hours lecture-discussion and one hour seminar-discussion each week. Prerequisite: None.

Mgt 1331 Principles of Retailing

(3-0)..... 3 hours  
Relates modern retailing industry to structure and environment of retailing, requirements of retailing management, retail merchandising, and sales promotion. Examines case studies which apply retailing principles to actual operating situations. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.

Mgt 1341 Introduction to Fashion Merchandising

(3-0)..... 3 hours  
Presents an overview of general field of fashion merchandising. Focuses in functions of fashion merchandiser as related to retail industry. Emphasizes organization and operation of fashion merchandising segment of a department store or specialty shop. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.

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- Mgt 1342 Fashion Sales Management**  
(3-0)..... 3 hours  
Relates role of selling to field of fashion merchandising. Emphasizes effective techniques of selling and sales functions, of training and managing sales personnel. Focuses on role playing and case studies of realistic situations. Prerequisite: None.
- ✓ **Mgt 1343 Development of Fashion**  
(3-0)..... 3 hours  
Traces the evolution of fashion from medieval times through the Renaissance, from 17th-century development of textiles and designs into the 19th-century world of French couture. Traces emergence of trends, which cycle through contemporary fashion, from originating designer to application to modern style. Compares structure of European fashion centers and their operation to contemporary American markets. Two hours lecture-discussion and one hour of seminar-discussion per week. Prerequisite: None.
- Mgt 1361 Principles of Production Supervision**  
(3-0)..... 3 hours  
Introduces fundamental concepts of production management. Emphasizes formulation of objectives and use of systems approach to production. Maintains integrated managerial perspective. Prerequisite: None.
- Mgt 1362 Industrial Safety**  
(3-0)..... 3 hours  
Introduces principles and practices of safety management. Presents overview of legal requirements of Occupational Safety and Health Act. Includes basic concepts and methods of administering an industrial safety program. Prerequisite: None.
- Mgt 1371 Introduction to Purchasing Management**  
(3-0)..... 3 hours  
Presents practices underlying sound procurement of materials, parts, supplies, and equipment to conduct a business. Emphasizes meaning, scope, organization, and principles of purchasing procedure, the place of value analysis in the process, standardization, and legal aspects of the purchasing function. Prerequisite: None.
- Mgt 2301 Management Development**  
(3-0) ..... 3 hours  
Examines relationships between management principles and actual management situations. Presents case studies and projects based on students' jobs taken from various fields, including personnel, sales, and merchandise management. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: Mgt 1301.
- ✓ **Mgt 2302 Principles of Personnel Management**  
(3-0) ..... 3 hours  
Includes manager-employee relationships oriented toward personnel responsibilities of all managers. Provides techniques in developing and supervising people. Directed toward organization principles, labor relations, understanding people, communicating, and techniques of building an effective working team. Requires two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.
- ✓ **Mgt 2303 Introduction to Public Relations**  
(3-0)..... 3 hours  
Introduces techniques of public relations applied to supervisory and management positions. Emphasizes customer relations. Gives attention to programming a total public relations effort and selecting strategy, media, and persuasive devices which accomplish given objectives. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.
- ✓ **Mgt 2304 Introduction to Human Relations**  
(3-0)..... 3 hours  
Applies field of human relations to modern business management. Emphasizes productive management of human resources available to a business or industrial firm. Introduces innovative techniques of behavioral science. Presents case studies to apply behavioral theories to actual situations. Requires two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: Mgt 1301.
- Mgt 2322 Marketing Management**  
(3-0)..... 3 hours  
A continuation of Mgt 1321. Emphasizes management of activities associated with marketing and distribution processes and institutions. Uses case studies to apply principles of marketing management to actual situations. Simulates marketing management in a portion of the course. Requires two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: Mgt 1321.
- Mgt 2323 Petroleum Marketing Operations**  
(3-0) ..... 3 hours  
A self-paced course designed to present the unique marketing activities involved in marketing petroleum products on wholesale and retail levels. Necessitates working in petroleum marketing or observing it in action in order to complete assignments. Offered on demand. Prerequisites: Mgt 1321 and consent of the instructor.

- Mgt 2324 Principles of Supermarket Operations**  
 (3-0)..... 3 hours  
 A self-paced course designed to acquaint student with principal methods used in operation of supermarkets. Includes organization, planning, and control for each department. Offered on demand. Prerequisites: Mgt 1321 and consent of the instructor.
- Mgt 2332 Small Business Management**  
 (3-0) ..... 3 hours  
 Emphasizes management of personnel, merchandising, and other resources of the small business enterprise. Uses case studies to apply principles of business management to actual conditions. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: Mgt 1331, Mgt 1321, or Mgt 2322.
- Mgt 2341 Fashion Display and Visual Design**  
 (3-0)..... 3 hours  
 Trains students in techniques of visual display. Presents analysis and evaluation of various types of displays to develop competency in understanding components of their effectiveness. Requires practice construction of hard-line and soft-line displays. Emphasizes designing and laying out show cards, selecting appropriate props for a given display, and understanding the value of visual merchandising in a store, department, or corporation. Two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.
- Mgt 2343 Fashion Buying**  
 (3-0)..... 3 hours  
 Presents fundamentals of effective buying as related to fashion retailing. Gives attention to planning correct purchases, estimation of demand, selection of sources of supply, and product merchandising. Prerequisite: Mgt 1341.
- Mgt 2344 Fashion Promotion**  
 (3-0) ..... 3 hours  
 Emphasizes relationship existing between personal selling, visual merchandising, advertising, and fashion shows to accomplish successful retail merchandising of fashion products. Prerequisite: None.
- Mgt 2363 Production Planning and Control**  
 (3-0)..... 3 hours  
 A continuation of Mgt 1361. Gives attention to procurement and inventory control. Includes logistics, methods analysis, and work measurement. Prerequisite: Mgt 1361.
- Mgt 2364 Materials Management**  
 (3-0) ..... 3 hours  
 Presents management-oriented skills needed in materials management. Gives attention to purchasing, inventory control, and traffic. Integrates cost control and cost reduction sections. Prerequisite: Mgt 1361.
- Mgt 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 materials handling. Emphasizes decision-making techniques as applied to each activity. Uses case studies. Prerequisite: None.
- Mgt 2371 Purchasing Practices**  
 (3-0)..... 3 hours  
 Designed to develop student's knowledge and skills of merchandise and material procurement procedures. Gives attention to improvement of planning, policies, and procedures applicable to organizational purchasing practices. Identifies concepts and problems in purchasing and merchandising management. Prerequisite: None.

## Music

**Faculty:** Jack Hendrix, Chairman; Dr. Maurice Alfred, Kathryn Hoppe, Dr. Bernard Rose.

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

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

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

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

| First Year           |         |                      |         |
|----------------------|---------|----------------------|---------|
| First Semester       |         | Second Semester      |         |
| Course               | Sem Hrs | Course               | Sem Hrs |
| Engl 1311.....       | 3       | Engl 1312.....       | 3       |
| Mu 1123.....         | 1       | Mu 1124.....         | 1       |
| Mu 1335.....         | 3       | Mu 1336.....         | 3       |
| Mu 1337 (Piano)..... | 3       | Mu 1338 (Piano)..... | 3       |
| Mu 1339 (Organ)..... | 3       | Mu 1340 (Organ)..... | 3       |
| Mu 1429.....         | 4       | Mu 1430.....         | 4       |
| PE.....              | 1       | PE.....              | 1       |

| Second Year                 |         |                             |         |
|-----------------------------|---------|-----------------------------|---------|
| Third Semester              |         | Fourth Semester             |         |
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| Hist 2301 or Govt 2301..... | 3       | Hist 2302 or Govt 2302..... | 3       |
| Mu 2231.....                | 2       | Mu 2232.....                | 2       |
| Mu 2333.....                | 3       | Mu 2334.....                | 3       |
| Mu 2337 (Piano).....        | 3       | Mu 2338 (Piano).....        | 3       |
| Mu 2339 (Organ).....        | 3       | Mu 2340 (Organ).....        | 3       |
| Phys 1301.....              | 3       | PE.....                     | 1       |

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

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Year                         |         |                                    |         |
|------------------------------------|---------|------------------------------------|---------|
| First Semester                     |         | Second Semester                    |         |
| Course                             | Sem Hrs | Course                             | Sem Hrs |
| Engl 1311.....                     | 3       | Engl 1312.....                     | 3       |
| Mu 1101.....                       | 1       | Mu 1102.....                       | 1       |
| Mu 1103.....                       | 1       | Mu 1104.....                       | 1       |
| Mu 1137.....                       | 1       | Mu 1138.....                       | 1       |
| Mu 1335.....                       | 3       | Mu 1336.....                       | 3       |
| Mu 1429.....                       | 4       | Mu 1430.....                       | 4       |
| Appl Mu: Principal Instrument..... | 2       | Appl Mu: Principal Instrument..... | 2       |
| PE.....                            | 1       | PE.....                            | 1       |

**Second Year**

| Third Semester                     |         | Fourth Semester                    |         |
|------------------------------------|---------|------------------------------------|---------|
| Course                             | Sem Hrs | Course                             | Sem Hrs |
| Engl (Sophomore Level) .....       | 3       | Engl (Sophomore Level) .....       | 3       |
| Hist 2301 or Govt 2301 .....       | 3       | Hist 2302 or Govt 2302 .....       | 3       |
| Mu 2101 .....                      | 1       | Mu 2102 .....                      | 1       |
| Mu 2103 .....                      | 1       | Mu 2104 .....                      | 1       |
| Mu 2137 .....                      | 1       | Mu 2138 .....                      | 1       |
| Mu 2231 .....                      | 2       | Mu 2232 .....                      | 2       |
| Mu 2333 .....                      | 3       | Mu 2334 .....                      | 3       |
| Appl Mu: Principal Instrument..... | 2       | Appl Mu: Principal Instrument..... | 2       |
| Phys 1301 .....                    | 3       | PE .....                           | 1       |

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

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

**First Year**

| First Semester        |         | Second Semester       |         |
|-----------------------|---------|-----------------------|---------|
| Course                | Sem Hrs | Course                | Sem Hrs |
| Engl 1311 .....       | 3       | Engl 1312 .....       | 3       |
| Mu 1123 .....         | 1       | Mu 1124 .....         | 1       |
| Mu 1237 (Piano) ..... | 2       | Mu 1238 (Piano) ..... | 2       |
| Mu 1239 (Organ) ..... | 2       | Mu 1240 (Organ) ..... | 2       |
| Mu 1335 .....         | 3       | Mu 1336 .....         | 3       |
| Mu 1429 .....         | 4       | Mu 1430 .....         | 4       |
| PE .....              | 1       | PE .....              | 1       |

**Second Year**

| Third Semester               |         | Fourth Semester              |         |
|------------------------------|---------|------------------------------|---------|
| Course                       | Sem Hrs | Course                       | Sem Hrs |
| Engl (Sophomore Level) ..... | 3       | Engl (Sophomore Level) ..... | 3       |
| Hist 2301 or Govt 2301 ..... | 3       | Hist 2301 or Govt 2301 ..... | 3       |
| Mu 2231 .....                | 2       | Mu 2232 .....                | 2       |
| Mu 2237 (Piano) .....        | 2       | Mu 2238 (Piano) .....        | 2       |
| Mu 2239 (Organ) .....        | 2       | Mu 2240 (Organ) .....        | 2       |
| Mu 2333 .....                | 3       | Mu 2334 .....                | 3       |
| Phys 1301 .....              | 3       | PE .....                     | 1       |

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

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

**First Year**

| First Semester              |         | Second Semester             |         |
|-----------------------------|---------|-----------------------------|---------|
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl 1311.....              | 3       | Engl 1312.....              | 3       |
| Mu 1125, 1126, or 1127..... | 1       | Mu 1125, 1126, or 1127..... | 1       |
| Mu 1137.....                | 1       | Mu 1138.....                | 1       |
| Mu 1211.....                | 2       | Mu 1212.....                | 2       |
| Mu 1335.....                | 3       | Mu 1336.....                | 3       |
| Mu 1429.....                | 4       | Mu 1430.....                | 4       |
| Mu 1241.....                | 2       | Mu 1242.....                | 2       |
| PE.....                     | 1       |                             |         |

**Second Year**

| Third Semester              |         | Fourth Semester             |         |
|-----------------------------|---------|-----------------------------|---------|
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| Hist 2301 or Govt 2301..... | 3       | Hist 2302 or Govt 2302..... | 3       |
| Mu 1125, 1126, or 1127..... | 1       | Mu 1125, 1126, or 1127..... | 1       |
| Mu 2137.....                | 1       | Mu 2138.....                | 1       |
| Mu 2211.....                | 2       | Mu 2212.....                | 2       |
| Mu 2231.....                | 2       | Mu 2232.....                | 2       |
| Mu 2241.....                | 2       | Mu 2242.....                | 2       |
| Mu 2333.....                | 3       | Mu 2334.....                | 3       |
| Phys 1301.....              | 3       | PE.....                     | 1       |

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

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Mu 1101, 1102, 2101, 2102 Concert Band**

(0-3)..... 1 hour each  
Activities include music concerts, pep rallies, and selected college functions. Includes many non-music majors. Requires participation in daily rehearsals and all major performances. Serves as required laboratory for instrumental music majors. Prerequisite: None.

**Mu 1103, 1104, 2103, 2104 Jazz Ensemble**

(0-3)..... 1 hour each  
Open to musicians having jazz experience or to those with instrumental skills and a desire for learning jazz techniques. Consists of minimum of three hours of rehearsal per week and playing at special college functions. Prerequisite: Admission by audition with acceptance based on musical ability.

**Mu 1105, 1106, 2105, 2106 Orchestra**

(0-4)..... 1 hour each  
Open to students who can play music of moderate difficulty upon some orchestral instruments. Prerequisite: Adequate ability on an instrument.

**Mu 1107, 1108, 2107, 2108 Vocal Ensemble**

(0-3)..... 1 hour each  
An elective designed to acquaint the student with chamber music for the small voice ensemble of all periods of music, and to provide advanced students with an opportunity to study the style and performance of a large amount of choral literature. Prerequisite: Selection from the A Cappella Choir by audition with expectation of participation in all major performances.

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

**Mu 1211, 1212, 2211, 2212 A Cappella Choir**  
 (0-5)..... 1 hour each  
 Serves as laboratory for music majors whose primary instrument is the voice or as an elective for non-music majors. Studies include fundamental voice techniques and choral literature representing many styles and composers from all periods of music. Participation in all major performances expected. Prerequisite: Admission by audition with acceptance based on musical ability and voice quality.

**Applied Music (Class Lessons)**

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

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

**Mu 1116 Percussion**  
 (0-3) ..... 1 hour  
 Designed to meet minimum requirements in percussion instruments for music education majors through study of snare drum rudiments, tuning and other techniques of playing the tympani, and limited performance ability on other instruments of the battery. Prerequisite: None.

**Mu 1117 Strings**  
 (0-3)..... 1 hour  
 Designed for music education majors to meet minimum proficiency requirements on stringed instruments through study of basic techniques, methods of teaching them, and a limited repertoire. Culminates in ability to play all scales on these instruments. Prerequisite: None.

**Mu 1118 Woodwinds**  
 (0-3)..... 1 hour  
 Designed for music education majors to meet minimum proficiency requirements on woodwind instruments through study of basic techniques, methods of teaching them, and a limited repertoire. Culminates in ability to play scales on these instruments. Prerequisite: None.

**Mu 1121, 1122, 2121, 2122 Opera Workshop**  
 (0-3) ..... 1 hour each  
 Serves as laboratory for students interested in dramatic music and its presentation. Requires outside preparation of various assignments for class and public presentations. Includes night rehearsals when necessary. Open to all students. Prerequisite: None.

**Mu 1123, 1124, 2123, 2124 Piano Ensemble and Accompanying**  
 (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. Prerequisite: Consent of the instructor for all non-keyboard majors.

**Mu 1125 French Diction**  
 (2-0) ..... 1 hour  
 Emphasizes French language and diction. Designed to promote ability to sing in French. Vocabulary derived from words commonly used in song and opera. Student's own appropriate literature studied with other selections added at discretion of the instructor. Prerequisite: None.

**Mu 1126 German Diction**  
 (2-0)..... 1 hour  
 Emphasizes German language and diction. Designed to promote ability to sing in German. Vocabulary derived from words commonly used in song and opera. Student's own appropriate literature studied with other selections added at discretion of the instructor. Prerequisite: None.

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- Mu 1127 Italian Diction** ..... 1 hour  
(2-0) .....  
Emphasizes Italian language and diction. Designed to promote ability to sing in Italian. Vocabulary derived from words commonly used in song and opera. Student's own appropriate literature studied with other selections added at discretion of the instructor. Prerequisite: None.
- Mu 1175, 1176, 2175, 2176 Blue Grass/Country Western** ..... 1 hour each  
(0-3).....  
Teaches the style and repertoire of country western and blue grass music. Gives insight into professional performing opportunities. Prerequisite: Consent of the instructor.
- Mu 1177, 1178 General Foundations in Music** ..... 1 hour each  
(0-1/2) .....  
Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation and necessary skills for satisfactory performance in listening, creating rhythmic responses, and developing an increasing ability to manage notation (music reading). Prerequisite: None.
- Mu 1179, 1180 Instrumental Foundations in Music** ..... 1 hour each  
(0-1/2) .....  
Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation and the necessary skills for satisfactory performance in playing an instrument, listening, creating rhythmic responses, and developing an increasing ability to manage notation (music reading). Prerequisite: None.
- Mu 1181, 1182 Keyboard Foundations in Music** ..... 1 hour each  
(0-1/2).....  
Offered on an elective basis to meet special needs of students to develop their musical ability in a specific field of study. Emphasizes participation and the necessary skills for satisfactory performance in playing a keyboard instrument, listening, creating rhythmic responses, and developing an increasing ability to manage notation (music reading). Prerequisite: None.
- Mu 1183, 1184 Vocal Foundations in Music** ..... 1 hour each  
(0-1/2).....  
Offered on an elective basis to meet special needs of students to develop their music ability in a specific field of study. Emphasizes participation in singing, listening, creating rhythmic responses, and developing an increasing ability to manage notation (music reading). Prerequisite: None.
- Mu 1185, 1186, 2185, 2186 Class Piano** ..... 1 hour each  
(0-3).....  
Designed to develop basic skills related to playing the piano, developing the keyboard skills through both class and individual participation. Begins with fundamental elements of music, including music reading, basic concepts of elementary music theory (melody, rhythm, harmony), chord structure, harmonization, ensemble playing and improvisation. Prerequisite: None for Mu 1185; consent of instructor thereafter.
- Mu 1203, 1204, 2203, 2204 Jazz Ensemble** ..... 2 hours each  
(0-5).....  
Open to musicians having jazz experience or to those with instrumental skills and a desire for learning jazz techniques. Consists of a minimum of five hours of rehearsal per week and playing at special college functions. Prerequisite: Admission by audition with acceptance based on musical ability.
- Mu 1329 Music Fundamentals** ..... 3 hours  
(3-0).....  
Introduces elements of music, including study of the staff, clefs, key signatures, scales, time signatures, notation, meter and rhythm, sightsinging, major and minor chords, application of theory at the keyboard, and rhythmic, melodic, and harmonic ear training. Prerequisite: None.
- Mu 1429, 1430 Freshman Music Theory** ..... 4 hours each  
(3-3).....  
Reviews basic music theory, followed by study of diatonic melody, diatonic triadic and seventh chord harmony, embellishing tones, modes, and motivic variation procedures through analysis, partwriting, composition, eartraining, sightsinging, rhythmic reading, and keyboard applications. Prerequisite for Mu 1430: Mu 1429.
- Mu 2231, 2232 Advanced Sightsinging and Eartraining** ..... 2 hours each  
(2-1).....  
Correlation of eartraining, sightsinging, rhythmic reading, and keyboard drills with theoretical material of Advanced Study of Harmony. Sightsinging includes modal melodies and partsinging. Prerequisite: Mu 1430.
- Mu 2333, 2334 Advanced Study of Harmony** ..... 3 hours each  
(2-1).....  
Presents secondary seventh chords, modulation, chromatic melody and harmony, and small forms through analysis, partwriting, and composition. Twentieth century melody and harmony and large forms studied during the second semester. Prerequisite: Mu 1430.

**Music History and Literature**

- Mu 1328 Music Appreciation**  
 (3-0)..... **3 hours**  
 Offered to all students, except music majors, who wish to acquire basic information and techniques necessary for intelligent appreciation of the art of music, as related to major style periods in music history. Guided listening experiences, through use of the extensive record collection in the listening laboratory, an important part of the course. Prerequisite: None.
- Mu 1335, 1336 Introduction to Music Literature**  
 (3-0)..... **3 hours each**  
 A chronological survey course, the prime objective of which is to introduce students to various periods of musical composition from ancient to present time. Seeks to acquaint students with both the historical aspect and the music itself. Extensive use made of large collection of phonograph records in listening laboratory. Required of all music majors. Prerequisite to Mu 1336: Mu 1335.
- Mu 1373, 1374 Piano Literature**  
 (3-0) ..... **3 hours each**  
 Surveys and studies solo literature for piano. Emphasizes individual and period idioms and styles. Presents, in the first semester, origins of keyboard and solo piano, and, specifically, piano literature of the eighteenth century. Presents solo piano literature of the nineteenth and twentieth centuries during second semester. Phonograph records and tape recordings utilized for listening assignments. Presentations in class include live performances, phonograph records, and tape recordings as appropriate. Prerequisite: Consent of the instructor.

**Applied Music**

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

**Private Lessons**

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

from Romantic and Contemporary periods; at least one composition memorized; additional technic as needed. Prerequisite for Mu 1239: Must be able to perform Bach Two-part and Three-part Inventions or equivalent on the piano. Minimum practice required: 12 hours per week. Prerequisite for Mu 1240: Mu 1239.

**Mu 2337, 2338 Sophomore Piano**

(0-1)..... 3 hours each

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

**Mu 2237, 2238 Sophomore Piano**

(0-1)..... 2 hours each

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

**Mu 1119, 1120 Applied Music**

(0-1/2)..... 1 hour each

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

**Mu 2119, 2120 Applied Music**

(0-1/2) ..... 1 hour each

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

**Mu 1137, 1138, 2137, 2138 Secondary Piano**

(0-1/2)..... 1 hour each

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

**Mu 2339, 2340 Sophomore Organ**

(0-1)..... 3 hours each

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

**Mu 2239, 2240 Sophomore Organ**

(0-1)..... 2 hours each

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

**Mu 1139, 1140, 2139, 2140 Secondary Organ**

(0-1/2) ..... 1 hour each

Designed for the music major whose primary instrument is not the organ or for elective credit. Representative literature includes: Gleason, *Method of Organ Playing*; Bach, "Eight Little Preludes and Fugues"; and/or *Liturgical Year*; Dupre, *Seventy-nine Chorals*; and standard compositions, range of difficulty from easy arrangement and transcriptions upward, by Handel, Mendelssohn, Franck, Langlais, Peeters, etc. Additional technic is added as needed. Minimum practice required: six hours per week. Prerequisite for Mu 1139: None, but previous organ or piano study is desirable.

**Mu 1141, 1142 Secondary Voice**

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

**Mu 2141, 2142 Secondary Voice**

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

**Mu 1241, 1242 Freshman Voice**

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

**Mu 2241, 2242 Sophomore Voice**

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

**Mu 1243, 1244 Freshman Violin**

(0-1) ..... **2 hours each**  
 Designed for the music education major or minor whose primary instrument is violin or for elective credit. Minimum representative requirements: Kreutzer *Etudes*, Ševčík technical exercises; all major and minor scales and arpeggios, three octaves, memorized; one Sonata by a standard composer (Bach, Vivaldi, Viotti, Nardini, etc.); pieces of similar difficulty by classic and contemporary composers; orchestra; ensemble. Minimum practice required: 12 hours per week. Prerequisite for Mu 1244: Mu 1243.

**Mu 2243, 2244 Sophomore Violin**

(0-1) ..... **2 hours each**  
 A continuation of Mu 1244. Minimum representative requirements: *Etudes*, Kreutzer, Fiorillo, Ševčík; scales and arpeggios, two Sonatas by a standard composer (Handel, Bach, Mozart, Beethoven, Gade, Grieg, etc.); Orchestra; ensemble. Minimum practice required: 12 hours per week. Prerequisite: Mu 1244.

**Mu 1245, 1246 Freshman Viola**

(0-1) ..... **2 hours each**  
 Designed for the music education major or minor whose primary instrument is viola or for elective credit. Minimum representative requirements: scales and arpeggios; studies and exercises; sonatas and concertos; smaller pieces from the standard repertoire; Wohlfahrt-Isaac-Lewis, *Thirty Studies for the Viola, Book I*; Wohlfahrt, Book II; "Lyric Suite" by Grieg-Sitt. Minimum practice required: 12 hours per week. Prerequisite for Mu 1246: Mu 1245.

**Mu 2245, 2246 Sophomore Viola**

(0-1) ..... **2 hours each**  
 A continuation of Mu 1246. Minimum representative requirements: scales and arpeggios; scales in double stops; studies and exercises selected according to individual needs, such as C. Dancla's *L'ecole du Mechanisme, Books I and II*, Dont's *20 Progressive Etudes*, and R. Kreutzer-Consolini's *42 Etudes*; sonatas by Leclair, Marcello, Corelli, G. Faure; concertos and short solo pieces. Minimum practice required: 12 hours per week. Prerequisite: Mu 1246.

**Mu 1247, 1248 Freshman Violoncello**

(0-1) ..... **2 hours each**  
 Designed for the music education major or minor whose primary interest is in violoncello or for elective credit. Minimum requirements: Klengel studies; Dotzaur *113 Selected Studies, Book II*; Sonatas by Eccles, Brevai; thumb position; scales of three octaves; studies equivalent in difficulty to Dotzaur, Volume II; shorter compositions equivalent in difficulty to Beethoven G Minor Sonata. Minimum practice required: 12 hours per week. Prerequisite for Mu 1248: Mu 1247.

**Mu 2247, 2248 Sophomore Violoncello**

(0-1) ..... **2 hours each**  
 A continuation of Mu 1248. Minimum representative requirements: scales and arpeggios; double stops; studies equivalent to Dotzaur, *Volume III*, and Grutzmacher, Opus 67; shorter compositions, and compositions equivalent in difficulty to the Sammartini G Major Sonata. At end of second year, student must be able to play at sight moderately difficult ensemble music. Minimum practice required: 12 hours per week. Prerequisite: Mu 1248.

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### **Mu 1249, 1250 Freshman Double Bass**

**(0-1).....2 hours each**  
Designed for the music education major or minor whose primary instrument is double bass or for elective credit. Minimum course requirements: scales and arpeggios; smaller pieces from the standard repertoire; orchestra studies; Franz Simandl, *Book I* and *Book II*. Minimum practice required: 12 hours per week. Prerequisite for Mu 1250: Mu 1249.

### **Mu 2249, 2250 Sophomore Double Bass**

**(0-1).....2 hours each**  
A continuation of Mu 1250. Minimum requirements: scales and arpeggios; scales of Shmuklousky; Harbe, *Etudes, Book I*; Franz Simandl, *Fundamental Method Book II*; Kreutzer bowing studies; shorter compositions and more advanced orchestra studies. Minimum practice required: 12 hours per week. Prerequisite: Mu 1250.

### **Mu 1251, 1252 Freshman Classical Guitar**

**(0-1).....2 hours each**  
Designed for the music education major whose primary instrument is classical guitar or for elective credit. Representative instructional materials: standard classical guitar literature from all periods of music, including transcriptions. Representative materials include: *Classical Guitar Method*, Mateo Carcassi (Carl Fisher edition); *Major and Minor Scales* (A. Segovia); the selection for any one semester is based on student's need in relation to his previous study and current ability as determined by instructor. Prerequisite: Demonstrated knowledge of fingerboard; know diatonic major and minor scales. Terrega method preferred. Minimum practice required: 12 hours per week. Prerequisite for Mu 1252: Mu 1251.

### **Mu 2251, 2252 Sophomore Classical Guitar**

**(0-1).....2 hours each**  
A continuation of Mu 1252. Representative instructional materials continue with standard literature from all periods of music, including transcriptions; Villa-Lobos *Etudes*; advanced technical studies; Albeniz "*Leyenda de la Maza*," "*Companatis del Alba*" (Etude in Tremolo); compositions by Bach, Dowland, Llobet, Granadas, Rodrigo, Ponce, Mudarra, Frescobaldi, Rameau, Torroba, Turina, etc. Minimum practice required: 12 hours per week. Prerequisite for Mu 2252: Mu 2251.

### **Mu 1253, 1254 Freshman Bassoon**

**(0-1).....2 hours each**  
Designed for the music education major or minor whose primary instrument is bassoon or for elective credit. Minimum technical requirements: all scales and arpeggios to be played from memory in eighth notes at MM 120 in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 80, in various articulations. Representative repertoire chosen from complete works of Weissenborn *Op. 8*, the Jancourt Studies, and solos selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Prerequisite for Mu 1258: Mu 1257.

### **Mu 2253, 2254 Sophomore Bassoon**

**(0-1).....2 hours each**  
A continuation of Mu 1254. Minimum representative requirements: all scales to be played from memory in eighth notes at MM 160, in various articulations, all major scales in broken thirds to be played from memory in eighth notes at MM 100, in various articulations. Additional etudes and technical studies should include the Milde *Etudes Volume I*, the Gambaro *Studies*, and such representative solos as the Vivaldi Concerto, the Weber Concerto, and the Hindemith Sonata. Minimum practice required: 12 hours per week. Prerequisite: Mu 1254.

### **Mu 1255, 1256 Freshman Flute**

**(0-1).....2 hours each**  
Designed for the music education major or minor whose primary interest is flute or for elective credit. Minimum technical requirements: all scales and arpeggios to be played from memory in eighth notes at MM 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 60, in various articulations. Representative repertoire chosen from the studies of Anderson, Cavally, Berbiguier, Koehler, and Boehm; and solos such as the Handel *Sonatas*, the Telemann *Suite*, and the Bach *Suite I*. Minimum practice required: 12 hours per week. Prerequisite for Mu 1256: Mu 1255.

### **Mu 2255, 2256 Sophomore Flute**

**(0-1).....2 hours each**  
A continuation of Mu 1256. Minimum representative requirements: all scales and arpeggios to be played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 100, in various articulations. Additional etudes and technical studies should include Anderson *Op. 15* and *63*, and others equivalent to Cavally. Representative literature should include at least one Bach and one Handel Sonata. Minimum practice required: 12 hours per week. Prerequisite for Mu 2255: Mu 1256.

**Mu 1257, 1258 Freshman Clarinet**

(0-1).....2 hours each  
 Designed for the music education major or minor whose primary instrument is clarinet or for elective credit. Minimum technical requirements: all scales and arpeggios to be played from memory in eighth notes at MM 120, in various articulations. Representative repertoire chosen from the *Klose Method*, the *Lazarus Method*, the *Rose 32 Etudes*, the *Rubank Selected Studies*, and solos selected from the Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Prerequisite for Mu 1258: Mu 1257.

**Mu 2257, 2258 Sophomore Clarinet**

(0-1).....2 hours each  
 Minimum requirements: all scales to be played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 100, in various articulations. Additional etudes and technical studies should include completion of the *Klose Method* or *Lazarus Method*, the *Rose 40 Studies*, and such representative solos as the Brahms Sonatas, the Weber or Mozart concertos and some contemporary works. Minimum practice required: 12 hours per week. Prerequisite for Mu 2257: Mu 1258.

**Mu 1259, 1260 Freshman Oboe**

(0-1) .....2 hours each  
 Designed for the music major or minor whose primary instrument is oboe or for elective credit. Minimum technical requirements: all scales and arpeggios to be played from memory in eighth notes at MM 120, in various articulations; all major scales in broken thirds played from memory in eighth notes at MM 80, in various articulations. Representative repertoire to be chosen from the *Verroust Studies*, the *Rubank Selected Studies* and the *Barret Progressive Exercises*, and solos such as the Handel Concertos and Sonatas, the Dittersdorf Concertos, and equivalent works. Minimum practice required: 12 hours per week. Prerequisite for Mu 1260: Mu 1259.

**Mu 2259, 2260 Sophomore Oboe**

(0-1).....2 hours each  
 A continuation of Mu 1260. Minimum representative requirements: all scales to be played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 100, in various articulations. Additional etudes and technical studies should include the *Barret Grand Studies*, the *Ferling 48 Etudes*, the *Andraud Vade Mecum* and the *Sellner Duets*. Representative literature should include at least two pre-classical sonatas and the orchestral solos for the oboe. Minimum practice required: 12 hours per week. Prerequisite for Mu 2259: Mu 1260.

**Mu 1261, 1262 Freshman Saxophone**

(0-1).....2 hours each  
 Designed for the music education major or minor whose primary instrument is saxophone or for elective credit. Minimum technical requirements: all scales and arpeggios to be played from memory in eighth notes at MM 120, in various articulations; all major scales in broken thirds are to be played from memory in eighth notes at MM 80, in various articulations. Additional technique will be taken from *Selected Studies* by Rubank, *Pares Scale Studies* and others. Solo literature can be selected from the Group 1 listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Prerequisite for Mu 1262: Mu 1261.

**Mu 2261, 2262 Sophomore Saxophone**

(0-1).....2 hours each  
 A continuation of Mu 1262. Minimum representative requirements: all scales and arpeggios to be played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 100, in various articulations. Additional etudes and technical studies should be equivalent to *Ferling, 48 Etudes*, *Klose-Derigny, Complete Method*, and solos by Handel, Rascher, Creston, Ibert, and other contemporary French recital pieces. Minimum practice required: 12 hours per week. Prerequisite for Mu 2261: Mu 1262.

**Mu 1263, 1264 Freshman French Horn**

(0-1).....2 hours each  
 Designed for the music education major or minor whose primary instrument is French horn or for elective credit. Minimum technical requirements: all scales to be played from memory in eighth notes at MM 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at MM 80, in various articulations. Additional technical studies from Alphonse, *Book I*, Pottage, *Preparatory Melodies*; and Kopprasch, *Book I*. Representative solo literature selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Prerequisite for Mu 1264: Mu 1263.

**Mu 2263, 2264 Sophomore French Horn**

(0-1).....2 hours each  
 A continuation of Mu 1264. Minimum representative requirements: all scales and arpeggios played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds played from memory in eighth notes at MM 100, in various articulations. Continuation of technical studies taken from Alphonse, Pottage, and studies from band and orchestra literature. Representative solos selected from the

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works of Gootwald, Painter, Mozart, Scarmolin, Wessel, Whittman, and various transcriptions for the horn. Minimum practice required: 12 hours per week. Prerequisite for Mu 2263: Mu 1264.

### **Mu 1265, 1266 Freshman Trombone or Baritone**

(0-1).....2 hours each

Designed for the music education major or minor whose primary instrument is trombone or baritone or for elective credit. Minimum technical requirements: all scales and arpeggios played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds played from memory in eighth notes at MM 100, in various articulations; continuation of technical studies taken from Kopprasch, *Etudes*; and Mueller, *Technical Studies*. Representative solos taken from works of Guilman, Zimmerman, Pryor, Simmons, and transcriptions for trombone or baritone. Minimum practice required: 12 hours per week. Prerequisite for Mu 2265: Mu 1266.

### **Mu 2265, 2266 Sophomore Trombone or Baritone**

(0-1).....2 hours each

A continuation of Mu 1266. Minimum representative requirements: all scales and arpeggios played from memory in eighth notes at MM160, in various articulations; all major scales in broken thirds played from memory in eighth notes at MM 100, in various articulations; continuation of technical studies taken from Kopprasch *Etudes*; and Mueller's *Technical Studies*. Representative solos to be taken from works of Guilman, Zimmerman, Pryor, Simmons, and transcriptions for trombone or baritone. Minimum practice required: 12 hours per week. Prerequisite for Mu 2265: Mu 1266.

### **Mu 1267, 1268 Freshman Cornet or Trumpet**

(0-1).....2 hours each

Designed for the music education major or minor whose primary instrument is cornet or trumpet or for elective credit. Minimum technical requirements: all scales and arpeggios played from memory in eighth notes at MM 120, in various articulations. Representative repertoire includes etudes and technical studies from Arban, St. Jacome, the Hering *Thirty-two Etudes*, and the Clark *Technical Studies*. Solos selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Prerequisite for Mu 1268: Mu 1267.

### **Mu 2267, 2268 Sophomore Cornet or Trumpet**

(0-1).....2 hours each

A continuation of Mu 1268. Minimum representative requirements: all scales played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds played from memory in eighth notes at MM 100, in various articulations. Additional etudes and technical studies should include St. Jacome, *Selected Studies*; and Williams, *Transposition Studies*; plus representative solos as those of Balay, Fitzgerald, Hindemith, and Busser. Minimum practice required: 12 hours per week. Prerequisite for Mu 2267: Mu 1268.

### **Mu 1269, 1270 Freshman Tuba**

(0-1).....2 hours each

Designed for the music education major or minor whose primary instrument is tuba or for elective credit. Minimum technical requirements: all scales and arpeggios played from memory in eighth note at MM 80, in various articulations. Additional technical studies taken from Eby *Method for Tuba* and the Hering *Thirty-two Etudes*. Representative solo literature selected from Group I listing of the University Interscholastic League. Minimum practice required: 12 hours per week. Prerequisite for Mu 1270: Mu 1269.

### **Mu 2269, 2270 Sophomore Tuba**

(0-1).....2 hours each

A continuation of Mu 1270. Minimum representative requirements: all scales and arpeggios played from memory in eighth notes at MM 160, in various articulations; all major scales in broken thirds played from memory in eighth notes at MM 100, in various articulations. Additional technical studies taken from the Eby *Method for Tuba*, and the Rochut *Etudes, Volume I*; and special transposition studies will be undertaken. Representative solo literature selected from original works for tuba and available transcriptions. Minimum practice required: 12 hours per week. Prerequisite for Mu 2269: Mu 1270.

### **Mu 1271, 1272 Freshman Percussion**

(0-1).....2 hours each

Designed for the music education major or minor whose primary instrument is percussion or for elective credit. Minimum technical requirements: completion of the 26 rudiments through all the various dynamics on the snare drum; rudimental solos selected from the Burns-Moore *Art of Rudimental Drumming*, the N.A.R.D. Solo Book, the Gardner *Progressive Studies* and the Group I listing of the tympani using the Goodman *Modern Method for Timpani* for two tympani; and instruction in the correct method of playing accessory instruments. Minimum practice required: 12 hours per week. Prerequisite for Mu 1272: Mu 1271.

### **Mu 2271, 2272 Sophomore Percussion**

(0-1).....2 hours each

A continuation of Mu 1272. Minimum representative requirements: continued instruction on tympani to include three and four kettles; additional technical studies taken from Seitz' *Modern School of Timpani Playing*, and orchestral literature; advanced rudimental solos for snare drum and multiple percussion solos including

playing the trap set; beginning instructions of mallet instruments to be taken from the xylophone with appropriate solos to be chosen from the literature. Minimum practice required: 12 hours per week. Prerequisite for Mu 2271: Mu 1272.

## Nursing

**Faculty:** Dorothy Jackson, Chairman, Odessa Career Ladder Nursing Program and Associate Degree Nursing Evening Program; Marilyn Kelly, Evening Program Coordinator; Irma Aguilar, Dorothy Cook, Betty Jackson, Rebecca Marcus, Eva Mauldin, Maxine Parks, Janet Phillips, Pat Richey, Robbie Rogers, Candace Taylor, Ann Winn.  
Norma Drennan, Chairman, Kermit Vocational Nursing Program; Maurine Watson.

Odessa College offers comprehensive nursing programs during both day and evening hours in Associate Degree Nursing. Its Career Ladder Program (day classes only) provides learning opportunities to prepare both the licensed vocational nurse and the registered nurse. In addition, there is a vocational nursing program located in Kermit/Monahans, a 12-month program beginning in the fall of each year. Graduates are eligible to take the examination for licensure as vocational nurses. Since enrollment is limited, students are urged to apply by November 1, for admission in the spring semester and by July 1, for admission in the fall semester.

The career ladder program on the Odessa College campus is designed to allow students maximum flexibility in education. Students have the option of progressing through the two levels of nursing after meeting requirements for each level. Level I prepares the vocational nurse, who qualifies, to write the licensing examination for the Licensed Vocational Nurse. Level II prepares the Associate Degree nurse, who qualifies, to write the licensing examination for Registered Nurse. Successful completion of Level II also qualifies students to receive the Associate in Applied Science Degree. Classes are admitted to Level I in the fall and spring semesters and to Level II in the fall semester.

The Transition/Validation course is offered for persons who are licensed vocational nurses. The purpose of this course is to validate and enhance nursing skills and to bring the LVN to the level of the generic student entering the second year. Upon successful completion of the Transition/Validation course, the LVN will receive credit for the first year of the nursing curriculum.

Requirements for admission to all the nursing programs are high school graduation or its equivalent, satisfactory achievement on pre-entrance examination including reading and writing skills, evidence of good physical and emotional health, and a completed application to the Nursing Department and to Odessa College. English language proficiency is essential. Because of limited enrollment, students are urged to apply as early as possible before the proposed date of admission.

There is no discrimination due to age, sex, race, cultural background, or ethnic origin. The nursing programs focus on the nursing care of clients with common health problems. Clinical experience is concurrent within each course and includes medical, surgical, obstetrical, pediatric, psychiatric, and geriatric nursing experiences as well as special selected services. Nursing courses must be taken in the sequence listed. Students must satisfy the objectives for the respective level with a minimum grade of "C" in each required course. Students may be required to withdraw from a course or courses if unsafe practice or practices are identified in the care of clients. Hospital experiences are scheduled during day and evening hours.

All nursing students must be covered by health and accident insurance. Students are responsible for their own transportation to clinical facilities. The Department of Nursing assumes no responsibility for students employed in an agency. Students are personally responsible and liable for any activity participated in while employed. Professional liability insurance purchased by students may be valid in the student role and not in the employment role.

The vocational program is accredited by the Board of Vocational Nurse Examiners; the Career Ladder Program is accredited by the National League for Nursing, the Board of Nurse Examiners for the State of Texas, and the Board of Vocational Nurse Examiners. All curriculum plans are approved by the Coordinating Board of the Texas College and University System.

**Transition/Validation Course  
for  
Licensed Vocational Nurses**

Prior to taking the Transition/Validation Course, licensed vocational nurses must have already successfully completed Biol 1404 and Biol 1405 and must be licensed to practice vocational nursing in Texas. Upon successful completion of these courses, students will follow the curriculum for Level II. All nursing students must have current CPR certification.

| <b>First Year</b> |         |                 |         |
|-------------------|---------|-----------------|---------|
| First Semester    |         | Second Semester |         |
| Course            | Sem Hrs | Course          | Sem Hrs |
| Nu 1604 .....     | 6       | Biol 2403 ..... | 4       |
| *Nu 1201 .....    | 2       | Engl 1311 ..... | 3       |
|                   |         | Nu 2701 .....   | 7       |
|                   |         | Psy 1301 .....  | 3       |
|                   |         | **PE .....      | 1       |

| <b>Second Year</b> |         |                   |         |
|--------------------|---------|-------------------|---------|
| Third Semester     |         | Midwinter Session |         |
| Course             | Sem Hrs | Course            | Sem Hrs |
| Govt 2302 .....    | 3       | Engl 1312 .....   | 3       |
| Nu 2702 .....      | 7       |                   |         |
| **PE .....         | 1       |                   |         |
| Psy 2302 .....     | 3       |                   |         |
| Soc 1301 .....     | 3       |                   |         |

\*Credit may be received by challenge examination.

\*\*HEd 1301 or EMT 1041 may be substituted for the two one-hour PE classes.

When students have successfully completed Nu 1604, they will receive credit for the first year of the nursing curriculum.

**Career Ladder Nursing**

The Career Ladder Nursing Program is designed to allow students maximum flexibility in education. They have the option of progressing through the two levels of nursing. Level I prepares the vocational nurse, and Level II prepares the associate degree nurse. Prior to entering the clinical nursing courses the student must have CPR Certification.

**Course of Study for Nursing  
Level I\***

| <b>First Year</b> |         |                 |         |
|-------------------|---------|-----------------|---------|
| First Semester    |         | Second Semester |         |
| Course            | Sem Hrs | Course          | Sem Hrs |
| Biol 1404 .....   | 4       | Biol 1405 ..... | 4       |
| Nu 1001 .....     | 10      | Nu 1002 .....   | 10      |
| Nu 1201 .....     | 2       |                 |         |

**Third Semester  
(If summer session, lasts 12 weeks)**

| Course        | Sem Hrs |
|---------------|---------|
| Nu 1903 ..... | 9       |

\*Students successfully completing Level I are eligible to write the State Board Examination for licensure as a vocational nurse.

**Level II\*\***

**Second Year**

| First Semester |         | Second Semester             |         |
|----------------|---------|-----------------------------|---------|
| Course         | Sem Hrs | Course                      | Sem Hrs |
| Biol 2403..... | 4       | Govt 2302.....              | 3       |
| Engl 1311..... | 3       | Nu 2702.....                | 7       |
| Nu 2701.....   | 7       | ***PE.....                  | 1       |
| ***PE.....     | 1       | Psy 2302.....               | 3       |
| Psy 1301.....  | 3       | ****Approved Electives..... | 3       |

**Midwinter Session**

| Course         | Sem Hrs |
|----------------|---------|
| Engl 1312..... | 3       |

\*\*Students successfully completing Level II are eligible to write the State Board Examination for licensure as a registered nurse.

\*\*\*HEd 1301 or EMT 1401 may be substituted for the two one-hour PE courses.

\*\*\*\*Approved electives: Soc 1301, Nu 2199, Nu 2299, Nu 2399.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Nu 1001 Basic Nursing**

(9-19)..... **10 hours**

Prepares the student to perform selected basic nursing procedures for clients with self-care limitations and stable health deviations. Emphasizes communication skills, medical terminology, and legal and ethical responsibilities. Introduces observing, recording, and reporting. Begins process of problem solving, medical asepsis, nutrition and fluids, administration of medication, growth and development, and maternal health. Includes clinical experiences in hospitals, geriatric facilities, day care, and simulated labs. Prerequisite: None. Corequisites: Biol 1404, and Nu 1201.

**Nu 1002 Care of Clients with Unstable Health Conditions I**

(7-21) ..... **10 hours**

Presents learning opportunities to develop practical abilities required for assessing, identifying, and meeting nursing requirements of hospitalized pediatric and adult clients with medical/surgical conditions. Requires special skills for meeting basic needs of maternity clients during pregnancy, labor, and delivery. Presents care of the newborn. Includes theory clinical, including simulated labs relevant to care from all age groups and varied cultural backgrounds. Prerequisites: Nu 1001, Nu 1201, and Biol 1404. Corequisite: Nu 1405.

**Nu 1201 Pharmacology**

(2-0)..... **2 hours**

Provides activities to help students recognize selected drug classifications and their actions, identify common drugs within each classification, and to become aware of some important implications for their administration. Prerequisite: None. Corequisites: Biol 1404, Nu 1001 or consent of the department chairman.

**Nu 1604 Transition/Validation for the L.V.N.**

(4-8)..... **6 hours**

Presents major concepts basic to the curriculum and conceptual framework in order to assure orientation to nursing as a professional endeavor. Emphasizes communications, beginning physical assessment, nursing process, rationale for actions, unstable medical-surgical and pediatric conditions, and obstetric complications. Stresses role change and issues and trends in nursing. Focuses on application of these concepts to clinical practice of nursing by using nursing process. Requires supervision by clinical instructor while in the hospital setting. Successful completion of course entitles student to credit for first year of the nursing curriculum. Prerequisites: Biol 1404 and 1405. Corequisite: Nu 1201.

**Nu 1903 Care of Clients with Unstable Health Conditions II**

(6-22.5 Spring; 8-30 Summer)..... **9 hours**

Includes theoretical application of scientific principles and practices using the nursing process for total nursing care of clients with unstable medical-surgical problems. Assists in preparing student for role of vocational nurse. Clinical includes care of clients in hospitals and simulated labs with medical/surgical conditions from varied age groups and cultural backgrounds. Prerequisites: Biol 1405 and Nu 1002.

**Nu 2701 Nursing Care of Clients with Critical Health Deviations**

(4-12)..... 7 hours  
 Provides students with opportunities to apply, review, and bring together previously-acquired knowledge in caring for more acutely ill clients in the hospital environment. Requires recognition and response to all aspects of a client's problem—human needs in face of crisis and problems regarding regulatory and body systems, for example. Includes operating room nursing. Care planned and given in critical care units. Prerequisite: Nu 1903. Corequisite: Biol 2403.

**Nu 2702 Complex Health and Nursing Problems**

(3-16) ..... 7 hours  
 Introduces students to clients of various age groups and cultural backgrounds who have overt psychiatric illness. Includes introduction to agencies concerned with community health care. Presents opportunity to learn legal-ethical aspects of professional nursing, assigning priorities in administering care, methods of health-team communication, supervising activities of others, and transcribing doctors' orders. Implements theoretical content in clinical environment. Prerequisites: Nu 2701 and Biol 2403.

**Nu 2399 Special Topics**

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

**Nu 2299 Special Topics**

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

**Nu 2199 Special Topics**

(1-0)..... 1 hour  
 Seminar sessions designed for persons in nursing and allied health. May include specialized instruction in arithmetic review and techniques in dosage calculations; nutrition and diet therapy; pediatrics and gerontology; adult health problems; obstetrics, mental health, and the nursing process. Focuses on special interest to groups of students. Offered as need arises. May be taken 3 times for credit. Prerequisite: Consent of the department chairman.

**Evening Nursing Program**

The Odessa College Evening Nursing Program offers a sequence of evening classes leading to an Associate in Applied Science Degree and preparation to write the licensing examination for a Registered Nurse. Nursing courses begin in the fall semester of even-numbered years. Psychiatric clinical experiences may be held during day hours. Prior to entering the nursing courses, the student must have completed the academic support course requirements designated in the first year of the curriculum and be currently certified in CPR.

**Course of Study for Nursing**

**First Year**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Biol 1404..... | 4       | Biol 1405.....  | 4       |
| Engl 1311..... | 3       | *PE.....        | 1       |
| *PE.....       | 1       | Psy 2302.....   | 3       |

**Summer Session I**

| Course         | Sem Hrs | Course       | Sem Hrs |
|----------------|---------|--------------|---------|
| Biol 2403..... | 4       | Nu 1201..... | 2       |

**Summer Session II**

**Second Year**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Nu 1901.....   | 9       | Nu 1902.....    | 9       |

**Summer Session I**

| Course         | Sem Hrs | Course                   | Sem Hrs |
|----------------|---------|--------------------------|---------|
| Engl 1312..... | 3       | Govt 2302.....           | 3       |
| Psy 1301.....  | 3       | **Approved Elective..... | 3       |

**Summer Session II**

**Third Year**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Nu 2901.....   | 9       | Nu 2902.....    | 9       |

\*HEd 1301 or EMT 1401 may be substituted for the two one-hour PE courses.

\*\*Approved electives: Soc 1301, Nu 2199, Nu 2299, Nu 2399.

**Evening Nursing Courses**

- Nu 1901 Nursing I**  
 (5-14)..... **9 hours**  
 Prepares student to perform selected basic nursing procedures for clients with self-care limitations and stable health deviations. Presents communication skills as integral part of course, including legal and ethical responsibilities. Introduces observing, recording, and reporting; process of beginning problem-solving; medical asepsis; nutrition and fluids; administration of medications; growth and development; and maternal health. Integrates clinical experience in medical-surgical environment. Prerequisites: Engl 1311, Biol 1404, Biol 1405, Biol 2403, Psy 2302, Nu 1201 and two 1-hour PE courses.
- Nu 1902 Nursing II**  
 (5-14)..... **9 hours**  
 Provides learning opportunities to develop practical abilities required for assessing, identifying, and meeting nursing requirements of hospitalized clients with medical-surgical conditions. Requires special skills for meeting basic needs of the maternity client during pregnancy, labor, and delivery. Presents care of the newborn. Theory includes content relevant to caring for clients in all age groups and from varied cultural backgrounds. Provides clinical experiences in maternity, pediatric, and medical-surgical units. Prerequisite: Nu 1901.
- Nu 2901 Nursing III**  
 (5-14)..... **9 hours**  
 Emphasizes meeting nursing needs of the client adapting to unstable or critical health problems. Continues use of previously-learned skills. Provides opportunity to develop assessment and intervention skills relevant to care of these clients. Presents theory to assist understanding the impact of health problems on the biopsychosocial integrity of the individual. Provides opportunity to assist clients of all age groups from varied cultural backgrounds in medical-surgical units and mental health facilities. Requires some mental health experiences during day hours instead of evenings. Prerequisites: Nu 1902, plus all academic course requirements.
- Nu 2902 Nursing IV**  
 (5-14)..... **9 hours**  
 Provides theory and clinical practice to assist student in adapting to graduate role. Presents legal-ethical aspects of professional nursing, as well as role of the nurse in planning and directing care of groups of clients in a health care agency. Provides opportunity to assist clients of all age groups from varied cultural backgrounds. Offers clinical experiences in critical care unit and in community facilities. Prerequisite: Nu 2901.
- Nu 2399 Special Topics**  
 (3-0)..... **3 hours**
- Nu 2299 Special Topics**  
 (2-0)..... **2 hours**
- Nu 2199 Special Topics**  
 (1-0)..... **1 hour**  
 Seminar sessions designed for persons in nursing and allied health. May include specialized instruction in arithmetic review and techniques in dosage calculations; nutrition and diet therapy; pediatrics and gerontology; adult health problems; obstetrics, mental health, and the nursing process. Focuses on special interest to groups of students. Offered as need arises. May be taken 3 times for credit. Prerequisite: Consent of department chairman.

**Vocational Nursing  
 (Kermit/Monahans Extension Center)**

The vocational nursing program in Kermit/Monahans is a 12-month program beginning in the fall of each year. Graduates are eligible to take the examination for licensure as vocational nurses. Enrollment is limited and students are urged to apply early.

**Course of Study for Vocational Nursing**

|              | First Semester |              | Second Semester |  |
|--------------|----------------|--------------|-----------------|--|
| Course       | Sem Hrs        | Course       | Sem Hrs         |  |
| VN 1601..... | 6              | VN 1603..... | 6               |  |
| VN 1602..... | 6              | VN 1604..... | 6               |  |
|              | Summer Session |              |                 |  |
|              | Course         |              | Sem Hrs         |  |
|              | VN 1605.....   |              | 6               |  |

## 108 Nursing

### VN 1601 Vocational Nursing I

(13-0)..... 6 hours

Includes study of personal and vocational relationships, maternal and child health, nutrition, structure and function of the human body, and basic microbiology. Prerequisite: None.

### VN 1602 Vocational Nursing II

(11-11)..... 6 hours

Presents fundamentals of nursing as related to client's need. Emphasizes total care. Prepares student to perform basic nursing procedures for comfort and safety of clients with self-care limitations. Presents skills in observing, reporting, and recording, as well as communication skills. Stresses medical terminology. Emphasizes application of nursing process in meeting basic needs of the client. Introduces aseptic technique and diet therapy related to nursing. Closely correlates laboratory experience with classroom instruction and provides opportunity for student to practice skills under supervision of an instructor. Corequisite: VN 1601.

### VN 1603 Vocational Nursing III

(7-11)..... 6 hours

Includes study of pharmacology, mental health, mental illness, and geriatrics. Prerequisites: VN 1601 and VN 1602.

### VN 1604 Vocational Nursing IV

(8-11)..... 6 hours

Includes study of medical and surgical nursing. Designed to aid in acquiring and developing knowledge, skills, and attitudes related to comprehensive nursing care of adults with medical and surgical conditions. Includes emotional and spiritual needs relating to nursing care along with specific drug and diet therapy. Includes basic first aid principles applicable to an emergency situation. Class Hours: Medical, 64; Surgical, 64. Prerequisites: VN 1601 and VN 1602. Corequisite: VN 1603.

### VN 1605 Vocational Nursing V

[(0-40) 12 weeks]..... 6 hours

Provides experience for vocational student to become prepared in bedside nursing. Consists totally of hospital or related areas of clinical instruction. Prerequisites: VN 1601, VN 1602, VN 1603, and VN 1604.

## Office Education

**Faculty:** Kay Rutherford, Chairman; Billie Duncan, Dr. Rita Hurst, Carol Lemen, Nancy Sturges.

The Office Education program is designed to offer the student intensive, individualized study. The intensive classes meet daily between 8 a.m. and 3 p.m., Monday through Friday and between 6 p.m. and 9 p.m. Monday through Thursday during the fall and spring semesters. The summer instructional schedule is 7 a.m. to 1 p.m. Monday through Thursday.

Students have the option of completing a Certificate of Technology in nine months or an Associate in Applied Science Degree in 18 months. Students may begin the certificate program either at the start of a regular semester or any quarter date (listed in the current class schedule). Students seeking personal development courses rather than a certificate or degree may enroll in any individual class.

All students will be advised on their individual program course sequence based on their present skill level and desired goals. Individual advisement will be in Instructional Building, Room 217. Registration will be conducted through the regular college procedure.

### Course of Study for Associate in Applied Science Degree (Office Careers Option)

| First Semester          |         | Second Semester            |         |
|-------------------------|---------|----------------------------|---------|
| Semester-length Courses | Sem Hrs | Semester-length Courses    | Sem Hrs |
| OE 1401 or 1402.....    | 4       | OE 1208 (Eight Weeks)..... | 2       |
| OE 1404.....            | 4       | OE 1402 or 1403.....       | 4       |
|                         |         | OE 1406.....               | 4       |
|                         |         | *Approved Electives.....   | 6/8     |

## Eight-week Courses

| Course  | Sem Hrs |
|---|---------|
| OE 1201.....  | 2       |
| OE 1202.....  | 2       |
| OE 1205.....  | 2       |
| OE 1206.....  | 2       |
| OE 1303.....  | 3       |
| OE 1304 (If beginning typist,<br>delay until second semester.)..... | 3       |

\*Approved Electives for second semester: OE 2401 and OE 2402 (16 weeks), BA 1301 (16 weeks), Mgt 1301 (16 weeks), and Spch 2360 (16 weeks).

Students not desiring the Associate in Applied Science degree may receive a Certificate of Technology upon successfully completing courses specified in the first and second semester.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

Courses completed for a Certificate of Technology plus the following courses will satisfy requirements for an Associate in Applied Science Degree.

| Third Semester          |         | Fourth Semester         |         |
|-------------------------|---------|-------------------------|---------|
| Semester-length Courses | Sem Hrs | Semester-length Courses | Sem Hrs |
| CIS 1400 or 1401 .....  | 4       | BA 1301 .....           | 3       |
| Engl 1311.....          | 3       | BA 2311 .....           | 3       |
| Govt 2301 or 2302.....  | 3       | Eco 1301.....           | 3       |
| Math 1301.....          | 3       | Engl 1321.....          | 3       |
| Mgt 1301.....           | 3       | *PE.....                | 1       |
| *PE.....                | 1       | Spch 2360.....          | 3       |

\*HEd 1301 may be substituted for the two one-hour PE classes.

**OE 1201 Business Math I**

[(3-2) 8 weeks]..... 2 hours  
Develops skills and accuracy in fundamental problems of business mathematics. Applies basic skills to actual business situations. Prerequisite: None.

**OE 1202 Business Math II**

[(3-2) 8 weeks]..... 2 hours  
Provides an intensive review of fundamental mathematic operations: addition, subtraction, multiplication, division, fractions, decimals, and percentage. Stresses computational skills relating to interest, discount, payroll, depreciation, expense accounts, retail selling, etc. Develops shortcut methods and ability to work with speed and accuracy. Prerequisite: OE 1201.

**OE 1205 Business Correspondence**

[(1-4) 8 weeks]..... 2 hours  
Develops skill in writing letters of request, response, sales, and collection. Further develops skills in writing followup letters, brief reports, and in filling out applications. Prerequisites: OE 1206 and OE 1401.

**OE 1206 Business English**

[(3-2) 8 weeks]..... 2 hours  
Provides basic skills in English grammar, punctuation, and style. Prerequisite: None.

**OE 1208 Office Machines**

[(1-4) 8 weeks]..... 2 hours  
Teaches touch method of operating electronic printing calculator. Stresses mathematical problem application and practice. Prerequisite: None.

**OE 1302 Office Simulation**

[(2-4) 8 weeks]..... 3 hours  
Focuses on application of business and human relations skills in an office environment. Develops, applies, and integrates skills in actual job training. Emphasizes initiative, interaction, follow-through, and flow of work. Prerequisite: OE 1401.

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- OE 1303 Introduction to Word Processing**  
[(1-5) 8 weeks] ..... 3 hours  
Introduces principles and purposes of word processing, including effect of automated office equipment, efficiency of automated office equipment, role of secretary in automated office, and career opportunities for people with word processing skills. Prerequisite: None.
- OE 1304 Word Processing Machine Operation**  
[(1-5) 8 weeks] ..... 3 hours  
Provides training on word processing machines. Includes basic machine operations as well as practical applications. Prerequisite: OE 1402 (may be taken concurrently) or type 45 WAM.
- OE 1401 Beginning Typewriting**  
[(1-5) 16 weeks] ..... 4 hours  
Develops touch-method skills on alphabetical keyboard, including numbers, symbols, and service mechanisms. Introduces proper form for business letters, transcripts, and reports—as well as tabulations and displays. Prerequisite: None.
- OE 1402 Intermediate Typewriting**  
[(1-5) 16 weeks] ..... 4 hours  
Designed for students who have had typewriting in high school or who have had beginning typewriting. Includes composing and typing business letters, tabulating materials, and typing manuscripts. Prerequisite: OE 1401.
- OE 1403 Advanced Typewriting**  
[(1-5) 16 weeks] ..... 4 hours  
Designed for students who wish to increase typewriting speed and knowledge of business forms. Includes practice in typing legal documents, rough drafts, payrolls, invoices, business letters, telegrams, envelope addresses, manuscript work, and stencil cutting. Prerequisite: OE 1402.
- OE 1404 Office Bookkeeping**  
[(1-5) 16 weeks] ..... 4 hours  
Prepares student to perform elementary bookkeeping skills in the accounting cycle: journalizing, posting, preparing a trial balance, and completing income statements and balance sheets for small business firms. Prerequisite: None.
- OE 1406 Office Practice**  
[(3-2) 16 weeks] ..... 4 hours  
Introduces the study of modern office practices which affect the office worker. Gives an overview of procedures necessary in office work, the importance of human relations, proofreading, telephone techniques, management of financial records, filing procedures, and the development of machine transcribing techniques. Prerequisites or Corequisites: OE 1206 and OE 1402.
- OE 2401 Beginning Shorthand**  
[(1-5) 16 weeks] ..... 4 hours  
A complete course in Gregg shorthand. Presents theory, dictation, and transcription. Emphasizes correct formation of shorthand symbols and brief forms. Requires extensive practice in correct phrasing, reading, writing, and transcribing of shorthand characters. Prerequisite: None.
- OE 2402 Intermediate Shorthand**  
[(1-5) 16 weeks] ..... 4 hours  
Offers a complete course in Gregg shorthand theory, dictation, and transcription. Emphasizes speed building and transcribing accurately written shorthand notes. Prerequisites: OE 2401 and OE 1401.
- OE 2403 Office Style Dictation & Skill Building**  
[(1-5) 16 weeks] ..... 4 hours  
Increases speed and accuracy in taking transcribing and typing dictation. Prerequisite: OE 2401 or OE 2402.
- OE 2404 Elementary Machine Shorthand**  
[(1-5) 16 weeks] ..... 4 hours  
Includes mastery of stenographic keyboard by the touch system. Includes phonetic applications, principles and rules of machine shorthand, prefix and suffix formations, number practice, punctuation accuracy drills, and note phrase reading mastery. Prerequisite: OE 1401.
- OE 2405 Intermediate Machine Shorthand**  
[(1-5) 16 weeks] ..... 4 hours  
Includes review of basic theory of shorthand development of automatic recall on brief forms, derivatives, and phrasing principles; development of speed and accuracy through drills and tests; and drill on intermediate phonetic patterns, reading practice, and simple reversal forms. Prerequisites: OE 2404 and OE 1401.

# Petroleum Technology

**Faculty:** Gary Gay, Chairman; Garry Tucker.

The Odessa College Petroleum Technology program is designed for people entering the industry for the first time and for employees in the industry who want to upgrade their skills. The two-year program is suggested for men and women who plan to work for producers, manufacturers, service firms, or supply firms.

## Course of Study for Associate in Applied Science Degree

### First Year

| First Semester                             |          | Second Semester                     |          |
|--|----------|-------------------------------------|----------|
| Course                                     | Sem Hrs. | Course                              | Sem Hrs. |
| Engl 1311 or 1311 (Technical writing)..... | 3        | Engl 1312 or 1321 or Spch 1310..... | 3        |
| Geol 1401.....                             | 4        | Geol 1402.....                      | 4        |
| Math 1313 or More Advanced.....            | 3        | Math 1335 or More Advanced.....     | 3        |
| *PE.....                                   | 1        | *PE.....                            | 1        |
| Pet 1300.....                              | 3        | Pet 1311.....                       | 3        |
| Pet 1310.....                              | 3        | Pet 1320.....                       | 3        |

### Second Year

| Third Semester            |         | Fourth Semester           |         |
|---------------------------|---------|---------------------------|---------|
| Course                    | Sem Hrs | Course                    | Sem Hrs |
| Govt 2302.....            | 3       | Pet 2360.....             | 3       |
| Pet 2310.....             | 3       | Pet 2390.....             | 3       |
| Pet 2325.....             | 3       | Pet 2395.....             | 3       |
| **Approved Electives..... | 6       | **Approved Electives..... | 6       |

\*HEd may be substituted for the two one-hour physical education courses.

\*\*Approved Electives: Any Petroleum course not already required.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing 39 semester hours of Petroleum courses approved by the department chairman plus Geol 1401 and 1402.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

#### Pet 1300 Petroleum Overview

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

Provides overview of major divisions within petroleum industry: exploration, drilling, production, transportation, marketing, and refining. Prerequisite: None.

#### Pet 1301 Basic Oilfield Hydraulics

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

Introduces oil field hydraulics applicable to drilling, completion, and production. Includes characteristics of flowing and static fluids: the effect of velocity, viscosity, and fluid type in tubular systems. Prerequisite: Pet 1300 or consent of the department chairman.

#### Pet 1302 Drilling Rig Equipment

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

Emphasizes technical information covering care and use of drilling equipment, hoists, power units, derricks, masts, pumps, and derrick equipment. Prerequisite: Pet 1300 or consent of the department chairman.

#### Pet 1310 Rotary Drilling Fluids

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

A study of the functions and properties of oil well drilling fluids. Prerequisite: Pet 1300 or consent of the department chairman.

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- Pet 1311 Well Completion Methods**  
(3-0)..... 3 hours  
Focuses upon effects of drilling through the production formation, logging, drill stem testing, running pipe, cementing, perforating, completion techniques, and methods of formation stimulation. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 1320 Production Methods**  
(3-0)..... 3 hours  
Introduces petroleum production. Includes effect of well completion methods upon production, artificial lift, natural flow, lease layouts, lease equipment, and basic problems and solutions in production efforts. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 1370 Petroleum Instrumentation**  
(3-0)..... 3 hours  
Surveys instrumentation, measurement, and control devices used within most major aspects of the petroleum industry. Emphasizes application, installation, and operation of each. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 1380 Computers for Petroleum**  
(3-0)..... 3 hours  
Designed for the student in the Petroleum Technology program. Introduces programmable calculators, mini-computers, and computer language. Emphasizes knowledge of use of computers rather than programming. Stresses use of the computer in the petroleum industry. Prerequisite: Consent of the department chairman.
- Pet 1800 Drilling Fluids Technology**  
(5-15) 12 weeks ..... 8 hours  
A comprehensive study of all aspects of drilling fluids. Designed to prepare the student for work as a drilling fluids technician. Covers functions and testing of drilling fluids, calculations relating to mud work, composition and properties, flow characteristics, solids control, fluid loss, inhibitive muds, oil muds, and completion fluids. Class meets four hours per day, five days per week, for 12 weeks. Prerequisite: Consent of the department chairman.
- Pet 2185 Well Control Refresher**  
(7-1)..... 1 hour  
A refresher course in well control. Complies with the Minerals Management Service Outer Continental Shelf Order T-1 (M.M.S. approved). Combines lecture, technical discussion, and simulator time. Prerequisite: Consent of the department chairman.
- Pet 2285 Well Control**  
(30-2)..... 2 hours  
Provides information to meet all government requirements stated in the Minerals Management Service Outer Continental Shelf Order T-1 (M.M.S. approved). Presents technology and equipment to maintain well control during drilling operation. Includes simulator exercises for both surface and subsea stacks. Prerequisite: Consent of the department chairman.
- Pet 2303 Petroleum Geology**  
(2-2)..... 3 hours  
A survey course on principles of geology related to petroleum properties, accumulation, distribution, structures, migration, and discovery. Includes study of actual fields for learning characteristics of different trapping mechanisms. Prerequisites: Geol 1401, Geol 1402, and Pet 1300 or consent of the department chairman.
- Pet 2310 Drilling Methods**  
(3-0)..... 3 hours  
Emphasizes the actual drilling process. Analyzes problems encountered, including control of downhole pressures. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2325 Well Workover Methods**  
(3-0)..... 3 hours  
Presents basics of well completion, oil well servicing, well workover, plugging, reentry, equipment needs, and maintenance programs. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2331 Natural Gas Processing**  
(3-0)..... 3 hours  
Presents all aspects of natural gas processing and field handling techniques. Includes handling corrosives, corrosive and inert gases, and equipment for separation, dehydration, and control of natural gas. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2340 Refining Methods**  
(3-0)..... 3 hours  
Emphasizes basics of petroleum refining techniques, processes, equipment, and support personnel. Prerequisite: Pet 1300 or consent of the department chairman.

- Pet 2350 Pipelining**  
 (3-0)..... 3 hours  
 Provides an overview of construction, repair, and maintenance on the following pipeline systems: product, oil, natural gas, salt water, and fresh water. Determines appropriate lines for size, pressure, and type (steel, PVC, PE, etc.). Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2360 Corrosion**  
 (3-0)..... 3 hours  
 Presents problems of corrosion in downhole, surface equipment, pipelines, etc. Seeks basic causes and recommends most reliable solutions. Emphasizes terminology and techniques. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2380 Petroleum: Land Titles**  
 (3-0)..... 3 hours  
 Presents land titles and related documents, both current and historical, of concern to the petroleum industry. Includes titles, mineral take-offs, right-of-ways and claim of the surface estate, mapping, metes and bounds description, surveys, and land systems. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2381 Petroleum: Law and Contracts**  
 (3-0)..... 3 hours  
 A general study of oil and gas law. Emphasizes interests created, right of the land owner, provisions in oil and gas leases, and other related contracts. Includes legislation dealing with production and conservation. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2382 Well Stimulation Methods**  
 (3-0)..... 3 hours  
 Presents detailed study in methods of well stimulation. Develops students' skills necessary to design acid or fracture treatment. Concentrates on needs of Permian Basin. Prerequisite: None.
- Pet 2383 Chemical Treating in Production Operations**  
 (3-0)..... 3 hours  
 Stresses chemical treating in all areas of production. Presents demonstration sessions using chemicals. Designed for Permian Basin production applications. Prerequisite: None.
- Pet 2388 Artificial Lift**  
 (3-0)..... 3 hours  
 Designed for students who have completed Production Methods and for individuals who want to further their knowledge of various lift systems. Stresses practical aspects of artificial lift in conventional production systems. Includes such topics as sucker rod pumps, tubing and rod strings, tubing anchors, beam pumps, gas lift and submersible pumping systems, wellheads, and equipment involved in secondary recovery systems. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2389 Gas and Liquid Measurement**  
 (3-0)..... 3 hours  
 Provides instruction in accuracy, quality, and validity of gas and liquid measurement techniques for field and plant operating personnel. Emphasizes correct techniques of measurement and proper procedures to correct errors. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2390 Petroleum Regulations**  
 (3-0)..... 3 hours  
 Concerned with regulatory requirements and strictures placed upon petroleum industry by agencies such as the RRC, DOT, FERC, DOE, and OSHA. Includes effects of such rulings and proper responses. Prerequisite: Pet 1300 or consent of the department chairman.
- Pet 2391 Special Problems**  
 (1-9)..... 3 hours  
 Includes selected topics for individual study or research under staff supervision. Presents drilling, oil production, natural gas production, well servicing, oil and gas supplies, transportation problems, and any area related to the petroleum industry. Prerequisite: Consent of the department chairman.
- Pet 2395 Petroleum Safety**  
 (3-0)..... 3 hours  
 Presents overview of safety in the petroleum industry. Includes CPR, multi-media, defensive driving, and laws affecting individuals in the petroleum industry, as well as case studies of accidents, their causes and cures. Prerequisite: Consent of the department chairman.
- Pet 2398 Petroleum Cooperative Work Experience**  
 (2-20)..... 3 hours  
 A joint venture between student and employer. Stresses student's industrial experience as related to academic studies. Develops complete analysis of student's job task, including planning, supervision, execution, problems encountered, safety hazards, etc. Prerequisite: Consent of department chairman and application must be completed at least one semester prior to enrollment.

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|   |         |
|---|---------|
| <b>Pet 2399 Petroleum Technology Special Topics</b><br>(0-5)..... | 3 hours |
| <b>Pet 2299 Petroleum Technology Special Topics</b><br>(0-3)..... | 2 hours |
| <b>Pet 2199 Petroleum Technology Special Topics</b><br>(0-1)..... | 1 hour  |

Workshop seminar sessions devoted to instruction in specialized topics pertinent to the oil industry. May include basic petroleum technology, corrosion control, drilling, energy conservation, management, production, reservoirs and geology, safety, sales and marketing, well control and workover, as well as other special programs when technology advances or special needs arise. Features speakers or panels of specialists from the petroleum industry with expertise in a particular subject area. May be repeated with a different instructor for college credit a maximum of two times. Seminar and hours credit must be approved by the department chairman. Prerequisite: Consent of the department chairman.

## Physical Education

**Faculty:** L.E. McColloch, Chairman; Jay Box, Fletcher Cockrell, Tim Dopp, Betty Fredrickson, Ken Hefner, Pat Hodges, Betty Hudson, Bill Lawrence, Archie Myers, Craig Obermeyer, James Segrest.

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 finally (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 25 different areas in the physical education curriculum) which will best contribute to their well being, their leisure-time skills, and to their total educational development.

### Course of Study for Associate in Science Degree

| First Year                      |         |                                 |         |
|---------------------------------|---------|---------------------------------|---------|
| First Semester                  |         | Second Semester                 |         |
| Course                          | Sem Hrs | Course                          | Sem Hrs |
| Biol 1401.....                  | 4       | Biol 1402.....                  | 4       |
| Engl 1311.....                  | 3       | Engl 1312.....                  | 3       |
| Hist 2301.....                  | 3       | Hist 2302.....                  | 3       |
| Math 1313 or More Advanced..... | 3       | Math 1341 or More Advanced..... | 3       |
| PE 1301.....                    | 3       | **Elective.....                 | 3       |
| *PE (Activity).....             | 1       | *PE (Activity).....             | 1       |

| Second Year                 |         |                             |         |
|-----------------------------|---------|-----------------------------|---------|
| Third Semester              |         | Fourth Semester             |         |
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Biol 1403.....              | 4       | Engl (Sophomore Level)..... | 3       |
| Engl (Sophomore Level)..... | 3       | Govt 2302.....              | 3       |
| Govt 2301.....              | 3       | Elective.....               | 3       |
| HEd 1301.....               | 3       | **Electives.....            | 6       |
| **Elective.....             | 3       | *PE (Activity).....         | 1       |
| *PE (Activity).....         | 1       |                             |         |

\*Students majoring in Physical Education in preparation for a teaching career are required to take four semesters of activity classes in the following areas:

One class of gymnastics or tumbling  
One class of team activity

One class of individual activity  
One class of dance activity

Athletics courses will not be counted as part of the four activity classes for PE majors.

\*\*Electives will be selected from the following three-hour classes based on senior institution requirements: PE 1302, PE 2301, PE 2302, PE 2303, PE 2304, Psy 1301, Soc 1301, Spch 1310, and HEd 2301.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

It is also recommended that physical education majors take more than the minimum of four one-hour activity classes in their preparation for a teaching career. PE majors should also consider the requirements of the senior college to which they intend to transfer and plan their junior college scholastic schedule accordingly.

Physical Education activity classes meet three hours weekly for one semester-hour credit. An activity class may be repeated once for credit.

|  |        |
|--|--------|
| PE 1101 Aerobics (0-3) .....                             | 1 hour |
| PE 1104 Archery (0-3) .....                              | 1 hour |
| PE 1107 Badminton (0-3) .....                            | 1 hour |
| PE 1110 Basketball, Men (0-3) .....                      | 1 hour |
| PE 1113 Basketball, Women (0-3) .....                    | 1 hour |
| PE 1115 Bowling (0-3) .....                              | 1 hour |
| PE 1116 Cheerleading (0-3) .....                         | 1 hour |
| PE 1117 Camping (0-3) .....                              | 1 hour |
| PE 1118 Defensive Tactics (0-3) .....                    | 1 hour |
| PE 1119 Advanced Defensive Tactics (0-3) .....           | 1 hour |
| PE 1120 Fencing, beginning (0-3) .....                   | 1 hour |
| PE 1121 Fencing, advanced (0-3) .....                    | 1 hour |
| PE 1123 Folk Dance (0-3) .....                           | 1 hour |
| PE 1124 Football, touch (0-3) .....                      | 1 hour |
| PE 1127 Foreign Dance (0-3) .....                        | 1 hour |
| PE 1130 Golf (0-3) .....                                 | 1 hour |
| PE 1133 Gymnastics (0-3) .....                           | 1 hour |
| PE 1137 Handball (0-3) .....                             | 1 hour |
| PE 1140 Judo and Karate (0-3) .....                      | 1 hour |
| PE 1143 Modern Dance (0-3) .....                         | 1 hour |
| PE 1146 Modern Dance, Theatre Dance Form I (0-3) .....   | 1 hour |
| PE 1148 Dance: Rehearsal and Performance (0-3) .....     | 1 hour |
| PE 1149 Coed Physical Conditioning (0-3) .....           | 1 hour |
| PE 1150 Women's Physical Conditioning (0-3) .....        | 1 hour |
| PE 1151 Men's Physical Conditioning (0-3) .....          | 1 hour |
| PE 1153 Racquetball (0-3) .....                          | 1 hour |
| PE 1156 Recreational Sports (0-3) .....                  | 1 hour |
| PE 1158 Rodeo (0-3) .....                                | 1 hour |
| Prerequisite: Consent of the instructor.                 |        |
| PE 1159 Red Cross Life Saving (0-3) .....                | 1 hour |
| PE 1160 Social Dance (0-3) .....                         | 1 hour |
| PE 1163 Softball (0-3) .....                             | 1 hour |
| PE 1164 Scuba Diving (0-3) .....                         | 1 hour |
| PE 1166 Swimming and Diving (0-3) .....                  | 1 hour |
| PE 1167 Water Sports Games (0-3) .....                   | 1 hour |
| Prerequisite: Intermediate or advanced level of ability. |        |
| PE 1169 Tap Dancing (0-3) .....                          | 1 hour |
| PE 1171 Tennis, beginning (0-3) .....                    | 1 hour |
| PE 1172 Tennis, advanced (0-3) .....                     | 1 hour |

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PE 1174 Trampoline (0-3)..... 1 hour  
PE 1176 Volleyball (0-3)..... 1 hour  
PE 1178 Skiing (0-3)..... 1 hour  
PE 2148 Modern Dance: Theatre Dance Form II (0-3)..... 1 hour  
PE 1181 Basketball, varsity (0-3)..... 1 hour  
PE 2181 Basketball, varsity (0-3)..... 1 hour  
PE 1183 Golf, varsity (0-3)..... 1 hour  
PE 2183 Golf, varsity (0-3)..... 1 hour  
PE 1185 Gymnastics, varsity (0-3)..... 1 hour  
PE 2185 Gymnastics, varsity (0-3)..... 1 hour  
PE 1189 Tennis, varsity (0-3)..... 1 hour  
PE 2189 Tennis, varsity (0-3)..... 1 hour  
PE 1191 Track and Field (0-3)..... 1 hour  
PE 2191 Track and Field (0-3)..... 1 hour  
PE 1193 Rodeo, varsity (0-3)..... 1 hour  
PE 2193 Rodeo, varsity (0-3)..... 1 hour

**PE 1301 Orientation in Health, Physical Education and Recreation**

(0-3)..... 3 hours  
Presents aims, objectives, curriculum, and philosophical and historical orientation of physical education, health education, and recreation. Includes acquisition of motor skills, relationship of education principles of practice, and the psychological, sociological, and biological aspects. Prerequisite: None.

**PE 1302 Camping and Outdoor Education**

(2-2)..... 3 hours  
Covers general aspects of camping and survival in the wilderness. Includes camp crafts, ecology, campsite preparation, back-packing, edible plants, compass orientation, and map reading. Also includes a special project and outdoor laboratory experience. Camping fee charged. Prerequisite: None.

**PE 1303 Movement and Recreation**

(2-2)..... 3 hours  
Consists of recreational activity training in basic movement skills, movement exploration, apparatus work, manipulative activities, rhythmic activities, basic stunts and tumbling, perceptual motor experiences, and simple games applied to children on the lab site. Prerequisite: None.

**PE 2301 Techniques of Officiating Sports I**

(2-2)..... 3 hours  
Presents effective officiating methods and techniques for basketball and track. Includes rules, mechanics, tournaments, and officials' associations. Prerequisite: Consent of the instructor.

**PE 2302 Techniques of Officiating Sports II**

(2-2)..... 3 hours  
Presents effective officiating methods and techniques for gymnastics and volleyball. Includes rules, mechanics, protests, tournaments, and officials' associations. Prerequisite: Consent of the instructor.

**PE 2303 Techniques of Coaching Sports I**

(2-2)..... 3 hours  
Presents fundamental skills, individual and team play, organization of practices, and handling of teams during competitive season of basketball and track. Prerequisite: Consent of the instructor.

**PE 2304 Techniques of Coaching Sports II**

(2-2)..... 3 hours  
Presents fundamental skills, individual and team play, organization of practices, and handling of teams during the competitive season for gymnastics and tennis. Prerequisite: Consent of the instructor.

**Health Education**

**HEd 1301 First Aid**

(3-0)..... 3 hours  
Consists of Multi-media, CPR, and standard American Red Cross first aid. Covers bandaging and transporting of injured. Includes prevention of injuries. Prerequisite: None.

**HEd 1302 Personal Health Assessment and Strategies**

(3-0)..... 3 hours  
Provides instruction in lifestyle assessment. Presents behavior change strategies in areas of physical fitness, nutrition, and stress management. Includes analysis of blood chemistry, body fat percentage, posture, strength, flexibility, endurance, diet, and personality type. Prerequisite: None.

**HEd 2301 Personal and Community Health**

(3-0)..... 3 hours  
 Presents study of body organs and systems, individual health problems, health concepts, public health organizations, social problems, and social services. Prerequisite: None.

# Physics

**Faculty:** Dr. E. Don Taylor, Chairman; Dr. Ashok Khosla.

The principal objective of the Department of Physics is to train physicists at the college level. In addition, it seeks to provide for certain other majors the foundation in the fundamental physical principles necessary for effective work in engineering, medicine, dentistry, chemistry, and technology.

## Course of Study for Associate in Science Degree

### First Year

| First Semester  |         | Second Semester |         |
|-----------------|---------|-----------------|---------|
| Course          | Sem Hrs | Course          | Sem Hrs |
| CIS 2406.....   | 4       | Engl 1312.....  | 3       |
| Engl 1311.....  | 3       | Hist 2302.....  | 3       |
| Hist 2301.....  | 3       | Lang 1412.....  | 4       |
| Lang 1411.....  | 4       | Math 2333.....  | 3       |
| *Math 2331..... | 3       | PE.....         | 1       |
| PE.....         | 1       | Phys 1403.....  | 4       |

### Second Year

| Third Semester              |         | Fourth Semester             |         |
|-----------------------------|---------|-----------------------------|---------|
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| Govt 2301.....              | 3       | Govt 2302.....              | 3       |
| Lang 2311.....              | 3       | Lang 2312.....              | 3       |
| Math 2335.....              | 3       | Math 2351.....              | 3       |
| PE.....                     | 1       | PE.....                     | 1       |
| Phys 2401.....              | 4       | Phys 2402.....              | 4       |

\*Prerequisite to Math 2331 should be taken during the summer prior to freshman enrollment. Students with strong mathematics background should consider advanced standing examinations.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or a specified times during their first semester.

**Phys 1301 Music Acoustics**

(3-0)..... 3 hours  
 A study of sound as it relates to speaking, singing, and playing musical instruments. Includes physical principles of sound production, transmission, interference, hearing, resonance, pitch, quality, musical intervals, stringed instruments, wind instruments, acoustics of rooms, and associated electronic equipment. Prerequisite: None

**Phys 1401 College Physics I**

(3-3)..... 4 hours  
 A study of classical mechanics, molecular physics, and heat with applications. Recommended for students of medicine, dentistry, veterinary medicine, optometry, biology, and architecture. Knowledge of elementary algebra and trigonometry needed. Prerequisite: None.

**Phys 1402 College Physics II**

(3-3)..... 4 hours  
 A study of classical electricity, magnetism, mechanical wave motion, optics, and practical aspects of modern physics. Prerequisite: Phys 1401.

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### **Phys 1403 Engineering Physics I**

**(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. Prerequisite or Corequisite: Math 2331.

### **Phys 2401 Engineering Physics II**

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

A study of classical electricity and magnetism from a theoretical and engineering application viewpoint. Prerequisite: Phys 1403. Prerequisite or Coresquisite: Math 2333.

### **Phys 2402 Engineering Physics III**

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

A study of mechanical and electromagnetic wave motion from the classical viewpoint, and a semi-quantitative study of modern physics. Stresses engineering applications of subject matter. Prerequisite: Phys 2401

## **Physical Science**

Physical Science is a survey course of the physical sciences—physics and chemistry—intended to satisfy a science requirement for non-science majors. The course emphasizes the nature of science as a creative human enterprise, the key role which it plays in modern society, its relationship to technology and thereby to the environment, and the human qualities of scientists and their social responsibility. The course assumes no prior work in science and very little in mathematics, certainly no more advanced than arithmetic and simple algebra.

### **PhSc 1101 Physical Science Laboratory I**

**(0-3)..... 1 hour**

A laboratory course which illustrates and reinforces principles and concepts of PhSc 1301 by use of individual experiments. Emphasizes techniques of handling scientific equipment and analyzing data acquired. Corequisite: PhSc 1301.

### **PhSc 1102 Physical Science Laboratory II**

**(0-3)..... 1 hour**

A laboratory course which illustrates and reinforces principles and concepts of PhSc 1302 by use of individual experiments. Emphasizes techniques of handling scientific equipment and analyzing data acquired. Corequisite: PhSc 1302.

### **PhSc 1301 Physical Science I**

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

A lecture course designed to satisfy physical science requirements for liberal arts, elementary education majors, etc. Concentrates on basics of chemistry. Uses environmental problems as underlying theme to present material. Corequisite: PhSc 1101.

### **PhSc 1302 Physical Science II**

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

A lecture course designed to satisfy physical science requirements for liberal arts, elementary education majors, etc. Concentrates on basics of physics. Current energy problems and their impact discussed. Corequisite: PhSc 1102.

## **Psychology, Sociology and Education**

**Faculty:** Gordon Gillette, Chairman; Mary Barker, Georgann Wemple.

This department furnishes foundation courses for those students preparing to teach in elementary or secondary school as well as those planning to major in psychology or sociology. The subjects offered are often taken by students because of their general social and cultural value.

Both psychology and sociology majors should plan their programs with the assistance of a counselor. Psychologists and sociologists are frequently hired as college teachers and researchers. Applied fields for either include the following: counselors, personnel workers, ministers, social case workers, group workers, community organizers, labor-management mediators, medical social workers, etc.

State law determines requirements for certification of public school teachers. Prospective teachers should keep in mind that they must complete a teacher training program as outlined by their selected senior college. Therefore, students should plan their course work at Odessa College to include those courses which the senior college requires at the freshman and sophomore levels. Prospective teachers should also plan to take the required pre-entry test before applying for admission to their junior year in any education program at the Texas senior college of their choice.

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

| First Semester |         | First Year             |         | Second Semester        |         |
|----------------|---------|------------------------|---------|------------------------|---------|
| Course         | Sem Hrs | Course                 | Sem Hrs | Course                 | Sem Hrs |
| Engl 1311..... | 3       | Engl 1312.....         | 3       | Engl 1312.....         | 3       |
| Hist 2301..... | 3       | Hist 2302.....         | 3       | Hist 2302.....         | 3       |
| Math 1341..... | 3       | Math 1343 or 1361..... | 3       | Math 1343 or 1361..... | 3       |
| PE.....        | 1       | PE.....                | 1       | PE.....                | 1       |
| Psy 1301.....  | 3       | Soc 1301.....          | 3       | Soc 1301.....          | 3       |
|                |         | Elective.....          | 3       | Elective.....          | 3       |

| Third Semester                                      |         | Second Year   |         | Fourth Semester                                     |         |
|---|---------|---|---------|---|---------|
| Course  | Sem Hrs | Course  | Sem Hrs | Course  | Sem Hrs |
| Biol 1401, Chem 1301 and 1101, or<br>Phys 1401..... | 4       | Biol 1402, Chem 1302 and 1102, or<br>Phys 1402..... | 4       | Biol 1402, Chem 1302 and 1102, or<br>Phys 1402..... | 4       |
| Engl (Sophomore Level).....                         | 3       | Engl (Sophomore Level).....                         | 3       | Engl (Sophomore Level).....                         | 3       |
| Govt 2301.....                                      | 3       | Govt 2302.....                                      | 3       | Govt 2302.....                                      | 3       |
| PE.....   | 1       | PE.....   | 1       | PE.....   | 1       |
| Phil 2301.....                                      | 3       | Psy 2302.....                                       | 3       | Psy 2302.....                                       | 3       |
| Psy 2303.....                                       | 3       | *Elective.....                                      | 3       | *Elective.....                                      | 3       |

\*Approved Electives: Soc 2301, Eco 2301, Math 1343, Psy 2301, Soc 2302, Soc 2304, Anth 2301, Anth 2302, and Geog 2301.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Semester          |         | First Year             |         | Second Semester        |         |
|-------------------------|---------|------------------------|---------|------------------------|---------|
| Course                  | Sem Hrs | Course                 | Sem Hrs | Course                 | Sem Hrs |
| Engl 1311.....          | 3       | Engl 1312.....         | 3       | Engl 1312.....         | 3       |
| Hist 2301.....          | 3       | Hist 2302.....         | 3       | Hist 2302.....         | 3       |
| Math 1341.....          | 3       | Math 1343 or 1361..... | 3       | Math 1343 or 1361..... | 3       |
| PE.....                 | 1       | PE.....                | 1       | PE.....                | 1       |
| Soc 1301.....           | 3       | Psy 1301.....          | 3       | Psy 1301.....          | 3       |
| *Approved Elective..... | 3       | Elective.....          | 3       | Elective.....          | 3       |

| Third Semester                                      |         | Second Year   |         | Fourth Semester                                     |         |
|---|---------|---|---------|---|---------|
| Course  | Sem Hrs | Course  | Sem Hrs | Course  | Sem Hrs |
| Biol 1401, Chem 1301 and 1101,<br>or Phys 1401..... | 4       | Biol 1402, Chem 1302 and 1102,<br>or Phys 1401..... | 4       | Biol 1402, Chem 1302 and 1102,<br>or Phys 1401..... | 4       |
| Engl (Sophomore Level).....                         | 3       | Engl (Sophomore Level).....                         | 3       | Engl (Sophomore Level).....                         | 3       |
| Govt 2301.....                                      | 3       | Govt 2302.....                                      | 3       | Govt 2302.....                                      | 3       |
| PE.....   | 1       | PE.....   | 1       | PE.....   | 1       |
| Soc 2303.....                                       | 3       | Sociology Elective.....                             | 3       | Sociology Elective.....                             | 3       |
| *Approved Elective.....                             | 3       |   |         |   |         |

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\*Approved Electives: Phil 2301, Soc 1302, Soc 2301, Soc 2302, and Soc 2304, Eco 2301, Psy 2302, Anth 2301, Anth 2302, and Geog 2301.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Year              |         |                         |         |
|-------------------------|---------|-------------------------|---------|
| First Semester          |         | Second Semester         |         |
| Course                  | Sem Hrs | Course                  | Sem Hrs |
| Biol 1401 .....         | 4       | Biol 1402 .....         | 4       |
| Engl 1311 .....         | 3       | Engl 1312 .....         | 3       |
| Hist 2301 .....         | 3       | Hist 2302 .....         | 3       |
| Math 2311 or 1341 ..... | 3       | Math 2313 or 1343 ..... | 3       |
| PE .....                | 1       | PE .....                | 1       |
| Spch 1310 .....         | 3       | Psy 1301 .....          | 3       |

| Second Year  |         |                              |         |
|--|---------|------------------------------|---------|
| Third Semester   |         | Fourth Semester              |         |
| Course   | Sem Hrs | Course                       | Sem Hrs |
| Engl (Sophomore Level) .....   | 3       | Engl (Sophomore Level) ..... | 3       |
| Geog 2301 .....  | 3       | Geog 2302 .....              | 3       |
| Govt 2301 .....  | 3       | Govt 2302 .....              | 3       |
| PE .....   | 1       | Mu 1328 .....                | 3       |
| Physical Science (Chem 1301 & 1101,<br>EaSc 1401 or Geol 1401) ..... | 4       | PE .....                     | 1       |
|  |         | Psy 2302 .....               | 3       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

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

| First Year              |         |                         |         |
|-------------------------|---------|-------------------------|---------|
| First Semester          |         | Second Semester         |         |
| Course                  | Sem Hrs | Course                  | Sem Hrs |
| Biol 1401 .....         | 4       | Biol 1402 .....         | 4       |
| Engl 1311 .....         | 3       | Engl 1312 .....         | 3       |
| Hist 2301 .....         | 3       | Hist 2302 .....         | 3       |
| Math 2311 or 1341 ..... | 3       | Math 2313 or 1343 ..... | 3       |
| PE .....                | 1       | PE .....                | 1       |
| Spch 1310 .....         | 3       | Psy 1301 .....          | 3       |

**Second Year**

| Third Semester  |         | Fourth Semester              |         |
|---|---------|------------------------------|---------|
| Course  | Sem Hrs | Course                       | Sem Hrs |
| Art 1300 .....  | 3       | Engl (Sophomore Level) ..... | 3       |
| Engl (Sophomore Level) .....  | 3       | Govt 2302 .....              | 3       |
| Govt 2301 .....   | 3       | Mu 1328 .....                | 3       |
| PE .....  | 1       | PE .....                     | 1       |
| Phil 2302 .....   | 3       | Psy 2302 .....               | 3       |
| Physical Science (Chem 1301 & 1101, EaSc<br>1401, Geol 1401,<br>or Phys 1401) ..... | 4       | Soc 1301 .....               | 3       |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Psychology**

- Psy 1301 Introduction to Psychology**  
(3-0)..... **3 hours**  
Presents basic problems and principles of experience and behavior. Includes heredity and environment, growth and development, aging, learning and conditioning, emotions, motivation, perception, psychological testing, personality, adjustment, normal and abnormal behavior, and therapies. Prerequisite: None.
- Psy 2301 Personal Applications of Psychology**  
(3-0)..... **3 hours**  
Emphasizes study of psychological principles and methods important in practical control of human behavior. Includes applications of psychology for increasing human efficiency, improving personalities, and harnessing emotions. Prerequisite: Psy 1301.
- Psy 2302 Child Psychology**  
(3-3)..... **3 hours**  
Emphasizes development processes, including biological and environmental factors which shape personality and affect achievement from pre-natal through pre-adolescence. Requires observation and study of children in lab. Prerequisite: None
- Psy 2303 Social Psychology**  
(3-0)..... **3 hours**  
Surveys research and theories dealing with human behavior in social situations. Includes attitudes, prejudices, interpersonal attraction, group behavior, conformity, motivation, and conflict. Students may elect subject area heading appropriate to their major. Students may not receive credit for both Psy 2303 and Soc 2303. Prerequisite: Psy 1301, Soc 1301, or consent of the instructor.

**Sociology**

- Soc 1301 Principles of Sociology**  
(3-0)..... **3 hours**  
Provides basic concepts of sociology and emphasizes the relationship of culture and social interaction to group behavior. Includes analysis of social organization, deviant behavior, urbanization, and social change. Prerequisite: None.
- Soc 1302 Sociology of the Family**  
(3-0)..... **3 hours**  
Analyzes human relationships pertaining to varied aspects of courtship, mate selection, and marital adjustment. Includes problems of adjustment in each stage of the life cycle. Prerequisite: None
- Soc 2301 Social Problems**  
(3-0)..... **3 hours**  
Applies sociological concepts to analysis of current social problems. Includes family and community disorganization, crime and delinquency, racial and educational problems and conflicts, problems of mass communications, and personal pathologies. Prerequisite: Soc 1301.

**Soc 2302 American Minorities**

(3-0)..... **3 hours**  
 Presents principal minority groups in American society and their sociological significance. Includes problems of inter-group relations, social movements, and related social changes and theories to explain such changes. Prerequisite: Soc 1301 or consent of the instructor.

**Soc 2303 Social Psychology**

(3-0)..... **3 hours**  
 Surveys research and theories dealing with human behavior in social situations. Includes attitudes, prejudice, interpersonal attraction, group behavior, conformity, motivation, and conflict. Students may elect subject area heading appropriate to their major. Students may not receive credit for both Psy 2303 and Soc 2303. Prerequisite: Psy 1301, Soc 1301, or consent of the instructor.

**Soc 2304 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, and analysis and interpretation. Prerequisites: Math 1361 or Math 1343, and Psy 1301 or Soc 1301. Offered only in spring semester of even-numbered years.

## Radiologic (X-Ray) Technology

**Faculty:** Kay Flood, Chairman; Sue Leach, Dr. Radames Martinez, Medical Director.

Odessa College, in cooperation with local hospitals, offers a Radiologic Technology program designed to provide understanding, proficiency, and skill. The program is accredited by the Committee on Allied Health Education and Accreditation (CAHEA) in cooperation with the Joint Review Committee on Education in Radiologic Technology (JRCERT). Upon successful completion of the program, students are granted an Associate in Applied Science Degree and are eligible to apply for the certification examination given by the American Registry of Radiologic Technologists in diagnostic X-Ray technology.

The curriculum balances general educational and technical courses and includes supervised practicum work at local hospitals. These combined experiences provide students with an opportunity for educational development as well as occupational competence during the 24-month program.

Available practicum space limits enrollment; therefore, students are admitted on a selective basis. To be considered for admission to the program, prospective students must be a high school graduate or equivalent, must achieve a satisfactory score on selected entrance examinations, must have character references, and must be approved by the program admissions committee. After being accepted, students must maintain a "C" average in all Radiologic Technology courses or they will be dropped from the program.

Applicants or other interested persons seeking additional information should contact the Radiologic Technology Program Director at the college. Prospective students are encouraged to submit their applications for admission by May 30, for review by the Admissions Committee.

### Course of Study for Associate in Applied Science Degree

#### Summer Session II

| Course                           | Sem Hrs |
|----------------------------------|---------|
| Math 1313 or More Advanced ..... | 3       |
| XT 1304 .....                    | 3       |
| XT 1314 .....                    | 3       |

#### First Year

| First Semester  |         | Second Semester |         |
|-----------------|---------|-----------------|---------|
| Course          | Sem Hrs | Course          | Sem Hrs |
| Biol 1403 ..... | 4       | *EMT 1401 ..... | 4       |
| Engl 1311 ..... | 3       | EMT 2302 .....  | 3       |
| XT 1111 .....   | 1       | XT 1112 .....   | 1       |
| XT 1321 .....   | 3       | XT 1402 .....   | 4       |
| XT 1401 .....   | 4       | XT 1422 .....   | 4       |

**Summer Sessions**

| Summer Session I       |         | Summer Session II           |         |
|------------------------|---------|-----------------------------|---------|
| Course                 | Sem Hrs | Course                      | Sem Hrs |
| Govt 2301 or 2302..... | 3       | Engl 1312 or Spch 2340..... | 3       |
| XT 1223 .....          | 2       | XT 1224 .....               | 2       |

**Second Year**

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| CIS 1401 ..... | 4       | XT 2112 .....   | 1       |
| XT 2111 .....  | 1       | XT 2402 .....   | 4       |
| XT 2401 .....  | 4       | XT 2422 .....   | 4       |
| XT 2421 .....  | 4       |                 |         |

**Summer Session I**

| Course        | Sem Hrs |
|---------------|---------|
| XT 2203 ..... | 2       |
| XT 2223 ..... | 2       |

\* HEd 1301 or two one-hour physical education courses may be substituted for EMT 1401.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**XT 1111 Radiography Laboratory II**

(0-2)..... **1 hour**  
Includes discussion and demonstration of standard radiographic positioning of the thorax, abdomen, spine and routine contrast media procedures to include film critique. Produces standard radiographs on radiographic phantoms. Prerequisite: XT 1314. Corequisites: XT 1401 and XT 1321.

**XT 1112 Radiography Laboratory III**

(0-2)..... **1 hour**  
Includes discussion and demonstration of radiographic projections of the cranium, including film critique. Produces standard radiographs on radiographic phantoms. Presents laboratory experiments involving factors influencing film quality. Prerequisite: XT 1111. Corequisites: XT 1402 and XT 1422.

**XT 1223 Clinical Practicum III**

(0-32)..... **2 hours**  
Emphasizes practice of basic radiographic procedures in positioning, on darkroom techniques, and on becoming more professional in use of anatomical terms. Requires taking all standard radiographs under limited supervision and assisting radiographers in obtaining radiographs on trauma patients. Includes film critique and demonstration of specific exams with a model. Prerequisite: XT 1422.

**XT 1224 Clinical Practicum IV**

(0-32)..... **2 hours**  
Requires taking all standard radiographs under limited supervision and assisting radiographers in obtaining radiographs on trauma patients. Includes film critique and demonstration of specific exams with a model. Requires recognizing structure and organs visualized and understanding normal functions of organs as a basis for certain X-ray examinations. Prerequisite: XT 1223.

**XT 1304 Introduction to Radiologic Technology**

(3-0)..... **3 hours**  
Introduces field of radiologic technology, basic radiation protection, professional ethics, darkroom procedures, medical terminology, prime exposure factors, and technical factors of film quality. Introduces basic physics of X-ray equipment and auxiliary devices. Corequisite: XT 1314.

**XT 1314 Radiography Laboratory I**

(0-12)..... **3 hours**  
Presents fundamentals of radiographic positioning and terminology used to describe radiographic projections. Discusses and demonstrates standard radiographic projections of the upper and lower extremities. Includes film critique. Produces standard radiographs on radiographic phantoms. Prerequisite: None. Corequisite: XT 1304.

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- XT 1321 Clinical Practicum I**  
(0-16)..... **3 hours**  
Introduces the clinical environment at a major facility. Requires observing operation of the X-ray Department by rotating through different work areas. Requires taking radiographs of chest, abdomen, and extremities under close supervision of a radiographer and demonstrating specific exams with a model. Prerequisite: XT 1314. Corequisites: XT 1111 and XT 1401.
- XT 1401 Radiographic Physics**  
(4-0)..... **4 hours**  
Analyzes physical principles related to matter, energy, basic electricity, magnetism, induction principles and transformers, basic X-ray circuits, methods of rectification, and construction of X-ray accessories. Presents physical principles of X-ray production, interaction of X-rays in matter, and methods of X-ray detection and measurement. Prerequisite: XT 1304. Corequisites: XT 1321 and XT 1111.
- XT 1402 Principles of Radiographic Exposure**  
(4-0)..... **4 hours**  
Presents characteristics of radiographic film construction, design of radiographic darkrooms, and manual and automatic processing techniques. Includes advanced radiographic principles such as review of prime exposure factors, technique formation, body section radiography, and conditions influencing radiographic exposure. Emphasizes radiation protection and image quality. Prerequisite: XT 1401. Corequisites: XT 1422 and XT 1112.
- XT 1422 Clinical Practicum II**  
(0-24)..... **4 hours**  
Requires taking standard radiographs of chest, abdomen, and extremities under limited supervision and taking radiographs of spine, skull, and sinuses under close supervision by a radiographer to include film critique. Requires assisting radiologist with fluoroscopic examinations and demonstrating specific exams with a model. Clinical rotations include fluoroscopic and orthopedic experiences. Prerequisite: XT 1321. Corequisites: XT 1402 and XT 1112.
- XT 2111 Radiography Laboratory IV**  
(0-2)..... **1 hour**  
Includes discussion and demonstration of radiographic positioning of the pediatric patient, specific female studies, foreign body localization, and stereoradiography to include film critique. Includes a complete review of anatomy systems, topographic anatomy, cross-sectional anatomy, and routine diagnostic positioning. Prerequisite: XT 1112. Corequisites: XT 2401 and XT 2421.
- XT 2112 Radiography Laboratory V**  
(0-2)..... **1 hour**  
Discusses and demonstrates quality assurance concepts, equipment maintenance, departmental design and administration. Presents a complete review of film critique, related pathology and routine diagnostic procedures. Prerequisite: XT 2111. Corequisites: XT 2402 and XT 2422.
- XT 2203 Registry Review**  
(2-0)..... **2 hours**  
A comprehensive review of major subject areas to prepare for the national examinations. Prerequisite: XT 2402. Corequisite: XT 2223.
- XT 2223 Clinical Practicum VII**  
(0-32)..... **2 hours**  
Requires demonstrating specific exams with a model and practicing film critique. Requires being able to function as a radiographer. Prerequisite: XT 2422. Corequisite: XT 2203.
- XT 2401 Advanced & Special Radiographic Procedures**  
(4-0)..... **4 hours**  
Presents specialized and highly technical procedures in radiology, includes neuroradiography, digital X-ray imaging, computed tomography, angiography, arteriography, breast imaging, magnetic resonance imaging and interventional procedures. Prerequisite: XT 1402. Corequisites: XT 2421 and XT 2111.
- XT 2402 Radiation Biology & Pathology**  
(4-0)..... **4 hours**  
Presents a review of atomic physics. Stresses radiation biology and protection. Includes topics of radiation therapy, nuclear medicine, ultrasound, and radiologic pathology. Requires a term paper. Prerequisite: XT 2401. Corequisites: XT 2422 and XT 2112.
- XT 2421 Clinical Practicum V**  
(0-24)..... **4 hours**  
Includes the following in clinical rotations: special procedures, O.T., breast imaging, MRI, and heart catheterization. Requires demonstrating specific exams with a model and practicing film critique. Prerequisite: XT 1224. Corequisites: XT 2401 and XT 2111.
- XT 2422 Clinical Practicum VI**  
(0-24)..... **4 hours**  
Includes the following in clinical rotations: ultrasound, nuclear medicine, radiation therapy, and quality assurance. Requires demonstrating specific exams with a model and practicing film critique. Prerequisite: XT 2421. Corequisites: XT 2402 and XT 2112.

# Reading

**Faculty:** Dr. Clayton Alred, Director; Dr. Imogene Freer, Jean McColloch, Sheryl Oates, Pam Williamson.

An effective citizen must read well, and reading courses develop efficient tools to use today. These courses implement the philosophy that the ultimate in reading is never reached and that the so-called study skills are predominantly reading skills. Time spent in this program is an investment in self. All people, no matter what kind of grades they make, can improve their reading skills.

All professional fields require above-average abilities in reading. Developing awareness of the competencies underlying effective reading and insight into the psychology of reading will be excellent preparation for those interested in the fields of education and teaching. These courses will also serve as a sound introduction for those interested in reading as a major. Reading specialists, reading supervisors, and reading clinicians are all in great demand.

## Read 1301 College Reading

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

Aims to improve speed and comprehension on various types of materials. Includes diagnosis of reading strengths and weaknesses, timed reading practices, short lectures, study skills, and vocabulary study. Prerequisite: None.

## Read 1302 Advanced College Reading

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

Continues and maintains independent work to improve rate of speed and comprehension skills. Designed to meet specific needs through individualized instruction. Prerequisite: Read 1301.

## College Reading Techniques

The college techniques courses taught in the Reading Lab provide an alternative reading program with individualized self-paced instruction in an informal setting.

Open registration is provided for all college students and interested adults who may enroll for non-credit or for one, two, or three hours of credit. Non-credit enrollment is also available for junior and senior high school students. Standardized tests are given to ascertain the reading performance level and determine specific areas which need improvement. After diagnosis, a self-paced plan of action is developed through student/instructor conferences to set immediate and long-range goals. These tests are available by appointment in the Reading Lab, Deaderick Hall 213, and in the Testing Center, second floor of the Student Union Building.

Students enrolling in any of the three lab courses should consult with the lab instructor as early as possible to arrange a meeting time. Materials covered and skills learned in the three one-hour Reading Lab courses — Read 1101, 1102, and 1103 — equate to Read 1301, College Reading.

## Read 1101 Improving Reading Skills

(0-24)..... 1 hour

Functions to improve student's ability to understand his relationship with the academic demands of the college. Diagnostic testing determines student's need for the following skills: vocabulary, reading, listening, and spelling. Taught in an individualized setting. Prerequisite: None.

## Read 1102 Improving Reading Flexibility

(0-12) ..... 1 hour

Aims to make student aware of importance of vocabulary and degree of comprehension expected when reading in a variety of materials at a variety of speeds. Prerequisite: Consent of the instructor.

## Read 1103 Improving Reading Rate and Comprehension

(0-12)..... 1 hour

Provides opportunity to become a trained, successful reader, one able to handle large amounts of written materials by emphasizing purpose, concentration, recall, increased vocabulary, and rapid reading. Prerequisite: Consent of the instructor.

# Real Estate

**Faculty:** Paul Tittle, Chairman; Imojene Hicks.

The primary objective of the Real Estate program is to prepare students for full-time employment in the real estate field. Completion of this program leads to an Associate in Applied Science Degree in Real Estate. All courses in the program are designed to provide basic employment skills for individuals seeking employment in real estate as well as to upgrade the skills of those individuals presently employed in the industry.

**Requirements for Licensure:** Pre-licensing for real estate salespersons requires successful completion of 12 semester hours of college course work; six of those hours must be in core Real Estate courses, with three semester hours of Principles. License renewal requires six semester hours within the first three years of licensure. Students must complete a total of 12 semester hours in core Real Estate courses to retain their licenses.

## Course of Study for Associate in Applied Science Degree

| First Year                      |         |                 |         |
|---------------------------------|---------|-----------------|---------|
| First Semester                  |         | Second Semester |         |
| Course                          | Sem Hrs | Course          | Sem Hrs |
| Engl 1311.....                  | 3       | Engl 1312.....  | 3       |
| Math 1313 or More Advanced..... | 3       | Mgt 2303.....   | 3       |
| Mgt 1301.....                   | 3       | PE.....         | 1       |
| PE.....                         | 1       | RE 1303.....    | 3       |
| RE 1301.....                    | 3       | RE 1304.....    | 3       |
| RE 1302.....                    | 3       | RE 1305.....    | 3       |

| Second Year    |         |                         |         |
|----------------|---------|-------------------------|---------|
| Third Semester |         | Fourth Semester         |         |
| Course         | Sem Hrs | Course                  | Sem Hrs |
| Eco 1301.....  | 3       | BA 2311.....            | 3       |
| Govt 2301..... | 3       | RE 2117.....            | 1       |
| Mgt 1303.....  | 3       | RE 2303.....            | 3       |
| RE 2301.....   | 3       | RE 2304.....            | 3       |
| RE 2302.....   | 3       | RE 2305.....            | 3       |
|                |         | *Approved Elective..... | 3       |

\*Approved Electives: Any other RE course; any other Mgt course; any other BA course; any other Eco course.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**RE 1301 Principles of Real Estate**

**(3-0)** ..... **3 hours**  
 Introduces real estate as a profession. Includes study of land and real estate, concepts of home ownership, functions of real estate broker, and legal aspects of titles and contract. Covers in detail Texas Real Estate License Act. Includes three hours of instruction on federal, state, and local laws governing housing discrimination, housing credit discrimination, and community reinvestment. Prerequisite: None.

**RE 1302 Real Estate Appraisal**

**(3-0)**..... **3 hours**  
 Provides basic knowledge and skills necessary to demonstrate application of cost, income, and market data approaches to real property value. Includes examination of nature of real property value, functions and purposes of appraisal, and methods of estimating residential market value. Prerequisite: None.

**RE 1303 Real Estate Finance**

**(3-0)**..... **3 hours**  
 Provides basic knowledge involved in real estate financing and investment. Includes study of institutions involved in real estate financing and investment transactions, instruments of transactions and financing, terminology of financing, and real property taxation. Prerequisite: None.

- RE 1304 Real Estate Law**  
**(3-0)** ..... **3 hours**  
 Presents principles of laws governing interests in real estate. Includes concepts of acquisition, encumbrance, transfer, rights and obligations, and state and federal statutes applicable to those concepts. Aids analysis of legal consequences of various real estate relationships and transactions to determine when an attorney should be consulted. Prerequisite: None.
- RE 1305 Fundamentals of Real Estate**  
**(3-0)** ..... **3 hours**  
 A continuation of RE 1301. Includes study of title transfer, records, real estate financing, leases, property appraisal and development, and residential construction. Prerequisite: RE 1301.
- RE 1306 Real Estate Mathematics**  
**(3-0)**..... **3 hours**  
 Presents basics of mathematics used in real estate business. Gives attention to mathematics of finance, appraisal, development, management, and investment. Prerequisite: None.
- RE 2117 Real Estate Internship**  
**(1-20)** ..... **1 hour**  
 Requires working 20 hours per week minimum in a paid, part-time job in an approved firm: real estate broker's office, title company, real estate mortgage company, or building construction company. Requires employment in occupational situations that give practical training and experience compatible with real estate career objectives. Includes one-hour seminar and 20 internship hours per week. Prerequisite: Minimum of 15 semester hours in Real Estate courses.
- RE 2301 Real Estate Sales and Marketing**  
**(3-0)** ..... **3 hours**  
 Presents information needed in effective selling and marketing of real estate. Includes analysis of buyer behavior, basic elements of listing property, of offers between buyer and seller, and of basic financing elements. Emphasis on professional marketing procedures, advertising, and regulations. Prerequisite: RE 1301.
- RE 2302 Real Estate Investment**  
**(3-0)**..... **3 hours**  
 Presents characteristics and benefits of real estate investment. Includes investment analysis and taxation as well as forms of ownership, methods of financing investments, and various types of considerations involved in investments. Prerequisites: RE 1301 and RE 1303.
- RE 2303 Property Management**  
**(3-0)** ..... **3 hours**  
 Presents information needed to manage income-producing property. Includes utilizing sound accounting and reporting principles; securing, qualifying, and contracting of tenants and lessees; legal aspects of property management; and maintaining, rehabilitating, renovating, and remodeling income-producing properties. Prerequisites: RE 1301 and RE 1304.
- RE 2304 Real Estate Brokerage**  
**(3-0)**..... **3 hours**  
 Presents factors necessary to establish and operate a real estate sales and brokerage office. Includes required terminology and salesperson-broker relationships. Intends to identify and utilize effective practices in coordinating and promoting a successful real estate brokerage. Prerequisites: RE 1301 and RE 2301.
- RE 2305 Real Estate Problems**  
**(3-0)**..... **3 hours**  
 Designed to provide opportunity to solve practical problems encountered in the real estate profession. Requires working in small groups with each participant filling a different real estate position in the group. Requires individual participation in problems which cover various facets of real estate practice. Prerequisite: Individual approval of the instructor; recommended for persons who hold real estate license.

## Refrigeration and Air Conditioning

**Faculty:** Norman Witcher, Chairman; James Bates.

Refrigeration, heating, and air conditioning is one of the fastest growing industries in the world today. Food preparation and storage, personal comfort, medical procedures, and industrial processes have been radically changed and improved by refrigeration. At present the demand for trained personnel has far exceeded the supply, and every new phase of the industry creates greater demands.

**Course of Study for Associate in Applied Science Degree**

| First Year                       |         |                           |         |
|----------------------------------|---------|---------------------------|---------|
| First Semester                   |         | Second Semester           |         |
| Course                           | Sem Hrs | Course                    | Sem Hrs |
| Math 1313, or More Advanced..... | 3       | Engr 1301 or DT 1401..... | 3 or 4  |
| **PE.....                        | 1       | **PE.....                 | 1       |
| R/AC 1302.....                   | 3       | R/AC 1306.....            | 3       |
| R/AC 1401.....                   | 4       | R/AC 2301.....            | 3       |
| *R/AC Elective.....              | 3       | *R/AC Elective.....       | 3       |
|                                  |         | *R/AC Elective.....       | 4       |

| Second Year                                |         |                             |         |
|--|---------|-----------------------------|---------|
| Third Semester                             |         | Fourth Semester             |         |
| Course                                     | Sem Hrs | Course                      | Sem Hrs |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312 or Spch 1310..... | 3       |
| Govt 2301 or 2302.....                     | 3       | R/AC 2304.....              | 3       |
| R/AC 2302.....                             | 3       | *R/AC Elective.....         | 4       |
| *R/AC Elective.....                        | 3       | *R/AC Elective.....         | 4       |
| *R/AC Elective.....                        | 4       | ***Approved Elective.....   | 3       |

\*R/AC Electives: Select any course in the R/AC program not already required.  
 \*\*HEd 1301 may be substituted for the two one-hour physical education courses.  
 \*\*\*Approved Electives: AT 2602, Mgt 2303, BA 1301, WT 1601, Math 1335 or more advanced, ET 1401, ET 1403, ET 1404, ET 2406, ET 2407, ET 2408, ET 2410, Engl 1321.  
 Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 48 semester hours in R/AC courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Solar Energy Option**

Solar energy is one of the newest, and yet oldest, fields under the sun. This course of study includes systems from the ancient Aztecs to the modern heating and cooling systems used today. This program prepares technicians to work in the field of solar energy. Upon successful completion of this course, students should be able to design, size, build, install, and maintain solar systems. All types of solar systems will be presented: active, passive, air, liquid, and greenhouse.

**Course of Study for Associate in Applied Science Degree**

| First Year                       |         |                 |         |
|----------------------------------|---------|-----------------|---------|
| First Semester                   |         | Second Semester |         |
| Course                           | Sem Hrs | Course          | Sem Hrs |
| DT 1401 or Engr 1301.....        | 4 or 3  | **PE.....       | 1       |
| Math 1313, or More Advanced..... | 3       | R/AC 1306.....  | 3       |
| **PE.....                        | 1       | R/AC 1405.....  | 4       |
| R/AC 1302.....                   | 3       | R/AC 2301.....  | 3       |
| R/AC 1401.....                   | 4       | R/AC 2400.....  | 4       |
| *R/AC Elective.....              | 3       |                 |         |

Second Year

| Third Semester         |         | Fourth Semester             |         |
|------------------------|---------|-----------------------------|---------|
| Course                 | Sem Hrs | Course                      | Sem Hrs |
| Engl 1311.....         | 3       | Engl 1312 or Spch 1310..... | 3       |
| Govt 2301 or 2302..... | 3       | R/AC 2406.....              | 4       |
| R/AC 2302.....         | 3       | R/AC 2408.....              | 4       |
| R/AC 2405.....         | 4       | R/AC 2409.....              | 4       |
| *R/AC Elective.....    | 3       | *R/AC Elective.....         | 4       |

\*R/AC Electives: Any course in the R/AC program not already required.

\*\*Hed 1301 may be substituted for the two one-hour physical education courses.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 48 semester hours in R/AC courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**R/AC 1302 Basic Control Theory**

(3-1)..... 3 hours

Introduces basic electricity and progresses to electric motors, design and function of starters, contactors, relays, capacitors, overloads, and control circuits applicable to refrigeration and air conditioning industry. Prerequisite: None. Corequisite: R/AC 1401.

**R/AC 1304 Heating**

(3-1)..... 3 hours

Includes gas controls, properties of gas and gas piping, gas combustion, burners, troubleshooting, venting of heating systems, and electrical strip heat. Presents indepth study of procedures for servicing and correcting difficulties with gas-fired equipment. Prerequisite: None.

**R/AC 1306 Heat Pump Theory**

(3-1)..... 3 hours

Presents theories of control and principles of heat pumps, sizing, installing, servicing, and troubleshooting. Includes duct-sizing problems, advantages, special applications of heat pump, and theories of control. Prerequisites: R/AC 1302 and R/AC 1401.

**R/AC 1401 Refrigeration Theory**

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

Presents theory of a sound, basic understanding of heat transfer, behavior of gases, refrigeration cycle, component parts of compression refrigeration machine, and its accessories. Prerequisite: None.

**R/AC 1402 Plumbing Fundamentals**

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

Presents theory and application of basic plumbing. Involves practical course in both gas and water piping. Includes drain repair and maintenance. Prerequisite: None.

**R/AC 1403 Commercial Refrigeration**

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

Focuses on commercial refrigeration components. Designed for understanding of theory and application of metering devices, evaporators, compressors, condensers, driers, sight glasses, system accessories, and sizing of walk-in and reach-in boxes. Prerequisite: R/AC 1401.

**R/AC 1405 Fundamentals of Sheet Metal Pattern Drafting and Layout**

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

Presents principles of basic sheet metal. Includes use of sheet metal tools, basic sheet metal layout, and construction of components. Prerequisite: None.

**R/AC 2202 Refrigeration and Air Conditioning Business Operations**

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

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

**R/AC 2205 Mechanical Code**

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

Presents mechanical codes used in refrigeration and air conditioning industry. Prerequisite: R/AC 1401 or industrial experience.

## 130 Refrigeration and Air Conditioning

### R/AC 2301 Electrical System Troubleshooting

(3-1)..... 3 hours  
Includes design theory and application of primary and secondary electrical systems used in the refrigeration and air conditioning industry. Prerequisite: R/AC 1302.

### R/AC 2302 Air Conditioning Design

(3-1)..... 3 hours  
Presents sizing and selecting air conditioning equipment and designing air distribution systems. Emphasizes estimating loads of residential and commercial applications. Prerequisite: None.

### R/AC 2304 Refrigeration and Air Conditioning System Troubleshooting

(3-1)..... 3 hours  
Presents troubleshooting refrigeration and air conditioning systems. Emphasizes the mechanical refrigeration cycle. Prerequisite: R/AC 1401.

### R/AC 2400 Solar Power

(3-3)..... 4 hours  
Applies use of solar power for heating and cooling. Includes solar history, application of solar power today, and possible future use. Offers practical information in sizing collectors, storage units, and exchange units. Includes both active and passive units. Prerequisite: None.

### R/AC 2405 National Electrical Code

(3-3)..... 4 hours  
Applies course information covering the National Electrical Code for industrial, commercial and residential wiring. Prerequisite: None.

### R/AC 2406 Advanced Solar Power

(3-3)..... 4 hours  
Emphasizes complex solar systems. Includes building, installing, maintaining, and evaluating solar operation. Emphasizes energy savings of different types of solar systems. Prerequisite: R/AC 2400.

### R/AC 2407 Advanced Sheet Metal Pattern Drafting and Layout

(3-3)..... 4 hours  
Presents advanced principles of sheet metal. Includes using sheet metal tools, preparing layouts, and building complete sheet metal systems. Prerequisite: R/AC 1405.

### R/AC 2408 Special Problems

(3-3)..... 4 hours  
Provides assigned problems to meet specific needs. Emphasizes modern techniques. All assignments made on individual basis. Prerequisites: R/AC 1401 and R/AC 1302.

### R/AC 2409 Building Energy Audit Training

(3-3)..... 4 hours  
Presents methods of performing a building energy audit. Identifies and evaluates energy conservation options available. Emphasizes savings opportunities in an understandable fashion. Prerequisite: None.

## Respiratory Therapy

**Faculty:** Allen Barbaro, Chairman; Barney Rodriguez, Dr. John Bray, Medical Director. Dr. Kenneth Batch and Dr. Mark Garwin, Associate Medical Directors.

Through its ladder concept curriculum in Respiratory Therapy, Odessa College offers an intensive program for therapists and technicians. The therapist program requires two years of study and leads to an Associate in Applied Science Degree. The technician program requires one year of study and leads to a certificate.

Therapists and technicians employ a variety of techniques to assist in the treatment of cardiopulmonary diseases and abnormalities. They also perform diagnostic testing.

The curriculum balances general educational and technical courses with supervised clinical work in local hospitals under the direction of qualified therapists and technicians. Medical doctors proficient in pulmonary medicine provide medical direction. This setting provides students with an excellent opportunity for educational development and occupational competence.

Students are admitted prior to the second summer semester on a selected basis because of limited space in the clinical area of study. Requirements for admission are high school graduation or its equivalent, satisfactory achievement on the college entrance examination, evidence of good health, personal interview, and approval of the admissions committee for the program.

Students may not receive a grade lower than "C" in any respiratory therapy, math, or science 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.

Once a student has enrolled in the Respiratory Therapy Program, all respiratory therapy courses must be taken in the proper sequence as shown in the catalog.

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 Chairman of the Respiratory Therapy Program. All persons wishing to apply should submit their application before June 15 of each year.

**Course of Study for Associate in Applied Science Degree  
and  
Course of Study for Certificate of Technology  
(Technician Option)**

**First Year**

**Summer Session II**

| Course         | Sem Hrs |
|----------------|---------|
| Math 1313..... | 3       |
| RT 1301.....   | 3       |

| First Semester |         | Second Semester |         |
|----------------|---------|-----------------|---------|
| Course         | Sem Hrs | Course          | Sem Hrs |
| Biol 1100..... | 1       | Biol 1403.....  | 4       |
| Chem 1101..... | 1       | Engl 1312.....  | 3       |
| Chem 1301..... | 3       | RT 1112.....    | 1       |
| Engl 1311..... | 3       | RT 1212.....    | 2       |
| *PE.....       | 1       | RT 1322.....    | 3       |
| RT 1101.....   | 1       | RT 1432.....    | 4       |
| RT 1111.....   | 1       |                 |         |
| RT 1302.....   | 3       |                 |         |

**Summer Sessions I and II**

| Course       | Sem Hrs |
|--------------|---------|
| RT 1140..... | 3       |
| RT 1433..... | 4       |

**Therapist Option**

**Second Year**

| Third Semester         |         | Fourth Semester |         |
|------------------------|---------|-----------------|---------|
| Course                 | Sem Hrs | Course          | Sem Hrs |
| Biol 2403.....         | 4       | Psy 1301.....   | 3       |
| Govt 2301 or 2302..... | 3       | PhSc 1102.....  | 1       |
| RT 2312.....           | 3       | PhSc 1302.....  | 3       |
| RT 2352.....           | 3       | *PE.....        | 1       |
| RT 2364.....           | 3       | RT 2103.....    | 1       |
|                        |         | RT 2230.....    | 2       |
|                        |         | RT 2362.....    | 3       |

\*EMT 1401 may be substituted for the two 1-hour physical education courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**RT 1101 Fundamentals of Respiratory Therapy II Lab (0-3)..... 1 hour**

Applies techniques learned in RT 1301. Requires performance of all techniques in laboratory setting prior to performing them in a clinical setting. Corequisites: RT 1111 and RT 1302.

## 132 Respiratory Therapy

- RT 1111 Clinical Practicum I**  
(0-6)..... 1 hour  
Provides initial exposure to hospital environment. Requires observation of administration of respiratory care modalities and patient assessment techniques. Also provides opportunity to become familiar with sterilization techniques. Corequisite: RT 1302.
- RT 1112 Fundamentals of Respiratory Therapy III Lab**  
(0-3)..... 1 hour  
Practices skills learned in RT 1212. Involves management of a mechanical ventilator, airway management, and chest physiotherapy. All techniques evaluated in laboratory prior to performance in clinical facility. Corequisite: RT 1212.
- RT 1140 Respiratory Therapy Seminar**  
(1-0)..... 1 hour  
Introduces most current literature in pulmonary care. Requires preparation of journal reports from recent publications. Prerequisite: RT 1212. Corequisite: RT 1433.
- RT 1212 Fundamentals of Respiratory Therapy III**  
(2-0)..... 2 hours  
An indepth presentation of techniques involved in mechanical ventilation. Presents techniques involved in airway management and pulmonary rehabilitation. Introduces hemodynamic monitoring. Prerequisite: RT 1302. Corequisites: RT 1112, RT 1422, and RT 1532.
- RT 1301 Fundamentals of Respiratory Therapy I**  
(3-0) ..... 3 hours  
Introduces respiratory therapy and the health care team. Presents anatomy and physiology of the cardiopulmonary system. Stresses applied physics, microbiology, sterilization, and beginning-patient assessment. Prerequisite: Admission to the Respiratory Therapy Program.
- RT 1302 Fundamentals of Respiratory Therapy II**  
(3-0)..... 3 hours  
An indepth presentation of oxygen therapy. Stresses other respiratory care modalities such as aerosol therapy, incentive spirometer, and IPPB. Also includes arterial blood gas sampling and chest physiotherapy. Prerequisite: RT 1301. Corequisites: RT 1111 and RT 1101.
- RT 1322 Clinical Practicum II**  
(0-16)..... 3 hours  
Applies in a clinical setting skills learned in RT 1302. Permits rotation through operating room and pediatric hospital. Prerequisites: RT 1302 and RT 1111. Corequisites: RT 1212 and RT 1112.
- RT 1433 Clinical Practicum III**  
(0-32) ..... 4 hours  
Applies to patient care skills learned in RT 1212. Emphasizes adult and pediatric intensive care. Requires assignment to general respiratory care. Prerequisites: RT 1212 and RT 1322. Corequisite: RT 1140.
- RT 1432 Cardiopulmonary Pathophysiology**  
(4-0)..... 4 hours  
Introduces normal and abnormal physiology of cardiopulmonary system. Includes oxygen transport, gas exchange, electrophysiology of the heart ABG interpretation, and pulmonary function testing. Presents disorders that affect the cardiopulmonary system and their management. Stresses disorders of newborn and pediatric patients as well as fluid and electrolyte balance. Prerequisites: RT 1301 and RT 1302. Corequisite: RT 1212.
- RT 2103 Respiratory Therapy Seminar**  
(1-0)..... 1 hour  
Introduces most current literature available in respiratory care. Requires development of journal reports and preparation of a major paper. Corequisite: RT 2362.
- RT 2230 Clinical Specialties**  
(2-0)..... 2 hours  
Requires respiratory therapy applications in medical practice. Includes pathology, internal medicine, neurology, surgery, pediatrics and obstetrics, and fluid and electrolyte balance. Presents role of respiratory therapist as member of specialized health-care team. Prerequisites: RT 2312 and RT 2364. Corequisite: RT 2362.
- RT 2312 Cardiopulmonary Dynamics**  
(3-0) ..... 3 hours  
Presents advanced concepts related to electrocardiography, hemodynamic monitoring, and pulmonary rehabilitation. Requires learning techniques relating to clinical respiratory care. Prerequisites: RT 1212 and RT 1432. Corequisite: RT 2364.
- RT 2352 Clinical Practicum IV**  
(0-16)..... 3 hours  
Allows application of skills learned. Emphasizes care of critically ill patient. Permits rotation through operating room, radiology department, and pediatric and neonatal intensive care unit. Requires continuing development of skills in respiratory care. Prerequisite: RT 1422. Corequisites: RT 2312 and RT 2364.

**RT 2362 Clinical Practicum V**

(0-16) ..... 3 hours  
 Integrates all previously learned skills. Requires rotation to adult, pediatric, and neonatal intensive care units, and in management and education. Prerequisites: RT 2312, RT 2364, and RT 2352. Corequisite: RT 2230.

**RT 2364 Pediatric Respiratory Care**

(3-0)..... 3 hours  
 Includes neonatal and pediatric respiratory care. Covers embryology, neonatal and pediatric disease, pediatric oxygen administration, and mechanical ventilation of the neonatal and pediatric patient. Prerequisites: RT 1212 and RT 1432. Corequisite: RT 2312.

**Social Sciences**

**Faculty:** Dr. Dick Kennedy, Chairman; Brian Dille, Dr. Tom Heiting, Truett Hilliard, Jack Kitzmiller, Ralston Parkinson, Robert Porter, Dr. Helen Reinhart, Dr. Bob Sturges, Dr. Kenneth Yeilding.

Social Sciences deals with the three basic relationships which mankind has dealt with since time began. These relationships involve man with his fellow man (History, Economics, and Government), man with himself (Philosophy), and man with God (Religion). No one can challenge the effect that philosophers, historical events, political theories, economic ideas, and religious concepts have had on mankind.

The four-semester curriculum outlined below leads to an Associate in Arts Degree. 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 career 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**

**First Year**

| First Semester                  |         | Second Semester                 |         |
|---------------------------------|---------|---------------------------------|---------|
| Course                          | Sem Hrs | Course                          | Sem Hrs |
| Eco 2301.....                   | 3       | Eco 2302.....                   | 3       |
| Engl 1311.....                  | 3       | Engl 1312.....                  | 3       |
| Hist 1301.....                  | 3       | Hist 1302.....                  | 3       |
| Lang 1411.....                  | 4       | Lang 1412.....                  | 4       |
| Math 1341 or More Advanced..... | 3       | Math 1343 or More Advanced..... | 3       |
| PE.....                         | 1       | PE.....                         | 1       |

**Second Year**

| Third Semester              |         | Fourth Semester             |         |
|-----------------------------|---------|-----------------------------|---------|
| Course                      | Sem Hrs | Course                      | Sem Hrs |
| Engl (Sophomore Level)..... | 3       | Engl (Sophomore Level)..... | 3       |
| *Hist 2301.....             | 3       | *Hist 2302.....             | 3       |
| Govt 2301.....              | 3       | Govt 2302.....              | 3       |
| Lang 2311.....              | 3       | Lang 2312.....              | 3       |
| **Approved Elective.....    | 3       | **Approved Elective.....    | 3       |
| PE.....                     | 1       | PE.....                     | 1       |

\*Hist 2303 may be substituted for either Hist 2301 or 2302.

\*\*Approved Electives: Hist 2303, 2304, and Soc 2302.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Economics****Eco 1301 Introduction to Economics**

(3-0)..... 3 hours  
Permits average citizen to increase economic literacy. Includes discussion of economic resources, basic economic decisions, price system, role of money and banking, problems of inflation and employment, and other personal and public economic issues. Recommended for Mid-Management majors and others who want a general knowledge of economics. Does not replace Eco 2301 and/or 2302. Prerequisite: None.

**Eco 2301 Principles of Economics**

(3-0) ..... 3 hours  
Designed to provide fundamental analytic concepts of economic theory and practice. Emphasizes microeconomic theory. Includes basic theory, price and output determination under varying conditions, and income distribution and factor prices. Prerequisite: None.

**Eco 2302 Economic Problems**

(3-0)..... 3 hours  
Provides basic analytic concepts relevant to aggregate economy. Emphasizes macroeconomic theory and practice. Includes money and banking, national income and employment, economic growth, public spending, and international economy. Prerequisite: None.

**Government****Govt 2301 State and Federal Government I**

(3-0)..... 3 hours  
Considers development of political thought, origin and development of the Constitutions of the United States and Texas, federalism, state and local governments, public opinion, interest groups, political parties, and elections. Satisfies government requirements for teacher certification by the Texas Education Agency. Prerequisite: None.

**Govt 2302 State and Federal Government II**

(3-0)..... 3 hours  
Deals with legislative, executive, and judicial functions of federal and state governments, federal bureaucracy, civil rights, and foreign and domestic policy issues. Satisfies government requirements for teacher certification by the Texas Education Agency. Prerequisite: None.

**Govt 2303 Introduction to International Relations**

(3-0) ..... 3 hours  
Presents theory and practice of international as well as foreign and domestic policy issues. Prerequisite: None.

**Govt 2304 Introduction to Public Administration**

(3-0)..... 3 hours  
Presents processes involved in management of men and materials in accomplishment of purposes of government. Analyzes structure and procedure of administrative or executive branch of government with particular reference to national, state, and local governments in United States. Prerequisite: None.

**History****Hist 1301 History of Modern Europe to 1815**

(3-0) ..... 3 hours  
Surveys social, economic, and political developments in Medieval and Modern Europe. Emphasizes the Renaissance, Protestant Reformation, overseas expansion during sixteenth and seventeenth centuries, struggle for parliamentary government in England, French Revolution, and Napoleonic period. Prerequisite: None.

**Hist 1302 History of Modern Europe Since 1815**

(3-0)..... 3 hours  
Includes study of results of the Napoleonic era, rise of liberalism and nationalism, causes and results of World War II, post-war problems, and prospective solutions. Prerequisite: None.

**Hist 2301 United States History to 1877**

(3-0) ..... 3 hours  
Deals with European background, establishment of colonial foundations, rise of American nationality, growth and sectional crisis, and the Civil War and Reconstruction. Prerequisite: None.

**Hist 2302 United States History from 1877**

(3-0)..... 3 hours  
Deals with the growth of big businesses and accompanying problems. Includes American imperialism, causes and results of World War I, causes of World War II, post-war adjustments, and prospective solutions. Prerequisite: None.

- Hist 2303 History of Texas**  
 (3-0) ..... 3 hours  
 Surveys history of Texas. Stresses European approach to Texas, Spanish and French rivalry, exploration and control, Anglo-American colonization, relations with Mexico, Texas Revolution, Texas as a Republic, annexation, statehood, reconstruction, and other political and economic developments. Prerequisite: None.
- Hist 2304 Afro-American History**  
 (3-0) ..... 3 hours  
 Surveys role and contributions of Afro-Americans to development and culture of the United States. Prerequisite: None.

**Philosophy**

- Phil 2301 Introduction to Philosophy I**  
 (3-0)..... 3 hours  
 Presents an adventure in ideas. Asks anew ultimate questions about the significance of life. With insights gleaned from world's greatest philosophers, students seek to clarify own ideas and beliefs concerning themselves, their world, and their ultimate destiny. Prerequisite: None.
- Phil 2302 Introduction to Philosophy II (Ethics)**  
 (3-0)..... 3 hours  
 Introduces ethical theories based on answers given by the world's greatest philosophers to the questions, "What makes acts right?" and "What is the good life?" Discusses nature of goodness, duty, and freedom. Considers selected ethical problems in light of each basic ethical system. Prerequisite: None.

**Religion**

- Bib 1101 Acts of the Apostles**  
 (1-0)..... 1 hour  
 Studies expansion of Christian beliefs, practices, and fellowships from Palestine to outlying parts of the Roman Empire. Includes personality study of Peter, John, Paul, and other apostles. Prerequisite: None.
- Bib 1301 Old Testament History**  
 (3-0)..... 3 hours  
 Introduces survey of the Old Testament. Emphasizes historical setting, types of religious literature, and religious element underlying the whole. Prerequisite: None.
- Bib 1302 New Testament History**  
 (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. Prerequisite: None.
- Bib 2301 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. Prerequisite: None.
- Bib 2302 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. Prerequisite: None.
- Relg 1301 Philosophy of Religion**  
 (3-0)..... 3 hours  
 Examines the nature and meaning of religion and religious expression. Emphasizes development of religious thinking in western civilization. Includes faith and reason, religion's authority, science and religion, problems and implications of freedom, evil, and conscience. Prerequisite: None.
- Relg 1302 History of Religion**  
 (3-0) ..... 3 hours  
 Investigates historically the development of the world from prehistory to modern times. Emphasizes role of religions in world history. Prerequisite: None.
- Relg 1303 Comparative Religions**  
 (3-0)..... 3 hours  
 Surveys religions of the world. Includes Hinduism, Buddhism, Confucianism, Taoism, Shinto, Judaism, Christianity, and Islam. Prerequisite: None.

# Surgical Technology

**Faculty:** Leola Rutledge, Chairman.

The Surgical Technology program prepares graduates to function in the operating room as surgical technicians under the direction of an operating room registered nurse. Duties include maintaining a safe environment for patients undergoing surgery, transporting patients, preparing supplies, operating equipment, handling instruments, and serving as a member of the surgical team.

The first semester is devoted to medical terminology, microbiology, and the didactic phase of instruction with an introduction to clinical experience. Anatomy and Physiology also are introduced. During the second semester, anatomy and physiology are continued, and the practicum is greatly expanded to give students skills in general surgery.

The six-week summer session allows students to perfect skills under supervision and provides for rotation through the common specialties. Upon graduation a certificate of completion is awarded.

Admission requirements to the program include high school graduation or the G.E.D. certificate, good mental and physical health, manual dexterity, satisfactory scores on the pre-entrance examination, two personal references, and approval of the program director. Previous hospital experience is desirable but not required.

Total length of the program is two semesters and one summer session. Students will be on a regular college schedule and eligible to participate in all college activities.

Applications for the fall semester must be made in advance. The number of students admitted to the program is limited, and those who apply early receive first consideration.

## Course of Study for Associate in Applied Science Degree

### First Year

| First Semester  |         | Second Semester            |         |
|-----------------|---------|----------------------------|---------|
| Course          | Sem Hrs | Course                     | Sem Hrs |
| Biol 1100 ..... | 1       | Biol 1405 .....            | 4       |
| Biol 1404 ..... | 4       | HEd 1301 or EMT 1401 ..... | 3 or 4  |
| HD 2301 .....   | 3       | ST 1402 .....              | 4       |
| ST 1401 .....   | 4       | ST 1602 .....              | 6       |
| ST 1411 .....   | 4       |                            |         |

### Summer Session I

| Course        | Sem Hrs |
|---------------|---------|
| ST 1503 ..... | 5       |

### Second Year

| First Semester  |         | Second Semester |         |
|-----------------|---------|-----------------|---------|
| Course          | Sem Hrs | Course          | Sem Hrs |
| Biol 2403 ..... | 4       | Engl 1312 ..... | 3       |
| Engl 1311 ..... | 3       | Govt 2302 ..... | 3       |
| Govt 2301 ..... | 3       | Mgt 2302 .....  | 3       |
| Math 1313 ..... | 3       | PE .....        | 1       |
| PE .....        | 1       | Psy 1301 .....  | 3       |
| Spch 1310 ..... | 3       |                 |         |

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**Course of Study for Certificate**

| First Semester |         | Second Semester           |         |
|----------------|---------|---------------------------|---------|
| Course         | Sem Hrs | Course                    | Sem Hrs |
| Biol 1100..... | 1       | Biol 1405.....            | 4       |
| Biol 1404..... | 4       | HEd 1301 or EMT 1401..... | 3 or 4  |
| HD 2301.....   | 3       | ST 1402.....              | 4       |
| ST 1401.....   | 4       | ST 1602.....              | 6       |
| ST 1411.....   | 4       |                           |         |

**Summer Session I**

| Course       | Sem Hrs |
|--------------|---------|
| ST 1503..... | 5       |

|   |                |
|---|----------------|
| <b>ST 1401 Introduction to Surgical Techniques (4-0).....</b>   | <b>4 hours</b> |
| Introduces career of surgical technician. Includes terminology, weights and measures, medical-legal aspects, ethics, and hospital and operating room environment. Prerequisite: None.                         |                |
| <b>ST 1402 Principles of Surgical Technology (4-0).....</b>   | <b>4 hours</b> |
| Presents operating room techniques, surgical procedures, record keeping, and responsibilities of the surgical technician. Prerequisites: ST 1401 and ST 1411.   |                |
| <b>ST 1411 Surgical Technology Practicum I (0-12).....</b>  | <b>4 hours</b> |
| Introduces skills in maintaining safe environment, patient safety, transportation of patients, care of instruments, aseptic technique, and related nursing procedures. Prerequisite: None.                    |                |
| <b>ST 1602 Surgical Technology Practicum II (0-18).....</b>   | <b>6 hours</b> |
| Includes assignments in surgery for experience in all commonly done procedures, with opportunity to develop confidence as knowledge progresses. Prerequisites or Corequisites: ST 1302, ST 1401, and ST 1411. |                |
| <b>ST 1503 Surgical Technology Practicum III (0-32).....</b>  | <b>5 hours</b> |
| Offers extended clinical experience with rotation through surgical specialties. Prerequisites: ST 1302, ST 1401, ST 1411, and ST 1602.  |                |

**Welding Technology**

**Faculty:** Duane Nobles, Chairman.

Welding and cutting are among the most important methods used in the fabrication and construction of products and structures made of metal. The welding program provides the student with sufficient skill in electric arc and gas welding procedures for entry employment in these occupations. Students completing the associate degree program will have sufficient background in mathematics, management, communications, blueprint reading, and layout to interpret engineers' plans and instructions, and to work as a supporting technician with minimum orientation.

**Course of Study for Associate in Applied Science Degree**

| First Semester          |         | Second Semester                 |         |
|-------------------------|---------|---------------------------------|---------|
| Course                  | Sem Hrs | Course                          | Sem Hrs |
| *PE.....                | 1       | Math 1313 or More Advanced..... | 3       |
| WT 1401 or DT 1401..... | 4       | *PE.....                        | 1       |
| WT 1601.....            | 6       | WT 1603.....                    | 6       |
| WT 1602.....            | 6       | WT 1604.....                    | 6       |

**Second Year**

| Third Semester                             |         | Fourth Semester             |         |
|--|---------|-----------------------------|---------|
| Course                                     | Sem Hrs | Course                      | Sem Hrs |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312 or Spch 1310..... | 3       |
| NDT 2401.....                              | 4       | Govt 2301 or 2302.....      | 3       |
| NDT 2602, NDT 2603 or WT 2605.....         | 6       | WT 2603.....                | 6       |
| WT 2601.....                               | 6       | WT 2604.....                | 6       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 42 semester hours in WT courses and NDT 2602 or 2603.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**WT 1401 Blueprint Reading and Drawing**

(2-4)..... **4 hours**  
 Presents fundamental drafting used in welding industry. Emphasizes fabrication prints, dimensioning, sectional views, symbols, and visualization of objects in pictorial form. Requires some shop print drawing. Prerequisite: Consent of the department chairman.

**WT 1601 Basic Shielded-Metal Arc Welding**

(2-8)..... **6 hours**  
 Presents basic principles and practices involving electric arc welding and oxy-acetylene cutting. Includes related theory in field of metallurgy applicable to welding on common metals. Stresses orientation, safety, operation, and machine maintenance. Prerequisite: None.

**WT 1602 Oxy-Fuel Welding**

(2-8)..... **6 hours**  
 Introduces oxy-fuel welding, cutting, and preparing metal for welding. Emphasizes torches and regulators, flame adjustment for cutting and welding, applying hard surfacing, solder, silver solder, brazing, and safe procedures for handling oxy-fuel equipment. Prerequisite: None.

**WT 1603 Intermediate Shielded-Metal Arc Welding**

(2-8)..... **6 hours**  
 Emphasizes proper execution of all-position V-groove carbon steel plate and pipe welding with "open stringer." Uses AWS testing standards. Prerequisite or Corequisite: WT 1601.

**WT 1604 Basic Layout**

(2-8)..... **6 hours**  
 Emphasizes constructing layouts according to specifications. Stresses related theory and practice involved in design of welded fittings and structures. Prerequisite or Corequisite: WT 1603.

**WT 2601 Advanced Shielded-Metal Arc Welding**

(2-8)..... **6 hours**  
 Includes execution of all types of welds on various alloys and a study of electrodes. Continues fabrication and layout techniques with attention devoted to piping, job planning, and cost factors. Emphasizes welding carbon steel plate and pipe with LH 7018 electrodes. Prerequisite: WT 1603.

**WT 2603 Gas Metal Arc Welding**

(2-8)..... **6 hours**  
 Introduces gas metal arc welding (GMAW) on mild steel, aluminum, and stainless steel. Includes different shield gases. Emphasizes mixture of gases and their effect on arc and welds. Prerequisite or Corequisite: WT 2601.

**WT 2604 Gas Tungsten Arc Welding**

(2-8)..... **6 hours**  
 Introduces gas tungsten arc welding (GTAW) and carbon arc cutting of various metals. Presents advantages and disadvantages of different shield and purge gases. Prerequisite or Corequisite: WT 1602.

**WT 2605 Industrial Fabrication**

(2-8)..... **6 hours**  
 Provides job-related experience and practical application of print reading related to construction of non-critical industrial items. Includes building skids, fireboxes, non-pressure vessels, and other non-coded items constructed by local industry. Prerequisite or Corequisite: WT 1604.

**Welding  
(Open-Entry, Clock-Hour Program)**

The open-entry, clock-hour program is a personalized instructional system designed to offer the student a concentrated individualized curriculum in basic skills. Block-time programs meet 20 to 40 hours per week depending upon the course and the personal schedule of the individual. A student may register for the following program on any week day. Classes start each Monday. Enrollment may be limited to available space. An Associate Degree option is available. Detailed information and admission and registration forms are available in the office of the program director or in the Counseling Center.

| Course Number | Course Name                             | Clock Hours | Sem Hours | Weeks |
|---------------|---|-------------|-----------|-------|
| WT 1841       | Basic Shielded-Metal Arc Welding        | 200         | 8         | 10    |
| WT 1842       | Intermediate Shielded-Metal Arc Welding | 200         | 8         | 10    |
| WT 1843       | Advanced Shielded-Metal Arc Welding     | 200         | 8         | 10    |
| WT 1544       | Oxy-Fuel Welding                        | 140         | 5         | 7     |
| WT 1846       | Basic Layout                            | 200         | 8         | 10    |
| WT 1847       | Industrial Fabrication                  | 200         | 8         | 10    |
| or            |   |             |           |       |
| WT 1848       | Radiographic Safety and Radiography     | 200         | 8         | 10    |
| or            |   |             |           |       |
| WT 1849       | Ultrasonics                             | 200         | 8         | 10    |
| WT 1547       | Gas Metal Arc Welding (GMAW)            | 160         | 5         | 8     |
| WT 1548       | Gas Tungsten Arc Welding (GTAW)         | 160         | 5         | 8     |
| *WT 1449      | Blueprint Reading and Drawing           | 100         | 4         | 10    |

Estimated cost of books and safety equipment: \$50 to \$100.

\*DT 1401 or Engr 1301 may be substituted for WT 1449.

For those students desiring the A.A.S. degree the following academic courses are required: Engl 1311; Engl 1312 or Spch 1310; Math 1313, or more advanced; two hours PE or HEd 1301; Govt 2302; NDT 2401.

**WT 1449 Blueprint Reading and Drawing**

[(2-8) for 10 weeks]..... 4 hours  
Introduces fundamental drafting used in welding industry. Emphasizes fabrication prints, dimensioning, sectional views, symbols, and visualizing objects in pictorial form. Requires some shop print drawing. Prerequisite: Consent of the department chairman.

**WT 1544 Oxy-Fuel Welding**

[(4-16) for 7 weeks]..... 5 hours  
Introduces oxy-fuel welding, cutting, and preparing metals for welding. Emphasizes torches and regulators, flame adjustment for cutting and welding, applying hard surfacing, solder, silver solder, brazing, and safe procedures for handling oxy-fuel equipment. Prerequisite: Consent of the department chairman.

**WT 1547 Gas Metal Arc Welding (GMAW)**

[(4-16) for 8 weeks]..... 5 hours  
Introduces gas metal arc welding (GMAW) on mild steel, aluminum, and stainless steel. Includes different shield gases. Emphasizes mixture of gases and their effect on the arc and weld. Prerequisite: WT 1843 or consent of the department chairman.

**WT 1548 Gas Tungsten Arc Welding (GTAW)**

[(4-16) for 8 weeks]..... 5 hours  
Introduces gas tungsten arc welding (GTAW) and carbon arc cutting of various metals. Includes advantages and disadvantages of different shield and purge gases. Prerequisite: WT 1544 or consent of the department chairman.

**WT 1841 Basic Shielded-Metal Arc Welding**

[(4-16) for 10 weeks]..... 8 hours  
Presents basic principles and practices involving electric arc welding and oxy-acetylene cutting. Includes related theory in the field of metallurgy applicable to welding on some common metals. Stresses orientation, safety, operation, and machine maintenance. Prerequisite: Consent of the department chairman.

- WT 1842 Intermediate Shielded-Metal Arc Welding**  
 [(4-16) for 10 weeks]..... 8 hours  
 Emphasizes proper execution of all position V-groove carbon steel plate and pipe welding with "open stringer". Uses AWS testing standards. Prerequisite: WT 1841 or consent of the department chairman.
- WT 1843 Advanced Shielded-Metal Arc Welding**  
 [(4-16) for 10 weeks]..... 8 hours  
 Includes execution of all types of welds on various alloys. Also includes study of electrodes used. Continues fabrication and layout techniques with attention devoted to piping, job planning, and cost factors. Emphasizes welding carbon steel plate and pipe with LH 7018 electrodes. Prerequisite: WT 1842 or consent of the department chairman.
- WT 1846 Basic Layout**  
 [(4-16) for 10 weeks]..... 8 hours  
 Emphasizes constructing layouts according to specifications. Stresses related theory and practice involved in design of welded fittings and structures. Prerequisite or Corequisite: WT 1842 or consent of the department chairman.
- WT 1847 Industrial Fabrication**  
 [(4-16) for 10 weeks]..... 8 hours  
 Provides job-related experience and practical application of print reading related to construction of non-critical industrial items. Includes building skids, fireboxes, non-pressure vessels, and other non-coded items constructed by local industry. Prerequisite or Corequisite: WT 1846.
- WT 1848 Radiation Safety and Radiography**  
 [(4-16) for 10 weeks]..... 8 hours  
 Stresses safety in use of radiographic equipment and sources. Involves use of penetrating X or Gamma radiation to examine parts and products for imperfections. Includes film exposure, development, and interpretation to determine imperfections. Emphasizes requirements for state safety certification. Prerequisite: Consent of the department chairman.
- WT 1849 Ultrasonics**  
 [(4-16) for 10 weeks]..... 8 hours  
 Presents study of sound waves, electrical current, and energy bursts to detect flaws and imperfections. Includes safety, fundamental properties of sound theory, interpretation in flow of electrical currents, and evaluation of emissions through study of their strength, rate, and location. Prerequisite: Consent of the department chairman.

## Welding Inspection (Non-Destructive Testing)

**Faculty:** Duane Nobles, Chairman.

Non-destructive testing is the examination of an object or material in a manner which does not affect its future usefulness. Non-destructive tests detect internal or external imperfections; determine structure, composition, or properties; or measure geometric characteristics without affecting the form, fit, or function of the test object or material.

Non-destructive testing offers employment opportunities in a variety of industrial fields, using primarily the testing methods of radiography, ultrasonics, eddy current, liquid penetrant, magnetic particle, leak testing, acoustic emission, visual examination, and certain other specialized methods.

### Course of Study for Associate in Applied Science Degree

| First Semester                             |         | Second Semester                   |         |
|--|---------|-----------------------------------|---------|
| Course                                     | Sem Hrs | Course                            | Sem Hrs |
| Engl 1311 or 1311 (Technical Writing)..... | 3       | Engl 1312, 1321 or Spch 1310..... | 3       |
| Math 1313 or More Advanced.....            | 3       | WT 1603.....                      | 6       |
| WT 1601.....                               | 6       | WT 1604.....                      | 6       |
| WT 1602.....                               | 6       |                                   |         |

**Second Year**

|                         | Third Semester |         | Fourth Semester        |         |
|-------------------------|----------------|---------|------------------------|---------|
| Course                  |                | Sem Hrs | Course                 | Sem Hrs |
| NDT 2401.....           |                | 4       | Govt 2301 or 2302..... | 3       |
| NDT 2601.....           |                | 6       | NDT 2602.....          | 6       |
| *PE.....                |                | 1       | NDT 2603.....          | 6       |
| WT 1401 or DT 1401..... |                | 4       | *PE.....               | 1       |

\*HEd 1301 may be substituted for the two one-hour physical education courses.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 22 semester hours in NDT and 24 hours in WT courses.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

**NDT 2401 Quality Assurance Auditing & NDT Math**

**(4-0)..... 4 hours**  
Presents writing of quality assurance auditing reports based on interpretation of inspections. Includes math necessary to perform all methods of NDT. Prerequisites: Engl 1312 or Engl 1321, Math 1313 or Math 1321 or more advanced and consent of the department chairman.

**NDT 2601 Introduction to NDT**

**(2-8) ..... 6 hours**  
Serves as an introduction to study and practices of NDT in accordance with ASNT. No. SNT-TC-1A of materials before and after they are welded. Emphasizes measuring devices, visual inspection, liquid penetrant (Types I & II), magnetic particle (wet, dry, and spray), and basic metallurgy. Prerequisite: Consent of the department chairman.

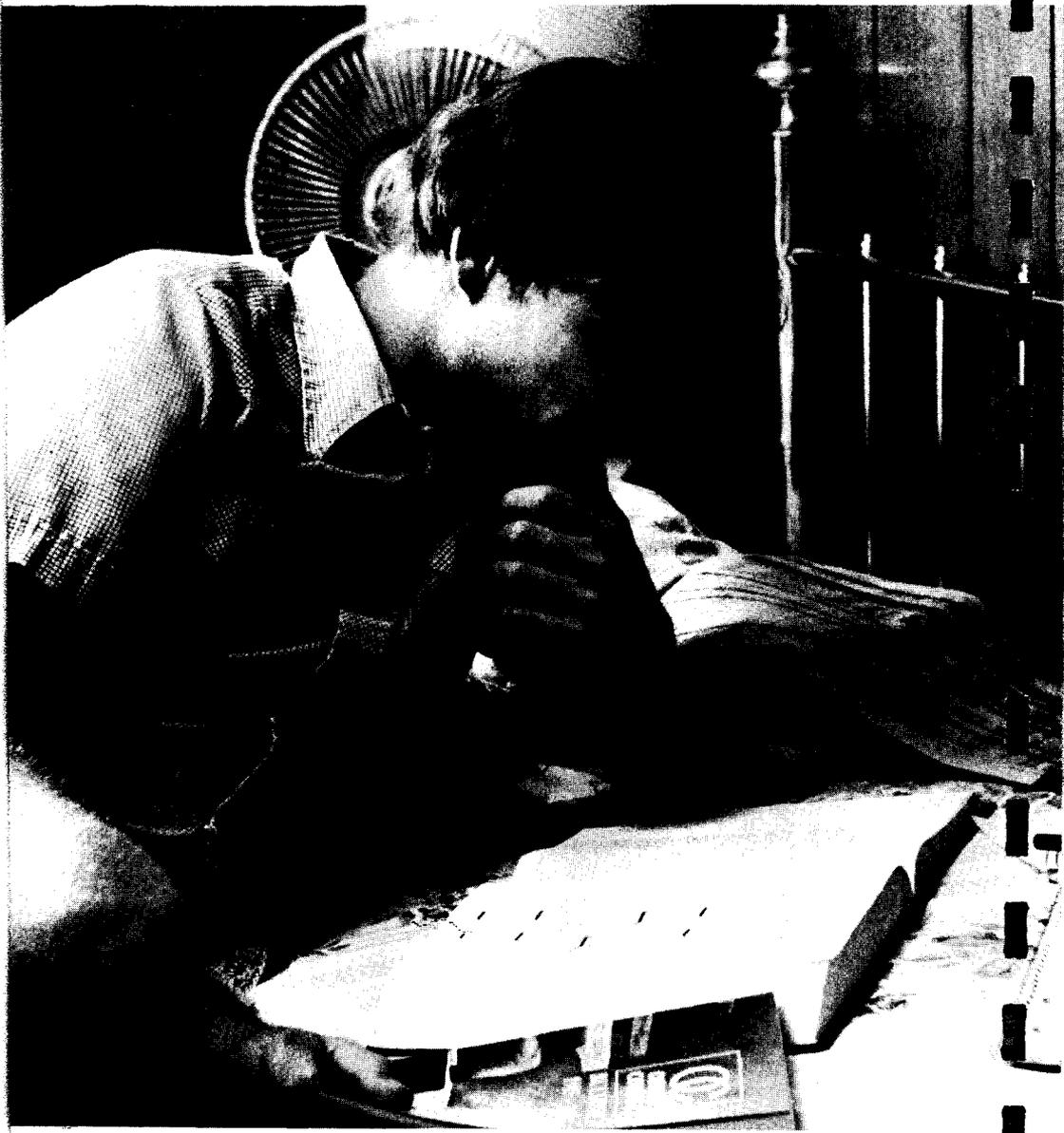
**NDT 2602 Radiation Safety and Radiography**

**(2-8)..... 6 hours**  
Stresses safety in use of radiographic equipment and sources. Involves use of penetrating X or Gamma radiation to examine parts and products for imperfections. Includes film exposure, development, and interpretation to determine imperfections. Emphasizes requirements for state safety certification. Prerequisite: Consent of the department chairman.

**NDT 2603 Ultrasonics**

**(2-8)..... 6 hours**  
Presents study of sound waves, electrical current, and energy bursts to detect flaws and imperfections. Includes safety, fundamental properties of sound theory, interpretation in flow of electrical currents, and evaluation of emissions through study of their strength, rate, and location. Prerequisite: Consent of the department chairman.

# Admissions



## Admissions Policies

Welcoming all adults who want to learn, Odessa College has an open-door admissions policy. Whether high school graduates or not, all adults interested in learning can be admitted to Odessa College.

A Counseling Center is available to all students. Counselors discuss career and educational goals with students so that an educational plan can be drawn for each individual. The Testing Center also makes available various types of tests to help students determine their aptitudes, interests, scholastic strengths and weaknesses, and other information helpful to a student making a career decision.

Students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of fulltime attendance.

As a community college, Odessa College has students of all ages, from recent high school graduates to senior citizens. Many students are employed as they pursue their education. The college welcomes all students and intends to provide educational services to students of all ages and educational needs. Each student is important and each student finds his place at Odessa College.

### Procedure

Students applying for admission should have their academic records sent to the Director of Admissions at Odessa College as soon as possible and should complete an application for admission. Students whose records are incomplete at the time of registration may be admitted to Odessa College but necessary records must be furnished before a transcript from OC can be obtained.

Students may be admitted to Odessa College by any of the following methods:

- **By High School Graduation:** Graduates of accredited high schools satisfy minimum requirements for admission. These students must submit official high school transcripts which show the date of their graduation.
- **Through the Early Admission Program:** When high school seniors are within four units or 12 quarter credits of graduation from high school, they may enroll in a maximum of two courses per semester at Odessa College. Early admission students must submit the prescribed documentation signed by a parent or guardian, their high school counselor, and the high school principal.
- **By Individual Approval:** All persons who are at least 18 years of age and whose high school class has graduated may be admitted to Odessa College if it is determined that those individuals can benefit from study at this institution. Normally, persons admitted on individual approval will be asked to take basic skills tests before registering for classes in order to ensure that they are placed in the right classes.
- **By Written Examination:** Persons who have not graduated from high school may be admitted if they have passed the General Educational Development Test (GED), if they are 18 years of age, if they have not attended high school for one or more semesters, and if they do not plan to return to high school. Proof that the GED has been passed must be submitted.
- **By Re-entry:** Former students in good standing who have not attended another college since enrolling at Odessa College are eligible for readmission.
- **By Transfer from Another College:** Persons transferring from another accredited college or university are ordinarily eligible for admission if they are eligible for readmission to the institution from which they are transferring. Scholastic deficiencies of transfer students will be reviewed by the Director of Admissions who will determine the eligibility of the student.

Transfer students must submit an official copy of their college or university transcripts as a final condition for admission. If possible, that record should be submitted prior to registration. Transfer students who are admitted to Odessa College but who do not submit prior educational records will be denied certified copies of their Odessa College transcripts.

\*If a transfer from another college/univ.  
age does not matter. 12-2-86 per Dr. Hart.

**Immunizations**

All students under 18 years of age who seek admission to Odessa College must provide proof that they have complied with the Texas Immunization Law which requires individuals to receive at least three doses of oral polio vaccine, with at least one dose being received on or after the fourth birthday.

**International Student Admissions**

International students (F-1 visa) must meet all regular admissions criteria. In addition, they must take and score at least 575 on the Test of English as a Foreign Language (TOEFL). A financial statement is also required. International students enrolling at Odessa College will need a minimum of \$7,000 for a calendar year of educational and living expenses, in addition to funds for transportation. A cash deposit in the amount of \$5,000 (U.S.) must be made with the college prior to the granting of an I-20. A minimum of \$2,000 of the deposit is required to remain as long as individuals continue their student status.

All required documents and information must be received in accordance with the following dates if international students expect their application to be processed for the semester indicated:

|                      |            |
|----------------------|------------|
| Summer School.....   | March 3    |
| Fall Semester.....   | June 1     |
| Spring Semester..... | October 15 |

Academic records for international students must be official and must be translated into English; copies will not be accepted. International students wishing to transfer to Odessa College from another U.S. college or university must also present official copies of all U.S. college work along with recommendations from the foreign student advisor from the previous school.

All applications from international students must be accompanied by a \$20 application fee, which will be returned to the student if admission is denied. Persons wanting additional information on international student admissions, should write to:

International Student Admissions  
 Odessa College  
 201 West University  
 Odessa, TX 79764

**Placement Examinations**

Odessa College accepts both ACT and SAT scores for guidance and counseling purposes. Both tests are administered on campus, and dates for giving these tests are announced periodically. Since results of these examinations are used for advising students in selecting appropriate course levels and for general guidance purposes, all students are strongly encouraged to take either of the examinations at least six weeks prior to their enrollment, even though the test scores are not required for admission.

Although it is not an admission requirement, students without a high school transcript or other predictive data, such as ACT or SAT scores, will take placement tests in English, Math, and Reading before registering for freshmen English or Math courses.

**Early Registration**

Early registration for a semester allows students, with the help of college counselors and faculty members, to select proper courses and to complete all registration—except for payment of fees—prior to regular registration.

Students who register early have the option of paying fees at the time of early registration or by a specified, later date. Students who do not pay and who do not have their early registration bill validated by the deadline date will automatically lose those classes chosen during early registration and will have to repeat the course selection process during the regular registration period.

Early registration begins from one to two months prior to regular registration. Exact information can be secured from the Counseling Center or the News and Information Office or the Registrar's Office. Students who register early have the advantage of selecting courses, instructors, and times which best suit their needs.

### **Auditing**

Permission to audit a course at Odessa College is granted only to those students who have already received credit for the course. The following items apply to persons seeking permission to audit:

1. A student may not register for an audit until after the first class day.
2. Audit permission must be obtained from the appropriate department chairman.
3. There must be seats available before an auditing student will be permitted to enter a particular class.
4. Auditing students are not required to meet course prerequisites listed in the catalog.
5. Students auditing a course may not under any circumstances claim credit for the course.
6. A student registering for a course may not change from audit to credit or from credit to audit after the twelfth class day during a long semester or fourth class day during a summer term.
7. Charges for auditing a course are the same as for regular registration.

### **Class Membership**

The only way to become an official member of a class at Odessa College is by following established procedures for registering and by paying tuition and fees. No person is officially enrolled until all registration requirements have been satisfied and all charges have been paid in full. Installment payment of tuition and fees is not permitted.

### **Veterans' Affairs**

Courses offered by Odessa College are approved for the training of veterans; therefore, veterans enrolled at Odessa College are eligible for educational assistance from the Veterans Administration. A veterans' clerk at the college assists in any matter pertaining to the relationship of students with the Veterans Administration and Odessa College. Each veteran, upon enrolling, should contact the veterans' clerk in the Financial Aid Office at Odessa College to obtain certification of enrollment to submit to the Veterans Administration.

### **Change of Address**

Students who change residence following registration must notify the Registrar's Office immediately. Students are held responsible for any communications mailed to them from the college to the last address which they supplied. Moving from a previous address does not relieve students of the responsibility of requests made through correspondence.

### **Equal Opportunity**

Odessa College is committed to the basic right of all people to have an equal opportunity for education or employment at this institution. Every effort will be made by the Board of Trustees, the administration, and the faculty to defend this right and to vigorously seek to promote its implementation in all areas of the institution.

Odessa College will admit as students any persons, in accordance with college admissions standards, who can benefit from the instructional programs offered. In addition, Odessa College will strive to meet post-secondary educational needs of its students by restructuring current programs and by creating new programs when so doing will benefit the students.

**Directory Information**

Odessa College classifies as directory information the following student data: the name, address, telephone number, date and place of birth, major field, participation in official activities and sports, weight and height of athletic team members, dates of attendance, degrees and awards received, and most recent educational institution attended. Such information is normally released to individuals upon request. Students who do not want this directory information released must file a written statement to that effect with the Registrar's Office. The written statement must be filed each semester.

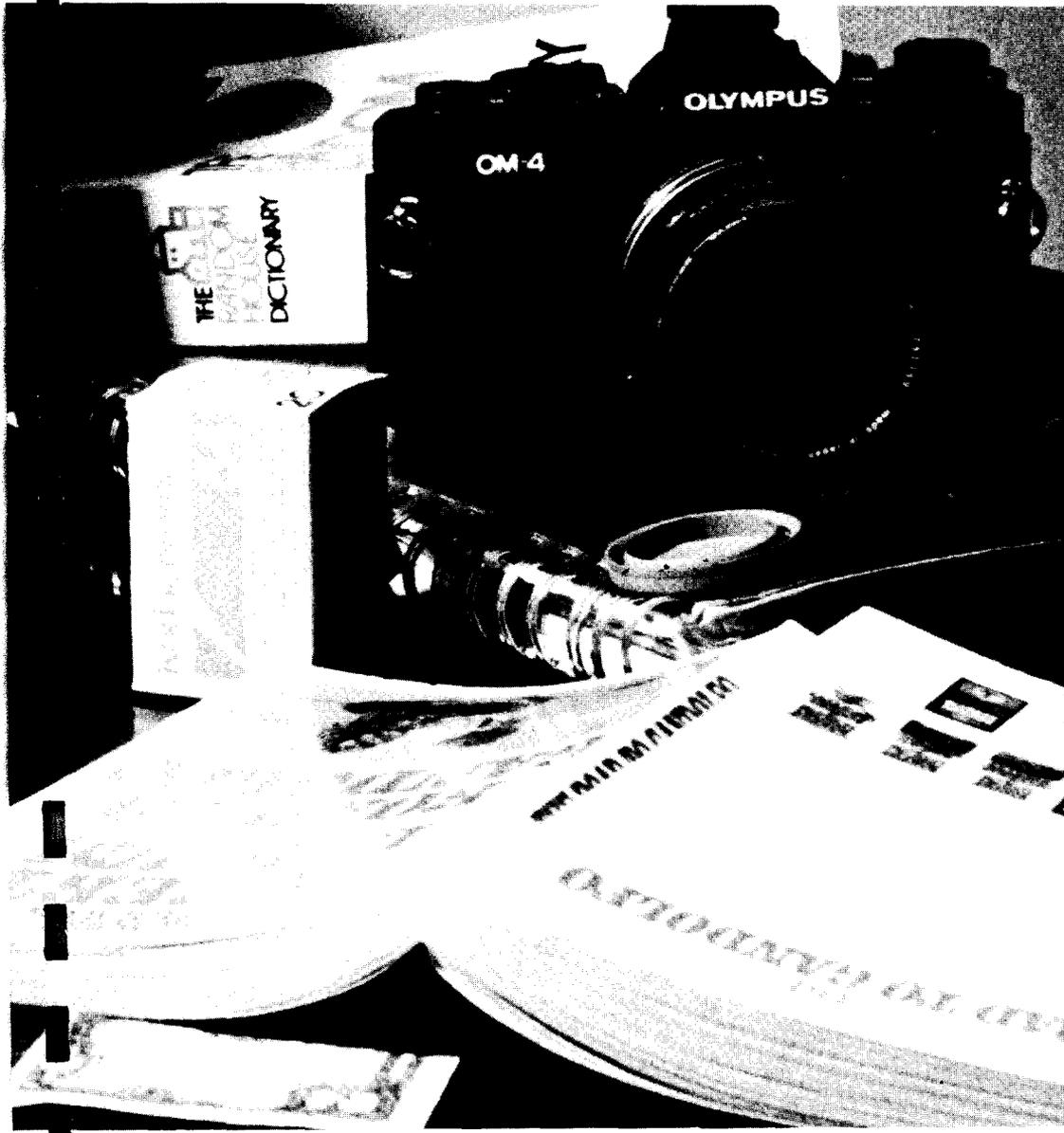
**Identification Cards**

Odessa College requires photo identification cards for all on-campus, credit-hour students. ID cards are used for admission to Odessa College student activities events, athletic events, fine arts presentations, the Sports Center, and library privileges. ID cards are processed off-campus and fees are non-refundable in case of withdrawal from the college.

Full information regarding ID cards can be obtained from the Business Office, Administrative Wing of the Student Union Building.

Photo by Arturo Hernandez

# Costs



**Financial Information**

**NOTE:** The following tuition and fee schedule for 1986-1987 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.

Only tuition, general use fees, activity fee, and other general fees are included here. See Course Fees and Deposits for additional amounts.

**Tuition and Fees**

| Semester<br>Hours | District<br>Resident | Out of<br>District | Non<br>Resident |
|-------------------|----------------------|--------------------|-----------------|
| 1                 | 32.00                | 52.00              | 227.00          |
| 2                 | 39.00                | 59.00              | 234.00          |
| 3                 | 46.00                | 66.00              | 241.00          |
| 4                 | 60.00                | 80.00              | 248.00          |
| 5                 | 75.00                | 95.00              | 255.00          |
| 6                 | 90.00                | 110.00             | 262.00          |
| 7                 | 102.00               | 122.00             | 266.00          |
| 8                 | 114.00               | 134.00             | 270.00          |
| 9                 | 126.00               | 146.00             | 274.00          |
| 10                | 138.00               | 158.00             | 278.00          |
| 11                | 150.00               | 170.00             | 282.00          |
| 12                | 162.00               | 182.00             | 286.00          |
| 13                | 170.00               | 190.00             | 290.00          |
| 14                | 174.00               | 194.00             | 294.00          |
| 15                | 178.00               | 198.00             | 298.00          |
| 16                | 182.00               | 202.00             | 302.00          |
| 17                | 186.00               | 206.00             | 306.00          |
| 18                | 190.00               | 210.00             | 310.00          |
| 19                | 194.00               | 214.00             | 314.00          |
| 20                | 198.00               | 218.00             | 318.00          |
| 21                | 202.00               | 222.00             | 322.00          |

**Tuition Only**

| Semester<br>Hours | Texas<br>Resident | Non<br>Resident | General<br>Use Fees<br>Students | Activity<br>Fees All<br>Students |
|-------------------|-------------------|-----------------|---------------------------------|----------------------------------|
| 1                 | 25.00             | 200.00          | 6.00                            | 1.00                             |
| 2                 | 25.00             | 200.00          | 12.00                           | 2.00                             |
| 3                 | 25.00             | 200.00          | 18.00                           | 3.00                             |
| 4                 | 32.00             | 200.00          | 24.00                           | 4.00                             |
| 5                 | 40.00             | 200.00          | 30.00                           | 5.00                             |
| 6                 | 48.00             | 200.00          | 36.00                           | 6.00                             |
| 7                 | 56.00             | 200.00          | 39.00                           | 7.00                             |
| 8                 | 64.00             | 200.00          | 42.00                           | 8.00                             |
| 9                 | 72.00             | 200.00          | 45.00                           | 9.00                             |
| 10                | 80.00             | 200.00          | 48.00                           | 10.00                            |
| 11                | 88.00             | 200.00          | 51.00                           | 11.00                            |
| 12                | 96.00             | 200.00          | 54.00                           | 12.00                            |
| 13                | 100.00            | 200.00          | 57.00                           | 13.00                            |
| 14                | 100.00            | 200.00          | 60.00                           | 14.00                            |
| 15                | 100.00            | 200.00          | 63.00                           | 15.00                            |

|    |        |        |       |       |
|----|--------|--------|-------|-------|
| 16 | 100.00 | 200.00 | 66.00 | 16.00 |
| 17 | 100.00 | 200.00 | 69.00 | 17.00 |
| 18 | 100.00 | 200.00 | 72.00 | 18.00 |
| 19 | 100.00 | 200.00 | 75.00 | 19.00 |
| 20 | 100.00 | 200.00 | 78.00 | 20.00 |
| 21 | 100.00 | 200.00 | 81.00 | 21.00 |

**Course Fees and Deposits**

|   |       |
|---|-------|
| Accounting (2401 and 2402)                          | 10.00 |
| Art Metals and Jewelry                              | 10.00 |
| Auto Body   | 24.00 |
| Automotive Technology                               | 24.00 |
| Biology   | 15.00 |
| Building Trades                                     | 24.00 |
| Business Machines                                   | 10.00 |
| Chemistry   | 15.00 |
| Child Development                                   | 10.00 |
| Computer Information Systems & Equipment Rental     | 15.00 |
| Diesel Mechanics                                    | 24.00 |
| Drafting (Except 1401 and 2408)                     | 5.00  |
| Drafting 2408                                       | 24.00 |
| Earth Science                                       | 15.00 |
| Electricity and Electronics                         | 24.00 |
| Emergency Medical Technology (1402, 2801, and 2802) | 15.00 |
| Engineering (1300)                                  | 5.00  |
| Foreign Language (1411 and 1412)                    | 5.00  |
| Geology   | 15.00 |
| Law Enforcement Lab (2310)                          | 20.00 |
| Law Enforcement (2311)                              | 24.00 |
| Law Enforcement Academy Lab (LEA 2311)              | 24.00 |
| Machine Technology and Equipment Rental             | 24.00 |
| Medical Lab Technology (1211, 1212, 2211, 2212)     | 15.00 |
| Nursing (1301, 1302, 1303, 1902)                    | 15.00 |
| Non-destructive Testing (NDT)                       | 24.00 |
| Petroleum Technology Lab (2303)                     | 10.00 |
| Petroleum Technology (1800)                         | 24.00 |
| Petroleum Technology Lab (2185 and 2385)            | 24.00 |
| Photography   | 10.00 |
| Physical Education (Golf)                           | 24.00 |
| Physical Education (Per Activity Class)             | 5.00  |
| Physical Education (Camping)                        | 24.00 |
| Physics   | 5.00  |
| Pottery   | 24.00 |
| Radio Broadcasting                                  | 10.00 |
| Radiologic Technology (1111, 1112, 1314)            | 15.00 |
| Reading (Per semester hour)                         | 2.00  |
| Refrigeration and Air Conditioning                  | 24.00 |
| Respiratory Therapy                                 | 15.00 |
| Sculpture   | 15.00 |
| Shorthand   | 10.00 |

## 150 Costs

|  |       |
|--|-------|
| Television.....                                      | 10.00 |
| Typewriting .....                                    | 10.00 |
| Welding and Equipment Rental (Except NDT 2401) ..... | 24.00 |
| Word Processing (OE 1304) .....                      | 10.00 |

### Private Lesson Fees

|   |       |
|---|-------|
| Applied Music, Private Instruction (½ hour).....  | 20.00 |
| Applied Music, Private Instruction (1 hour).....  | 40.00 |
| Applied Music, Class Instruction (Mu 1177, 1178, 1179, 1180, 1181, 1182, and 1184)..... | 20.00 |

### Travel Fees

|                                    |        |
|------------------------------------|--------|
| Foreign Language (Span 1220) ..... | 200.00 |
| Physical Education (Skiing).....   | 218.00 |

### Miscellaneous Fees

|   |       |
|---|-------|
| Advanced Standing Examination .....               | 20.00 |
| General Deposit (Refundable).....                 | 10.00 |
| Late Registration .....                           | 5.00  |
| Student Identification Card (Non-refundable)..... | 4.00  |
| Student Liability Insurance .....                 | 9.00  |
| Testing Fee.....                                  | 2.00  |
| Transcript (First copy free).....                 | 1.00  |
| Vehicle Registration (Regular semester) .....     | 3.00  |
| Vehicle Registration (Short term) .....           | 1.00  |

Courses involving out of town trips will have additional fees for travel and lodging.

In some areas of instruction, students provide their own tools, equipment, supplies, etc. When enrolling, they should inquire as to estimated total costs.

Student liability insurance or proof of comparable coverage is required for students enrolled in Child Development, Emergency Medical Technology, Clinical Lab Science, Nursing, Radiologic Technology, and Respiratory Therapy.

### Refund Policy

Tuition and fees paid directly to the college by a sponsor, donor, grant, loan or scholarship shall be refunded to the source rather than directly to the student.

**Note:** Class day means the day the session is designated to begin and each consecutive school day thereafter.

To have a refund authorized, a student must present a completed withdrawal request form to the business office. Refer to the section in the catalog or Student Handbook on "Withdrawal" for procedures.

**Cancelled Classes:** If a class is cancelled by the college, all tuition and fees for that course will be refunded.

**Dropped Courses:** Students who reduce their semester credit-hour load by officially dropping a course or courses and remain enrolled at Odessa College will have 100 percent of applicable tuition and fees refunded if the drop occurs during the first 12 class days of a regular session or during the first four class days during a summer session or open entry course.

**Withdrawal from the College:** Students who officially withdraw from Odessa College will have their tuition and mandatory fees refunded according to the following schedule.

**Fall and Spring Semesters**

When the withdrawal occurs

|   |                                      |
|---|--------------------------------------|
| Prior to the first class day.....       | 100%,<br>less \$15 processing charge |
| During the first five class days .....  | 80%                                  |
| During the second five class days ..... | 70%                                  |
| During the third five class days .....  | 50%                                  |
| During the fourth five class days.....  | 25%                                  |
| After the fourth five class days.....   | NONE                                 |

**Summer Semesters and Open-entry Classes**

When withdrawal occurs

|   |                                      |
|---|--------------------------------------|
| Prior to the first class day.....                 | 100%,<br>less \$15 processing charge |
| During the first, second or third class day ..... | 80%                                  |
| During the fourth, fifth or sixth class day ..... | 50%                                  |
| After the sixth class day .....                   | NONE                                 |

**Extension Courses:** Students enrolled in extension classes may be charged an additional fee, depending upon the course and the center in which the class is held.

**Payment by Check:** Positive identification (drivers license preferred) is required for any payment to Odessa College. Checks are accepted for the exact amount of tuition and fees only. All checks are to be payable to Odessa College. The college does not accept two-party checks or payroll checks.

**Returned Check Policy:** Checks for tuition and fees returned by the bank for any reason constitutes the student's automatic withdrawal from all classes, unless the tuition and fees are paid within five days of the date notification is mailed to the student. All returned checks are collected through Instachek. A returned check fee of \$15 is charged per check by Instachek. Odessa College reserves the right to require payment in cash from individuals with a history of returned checks. Stop payments will be considered the same as returned checks.

**Payment by Credit Card:** The college will accept VISA and MasterCard for payment of tuition and fees with proper approval.

**Schedule Change Fee:** A schedule change fee of \$5 will be charged for all schedule changes made during the first 12 class days of a regular semester or during the first four class days of a summer session except for the following situations:

- a. When a change or drop constitutes a withdrawal from the college.
- b. When semester hours only are added to the existing schedule.
- c. When the change is for the convenience of the college or has been caused by the college—cancelled class, change in class time, departmental request, etc.

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

**Residence Status for Tuition Purposes**

Assessment of tuition and fees for students is based on the residency classification of the student. At Odessa College, a student's residence status for tuition purposes will fall in one of four categories.

1. **In-District Resident:** Students who are 18 years or older must have been a resident of the State of Texas for twelve (12) months prior to their enrollment, including six (6) months as a resident in the Odessa Junior College District. In the case of students under 18 years, their parents must meet the above criteria.

2. **Out-of-District Resident:** Students 18 years and older who have not lived within the Odessa Junior College District six (6) months prior to registration, but who have been a resident of Texas at least twelve (12) months prior to registration, are considered to be Out-of-District students. In the case of students under 18, their parents must meet the above criteria.
3. **Out-of-State Resident:** United States citizens who are 18 years of age or older and who have not lived in Texas for at least twelve (12) months prior to registration, are considered out-of-state residents. When students are under 18 years of age, their family's residence for the prior twelve (12) months determines whether they are out-of-state residents.
4. **Alien Resident:** A citizen of another country who is in the United States on a student visa other than an immigrant visa will be classified as an alien student.
5. **Waiver of Residence Requirements:** Odessa College will waive the difference in the rate of tuition for non-resident and resident students and their dependents, when those individuals own property which is subject to ad valorem taxation including land, homestead, and property for business purposes. The student must present the Admissions Office with a certified copy of the Warranty Deed obtained from the Ector County Clerk's Office. This deed must show a record title of the Ector County property to be in the name of the student, spouse or parents, whichever is applicable.

The determination of a student's legal residence for purposes of establishing the appropriate tuition rates is made at Odessa College according to guidelines pursuant to Title 3, Texas Education Code: **Rules and Regulations for Determining Residence Status and for Determining Tuition Rates for Foreign Students**, effective July 15, 1981. Students should be aware that these guidelines are subject to further revision.

Copies of these guidelines, as published by the Coordinating Board, Texas College and University System, are available for inspection in the Office of the Director of Admissions/Registrar. Questions or disputes regarding interpretation of these guidelines should be directed to that office.

#### **Resident Classification Is Student Responsibility**

Students are responsible for registering under the proper residence classification. If there is any question regarding their right to classification as a resident of Texas, they should inquire at the Registrar's Office.

Students found to be non-residents will remain in that classification as long as they attend Odessa College or until they petition for and receive approval for change of status.

Students classified as a resident but who become nonresidents 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.

#### **Financial Aid**

Odessa College is firmly committed to the philosophy of assisting those students who do not have the financial resources to pay for higher education but who wish to attend college. Of equal importance is the awarding of academic scholarships to recognize those students who exhibit superior scholastic abilities.

The Financial Aid Office administers four broad program areas: grants, employment, scholarships, and loans. An institutional application and a Family Financial Statement from the American College Testing Program is required for all needs-based financial aid programs. Only an institutional application is required for scholarships. Both the institutional application and the Family Financial Statement are available from the Odessa College Financial Aid Office. Most high school counselors also have the Family Financial Statement.

When requesting information about financial aid programs, students should ask for an application packet and the Financial Aid Bulletin. The Bulletin provides detailed information about the aid programs, including general eligibility requirements and satisfactory academic progress.

## Types of Student Financial Aid

### Grants

**The Pell Grant Program** provides the foundation of student financial aid and thus serves as the starting point in the aid process. A number of factors, including a student's range of eligibility, cost of education, and enrollment status determine the award. Pell Grants are awarded in three student-load categories: (1) enrollment in 12 or more semester hours for a full-time award; (2) enrollment in nine to 11 hours for approximately three-fourths of a full-time award; and (3) enrollment in six to eight semester hours for approximately one-half of a full award. Students enrolled in fewer than six hours are not eligible for a Pell Grant.

Application for a Pell Grant may be made in two ways. Completing a Family Financial Statement from the American College Testing Program and entering the correct response on the form will initiate application process of a Pell Grant and other financial aid programs described below which call for the completion of a Family Financial Statement as a part of the application. The Family Financial Statement is not the application document to use to be considered for only a Pell Grant.

A separate application may be used to apply for only a Pell Grant. Although the application is titled "Application for Federal Student Aid", it only causes the student to be considered for Pell Grant assistance. This application is available through the Financial Aid Office and high school counselors.

Students will receive a **Student Aid Report (SAR)** from the Pell Grant Processing Center as a result of their application. All copies of the SAR should be submitted to the Financial Aid Office as soon as they are received to expedite processing of the award.

**The Supplemental Educational Opportunity Grant (SEOG)** is for students with financial need and is usually combined with other forms of assistance to help students meet their cost of education. Application is made by completing a Family Financial Statement. Priority is given to full-time students for this program.

**The Texas Public Education Grant (TPEG)** is also for students with financial need and is designed to assist students in enrolling and remaining in college. The Family Financial Statement serves as the application, and priority consideration is given to full-time students for funds generated for this program.

**The Texas Public Education-State Student Incentive Grant (TPE-SSIG)** is awarded to students with financial need and is financed through equal shares of TPEG and federal funds. Application is made by submitting a Family Financial Statement. Priority consideration for this program is reserved for full-time students.

### Loans

**The Texas Guaranteed Student Loan Program (TGSL)** allows a student to borrow directly from a bank, credit union, savings and loan association, or other lending institutions. Since not all financial institutions participate in the program, it is the responsibility of the student to locate a lender and to arrange the loan. The Financial Aid Office only certifies the student's eligibility for the loan and is not involved in any other phase of the application process. If the student cannot find a lender, the Financial Aid Office will assist in trying to locate one.

Recent legislation requests a TGSL Application to be subjected to a needs-test. As of this printing, students who had family incomes of \$30,000 or less during the base application year are generally eligible to apply for a loan in the amount of \$2,500 for the academic year. Students with family incomes of over \$30,000 during the base application year will have the amount of their loan eligibility determined by a needs-test, but the loan may not exceed \$2,500 for the academic year.

Undergraduates may accrue a total outstanding debt of \$12,500 to finance their entire education. Repayment begins six months after they terminate their education.

**Short-term Institutional Loans** are made by Odessa College to assist students with registration costs. A student attempting to enroll at Odessa College is eligible to apply if proof can be shown that the loan can be repaid during the semester for which it was borrowed. The amount of the loan is determined by the student's temporary need and is made on a first-come, first-served basis. Applications for the loans can be obtained in the Financial Aid Office.

### **Campus Employment**

**The College Work-Study Program (CWS)** provides employment opportunities to students who have established financial need. Students work in a wide variety of jobs compatible with their interests and abilities and are paid at least the prevailing minimum wage. Although need determines the amount of total allowable earnings, students generally do not work over 20 hours per week and arrange their working hours so as not to conflict with classes. Application for the program is made by completing a Family Financial Statement.

**Non-Work-Study Jobs** are available in some departments. These part-time jobs are not need related and the employing department has considerable flexibility in meeting employment needs. Applications may be made to the department in which the student is interested in working.

### **Scholarships**

**Odessa College Academic Scholarships** are offered annually to recognize scholastic merit. **The Career Advancement Scholarship** has been established to encourage students to pursue career goals, and although academic performance is part of the selection criteria, recipients need not be high-ranking honor students to receive the award. **The President's Outstanding Student Scholarship** is awarded to honor students and as such emphasizes quality scholastic achievement. Need is not considered for either scholarship. Application should be made to the Financial Aid Office.

**Valedictorians** of Texas high schools are eligible for exemption from payment of tuition during both regular semesters at Odessa College following their graduation from high school. Since this is only a tuition exemption, valedictorians are encouraged to apply for other scholarships since their top-ranking status is certainly worthy of consideration for other awards.

**Departmental Scholarships** are offered each year through the **Art, Music, Theatre, Speech (Forensics), and Journalism** departments which are based upon performance, merit, skill, and ability. Specific information and application requirements may be obtained by contacting the particular department chairman of the scholarship area in which the student is interested.

**The Noel Scholarship** is available to students through generous gifts from Ellen and Bill Noel. The award is first restricted to children of employees of El Paso Products Company in amounts intended to cover tuition, fees, and books. Any excess funds after these awards are made may be used for Ector County residents determined to be in financial need.

**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 \$200 per semester for eight consecutive full-time semesters; four semesters are applicable at Odessa College while the remaining four semesters are available at the University of Texas of the Permian Basin. Students must complete each semester with a minimum of 12 credit hours with a 2.50 grade point average to maintain their eligibility. Applications are available from the foundation or from area high school counselors.

**Other Scholarships** in addition to the ones described above are also available to students attending Odessa College. Many individuals and organizations cooperate with Odessa College in their search for scholarship recipients. These awards are not controlled by, nor are selections made by the college, but every attempt is made to provide applications to these parties within the framework of applicable restrictions. Since some organizations do not contribute annually and other contributors are not known at print time, it is not possible to catalog and list each donor.

### **Veterans**

Veterans interested in taking advantage of their benefits to pursue or further their education are encouraged to contact the veterans' officer at Odessa College. As with the other programs described above, students are strongly encouraged to inquire into the possible benefits of the Veterans' Administration as far in advance of the semester of planned attendance as possible. This facilitates the coordination of educational claims for benefits between Odessa College and the regional VA office, and avoids delays that could occur in the award cycle. The Veterans' Office is a component of the Financial Aid Office and is located on the second floor of the Student Union Building.

# Academic Information



## Academic Information

### Academic Guidelines

That all students receive the best education possible is the primary goal of Odessa College. Whether they intend to transfer to other institutions after completing their studies at Odessa College or whether they intend to put their learning to immediate use in the job market, students are assured that they will obtain quality education at Odessa College. They will receive an education that will be meaningful in all areas of their lives.

Academic needs of all students are important at Odessa College. Programs have been initiated for students who need basic instruction to raise their proficiency in a particular subject area. Similarly, special programs are offered for students who excel. The college has well-equipped facilities for its Reading and Writing Laboratory, its Computer-Assisted Instruction Center, and its Health Sciences Learning Center. Laboratories to assist in instruction in physical and natural science also are provided. Also on an individualized basis, Personal Development courses are available. But perhaps the most important factor of all is a concerned faculty who want to help students succeed. As a result, Odessa College practices its belief that quality instruction and academic excellence not be compromised.

University-parallel programs at Odessa College focus on academic excellence. As a result, the quality of its curriculum and its outstanding faculty have gained national recognition. Students who intend to transfer from Odessa College to other institutions build solid foundations for their educational pursuits. More often than not, their performance on the senior college level equals or surpasses that of those students who attend their selected senior college or university beginning with the freshman year.

Occupational-technical programs at Odessa College train students who exhibit outstanding proficiency with on-the-job skills. Program directors, supervisors, and faculty work closely with advisory committees from business and industry to assure that students in occupational-technical programs learn the exact skills they will need on the job. As a result, students who complete these programs receive both practical education and professional training that contribute to their success in their respective skills.

To make college instruction even more accessible to more people, several departments offer open-entry classes. This procedure allows students to enroll in some courses at almost any time during a long semester rather than having to wait until a regular term begins. In addition, innovative instructional approaches and scheduling in some departments allow students to complete a three semester-hour course in some subjects in only eight weeks. The instructional staff at Odessa College constantly searches for ways to better serve students without compromising instructional quality.

All instructional programs are reinforced by strong support services. A Learning Resources Center—which houses the library, learning center, and developmental studies provides rich resources to supplement classroom instruction. Faculty members also use the learning resources center and the instructional media program to enrich their accumulated resources and to enhance their proven teaching methods.

### Learning Resources Center

The essential objective of the Murry Fly Learning Resources Center is to support and enhance curriculum programs and classroom research needs. Through the concept of an independent learning laboratory and classroom adjunct, the LRC provides and produces a wide assortment of services and resources including over 65,000 books, 600 current serial titles, 14 daily or weekly state and national newspapers, over 600 film/video recordings, and hundreds of audio tapes. In addition, numerous multimedia and computer-assisted instructional programs are available for particular disciplines, as well

as extensive files of thousands of pamphlets, articles, reprints, etc. of information not otherwise accessible.

More specialized resources include NEWSBANK—a monthly compilation, by subject, of data from over 2,000 selected U.S. and Canadian newspapers and journals. A comprehensive collection of U.S. college catalogs and telephone books is also maintained. Numerous microcomputers are available for use with an extensive software collection containing all the more popular word processing, database management, and spreadsheet systems. Printers are also available to assist students with term papers and other classroom projects. A catalog, by subject, of all software/AV holdings is published and distributed annually in a Student and Faculty Guide to the LRC.

To further enhance readily-available resources, the LRC contracts with a national database vendor for direct access to over 80 major educational/industrial commercial databases holding in excess of 50,000,000 records. As a nominal fee is required for telephone charges, a reference interview is required to determine actual and particular needs. The Reference Department provides both general and specific instruction in the effective use of the LRC. Classroom instruction is also available upon request. The AV Department provides viewing areas and assistance with all media formats. General classroom instruction efforts are assisted by scheduled delivery/pickup and maintenance of equipment. The Instructional Development Department works closely with faculty or students in developing particular or specialized curriculum-related courses or projects.

### **Regulations Subject to Change**

Information and regulations printed in this catalog are subject to change. The Board of Trustees and the administrative staff may revise programs, courses, tuition, fees, or any other information stated in this publication. Anyone having questions regarding such information and changes thereto should check with the appropriate office, department, or division for current information.

### **Course Load**

The normal course load that full-time students may carry during a regular semester will vary with the particular courses for which they have enrolled. Students are classified as full-time when they are enrolled in 12 or more semester hours, but students will normally enroll in 15 to 18 hours each semester as outlined in their course of study or degree plan. Students will not be permitted to take more than five courses of three or more semester hours in one semester without written approval from the Registrar unless a particular Course of Study for an Associate Degree or a certain Certificate of Completion specifies a total semester-hour load exceeding 18 hours.

A normal load during each term of the summer session will vary from three to seven semester hours. Generally, the maximum credit that a student may earn during the entire summer sessions is 14 semester hours. In the midwinter session one course may be taken for the normal amount of credit derived during a regular semester.

The maximum course load for a student enrolled in evening classes depends on individual circumstances and ability of the student. The normal load for evening students who have full-time employment is six semester hours or two courses.

Students who are employed while attending classes or who have experienced difficulty previously in academic work should plan course loads in such a way that ample time can be given to all these demands. Usually, three hours of preparation time are needed for each hour of classroom time. Therefore, an average student should plan on investing nine hours of preparation time outside of class each week for each three-hour course taken. Students are encouraged to consult a college counselor to determine the best program possible.

**Open-entry/Open-exit Programs**

Open-entry/open-exit classes are available in five vocational programs: Automotive Technology, Cosmetology, Diesel Mechanics, Machine Technology, and Welding Technology. These areas of instruction feature continuous registration and admissions throughout the school year. These intensive programs are designed to fit the individual needs of persons interested in learning a new skill or updating existing ones as quickly as possible.

A special advantage of these programs is that students may register at any time and may begin classes immediately instead of waiting for the beginning of a term or semester. Skilled instructors who have many years of professional experience in their teaching field closely supervise students in their classes.

Information about these open-entry/open-exit programs is available from the specific program director, the Counseling Center, the Admissions Office, or the News and Information Office.

**Flexible-entry Opportunities**

Flexible-entry classes are also offered in the following academic and occupational programs: Emergency Medical Technology, English, Office Education, Photography, Reading, Refrigeration/Air Conditioning, and Real Estate. Students may register for these classes at various times during the semester. The program director or the Admissions Office should be contacted for information.

**Student Classification**

Students who have completed 24 semester hours or less will be classified as freshmen. Students with more than 24 semester hours will be classified as sophomores.

Students will be classified as full-time if they are enrolled in 12 or more semester hours. Students enrolled in fewer than 12 hours will be classified as part-time.

**Grades**

Grading measures the ability of students to master specific objectives within a given course. A grade is based upon the level of performance in examinations, term papers, reports, class discussion, and the final examination in the course or project. Odessa College uses the following grade and grade point system:

| Grade | Description   | Grade Points      |
|-------|---|-------------------|
|       |   | Per Semester Hour |
| A     | Excellent .....   | 4                 |
| B     | Above average.....  | 3                 |
| C     | Average.....  | 2                 |
| D     | Passing, but poor.....  | 1                 |
| I     | Incomplete .....  | 0                 |
| IP    | In Progress, on-going course .....                            | 0                 |
| Z     | No grade assessed; requires re-enrollment.....                | 0                 |
| F     | Failure.....  | 0                 |
| —     | Audit (not taken for credit).....                             | 0                 |
| W     | Official Withdrawal before the end of the first 12 weeks..... | 0                 |
| WF    | Withdrawal while failing during 7th through 12th week.....    | 0                 |
| CR    | Advanced Standing (credit by examination).....                | 0                 |

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 (G.P.A.): the semester grade point average and the cumulative grade point average. The G.P.A. for any semester is determined by multiplying the number of semester hours for each course by the number of grade points corresponding to the final grade for the course. The total of all such products for the semester is then divided by the number of semester hours attempted for that period. Incomplete grades are included in calculations of grade averages when the final grades have been recorded. Grades of W and WF are not included.

The cumulative grade point average is calculated by dividing the total number of grade points by the total number of semester hours attempted by the student in all terms.

### **Scholastic Standards**

Odessa College is dedicated to providing students with opportunities for success in their course work and with support services to help them realize that success. The college recognizes, however, that students do encounter scholastic difficulties from time to time. Consequently, the college has designed a system of scholastic referral and withdrawal to identify students with scholastic problems and to provide a mechanism to aid them in recognizing and solving such problems.

All Odessa College degree and certificate plans require that students have a G.P.A. of 2.0 or higher for graduation; therefore, students are considered to be in good standing as long as they maintain a G.P.A. of 2.0 or higher on a semester or cumulative basis.

### **Scholastic Referral**

At the end of each semester, academic records of all students will be evaluated according to the following criteria:

1. The grade point average for the semester will be computed. If the G.P.A. is 2.0 or higher, the student is considered to be in good standing.
2. If the G.P.A. is less than 2.0, the cumulative G.P.A. will be examined. If the cumulative G.P.A. is 2.0 or higher, the student is still considered to be in good standing.

If the cumulative G.P.A. is less than 2.0, the student will be put on Scholastic Referral.

Scholastic Referral warns students that they need to pay careful attention to academic progress. They will be given the opportunity to take advantage of special study-skills counseling through the Odessa College Counseling Center.

### **Removal from Scholastic Referral**

Students on scholastic referral return to "good standing" status by earning a G.P.A. of 2.0 or higher the next long semester of enrollment at Odessa College or by having a cumulative G.P.A. of 2.0 or higher at the end of the next semester. A G.P.A. of 2.0 for either the semester or on a cumulative basis will remove students from scholastic referral.

### **Enforced Scholastic Withdrawal**

Students who are in the scholastic referral category and who do not earn a G.P.A. of 2.0 for the next semester of enrollment at Odessa College or who do not bring the

cumulative G.P.A. up to at least a 2.0 by the end of the semester will be placed in the Enforced Scholastic Withdrawal category. Students in this category will not be allowed to enroll at Odessa College the next long semester.

### **Appeal of Scholastic Withdrawal**

Students placed on Enforced Scholastic Withdrawal may appeal their status to the Director of Admissions. Extenuating circumstances may allow such students to enroll under a Continued Scholastic Referral category with specified conditions. Students not in good standing at the end of the continued referral semester must withdraw for the next long semester.

### **Re-Enrollment After Enforced Scholastic Withdrawal**

Students who serve the designated semester of Enforced Scholastic Withdrawal may enroll for the next long semester. They are, however, still on Scholastic Referral. At the end of the semester, their G.P.A. will be examined both on a semester and a cumulative basis to determine whether they have returned to good standing.

If their G.P.A. meets minimum requirements, students may continue to enroll without special conditions. If, however, students do not meet minimum G.P.A. requirements, they will again be placed on Enforced Scholastic Withdrawal. When Scholastic Withdrawal occurs a second time, the period of forced withdrawal will be two long semesters. Following a two-semester enforced withdrawal, students must make a request in writing to the Director of Admissions for readmission on Scholastic Referral.

### **Special Conditions**

Students on Scholastic Referral who enroll in summer school at Odessa College will not have their academic status altered as a result of summer school grades. Students on Enforced Scholastic Withdrawal who enroll in summer school at Odessa College, who earn a summer G.P.A. 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 Referral basis.

Transfer students who are on academic probation or the equivalent from the last institution attended and who apply for admission to Odessa College will be admitted. Their academic standing will be determined at the end of the semester in the same manner as other Odessa College students. Students on academic suspension or equivalent at the time of application will be required to submit an official transcript for evaluation by the Director of Admissions. Students who would be eligible to enroll according to Odessa College standards will be admitted and enrolled on Scholastic Referral for the first semester. Their future academic standing will be determined in the same manner as for other Odessa College students.

### **Incomplete Grades**

The conditional grade of "I" means that students have not completed required work for a course. The grade may not be given unless (1) students have passed all work completed and (2) they have completed a minimum of three-fourths of the required course work.

An "I" grade will not be assigned until conditions for completion of the course work are agreed upon by both the instructor and the student. Whenever possible, such an agreement should be in writing and should be signed by both the instructor and the student. The final decision as to whether a grade of "I" will be assigned rests with the instructor. When an "I" grade is assigned, incomplete work must be completed in the semester immediately following the one in which the grade was assigned.

### **Grade Changes**

All grade changes must be made by the end of the semester following the one the original grade was assigned. For example, a student requesting a grade change from an "F" received in the fall to a "W" must make the request during the spring semester immediately following. Students wanting a grade change in a course taken during a summer session have until the end of the fall semester to effect the change. Any "I" grade not completed by the student and not changed by the instructor within the one-semester time limit will be computed as an "F" for grade point average purposes.

Students are not routinely notified by the college when a grade change has been processed. Students should request a new copy of their college transcript for this information.

### **Withdrawal**

So that all records are left in proper order, students who leave Odessa College before the end of a semester or before the end of a class for which they are registered must follow the official withdrawal procedure, which students themselves initiate in the Registrar's Office. Students who wish to withdraw should appear in person unless there are extenuating circumstances. When an individual other than the student initiates a withdrawal, that individual must be identified and verified for the student's protection. Students who stop attending class without officially dropping will receive an "F" in the class for the semester.

Students who drop classes or withdraw prior to the official census day for the semester will not be assigned a grade for the class or classes dropped. No record of the class will appear on their permanent academic record.

Grades of "W" will be assigned to all students who withdraw or drop classes during the first six weeks of classes during any long semester and before a specified date for summer and midwinter classes. After the sixth week, 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" or "WF" and sign the withdrawal form. Students will then return the form to the Registrar's Office. Grades of "W" or "WF" are assigned through the twelfth week of class in the long semesters. Students who withdraw after that time will receive an "F" grade.

The college reserves the right to withdraw students from any one or all of their classes if, in the judgment of college officials, such withdrawal is in the best interests of the students or the student body.

### **Class Attendance**

Students are expected to regularly attend all classes in which they are enrolled. Records of student absences are kept by instructors, and when students are absent from class, they are responsible for consulting with the instructor regarding the absence.

### **Schedule Changes**

At the beginning of each semester, the college designates a time for students to change their schedules by adding and/or dropping classes. These dates and times are specified in the class schedule for the semester. A schedule change fee of \$5 will be charged for all changes except those caused by the college or those in which a student is only adding hours to the existing schedule.

### **Advanced Standing and Credit by Examination**

Odessa College is an open testing center for College Level Program and will administer those examinations to anyone making application, subject only to restrictions established

by the Educational Testing Service and the College Entrance Examination Board. Departmental examinations are administered in most areas in which CLEP examinations are not used at Odessa College. Specific information about CLEP examinations may be obtained in the Counseling Center. Department chairmen should be contacted regarding applications for advanced standing examinations.

Odessa College will accept up to 15 semester hours of advanced standing credit awarded either by the College Level Program (CLEP) subject examinations or by approved Odessa College departmental examinations (exceptions for additional hours may be granted in some specialized programs such as Nursing). Before credit by examination will be noted on their permanent record card, students must complete Odessa College credits equal to the number received by examination.

Students who do not pass a departmental advanced standing examination may retake the test after a period of six months has elapsed, but they must receive permission from the respective department chairman in order to do so. No departmental examination may be repeated more than once.

Students who receive advanced standing credit in a course may not apply for advanced standing in courses considered lower level than the one for which they currently have credit or are currently enrolled.

Examinees should check with senior institutions of their choice concerning the acceptance of credit earned by advanced standing examinations. Transcripts will record credit given by examination but will not list a specific grade. Hours earned by examination will not be included in computing grade point averages, scholastic hours, residence requirements for graduation, or credit load requirements for Social Security or Veterans Administration benefits.

### **Early Admissions Program**

The Early Admissions Program enables high school seniors to enroll concurrently in Odessa College while completing their high school requirements. Students in the program can profitably accelerate their progress in college and achieve their educational goals in less time and with less expense than in the traditional program.

To be eligible for the program, high school seniors must be within four units or 12 quarter credits of graduation and have the recommendation of their high school counselor, their high school principal, and the approval of their parents. They may then enroll in the regular manner at Odessa College.

Students in the Early Admissions Program may enroll in as many as two courses each semester. They will be expected to adhere to all policies of the college as well as those of their respective high school while in the program.

Letters from most Texas colleges and universities accepting transfer credit of courses completed under the Early Admissions Program have been received by the Director of Counseling. Participating students also have been given approval by the University Interscholastic League to retain their eligibility in League activities.

Information on the Early Admissions Program can be obtained from the Odessa College Director of Admissions or from counselors at participating high schools.

### **Honors**

Students enrolled in 12 semester hours or more during a semester and making a grade of "A" in all courses are listed on the Summa Cum Laude honor roll. Full-time students who make no grade lower than "B" are listed on the Cum Laude honor roll.

Part-time and summer session students enrolled in two courses for a total of six semester hours or more and make a grade of "A" in all courses are listed on the part-time student or summer session Summa Cum Laude honor roll. Part-time and summer

session 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 and summer session Cum Laude honor roll.

### **Graduation Requirements**

Students completing degree requirements during the summer or in December are encouraged to participate in spring graduation ceremonies. Students who complete requirements at the end of the spring semester will be expected to participate unless unusual circumstances prevent such participation.

To receive an associate degree from Odessa College, students must complete degree requirements as set forth in the catalog and complete a degree application in the Registrar's Office by the deadline specified in the official college calendar. Summer graduates should observe the date for fall graduates.

Odessa College does not charge a graduation participation or a diploma fee. The cost for these items is absorbed by the college. Rental fees for caps and gowns and invitations are paid by students.

### **Transcript of Record**

The transcript of record is an official copy of the student's permanent record. Copies will be supplied upon written request. Students may instruct the Registrar's Office to mail official transcripts to colleges or universities to which they are applying or to prospective employers, etc. The first copy of a transcript is provided at no cost. A charge of \$1 will be made for all subsequent official copies.

Students who transfer to Odessa College from other accredited institutions and who plan to earn a degree from Odessa College will have transfer work evaluated in terms of the proposed degree plan. Courses that satisfy degree requirements will be posted to the student's Odessa College record and will be identified as transfer work done for degree credit. The transferring institution, dates, and semester hours of credit will also be noted. This posting is not intended to be certified for future transferability. Students who transfer from Odessa College to other institutions can expect to submit official copies of academic records from all previous institutions.

To protect student records, Odessa College adheres to the conditions by which information about students can be released as set forth in The Family Educational Rights and Privacy Act of 1974, as amended.

### **Military Experience**

Odessa College does not routinely give academic credit for military experience. If individuals have acquired skills normally learned in a course or in courses in their degree plan, they are encouraged to utilize the Credit by Examination option. Odessa College does award credit for physical education activity courses when a DD-214 is properly submitted to the Registrar's Office.

Students who have passed military CLEP examinations may have those results evaluated as if the testing were done under Odessa College guidelines. Credit will be awarded only if credit would be awarded on the basis of examinations taken at Odessa College.

If military credit has been awarded on an official transfer transcript from an institution accredited by the appropriate regional accrediting association, that credit will be evaluated in the same manner as any other transfer work.

### **Transfer to Another Institution**

Courses taken at Odessa College normally transfer to all other accredited institutions at face value. Grades earned at one college can not be lowered by another college or

university. However, courses taken that are not required for graduation at the senior college or university will not apply and therefore should not be taken at this institution. Before registering, students should contact a counselor or advisor at Odessa College for maximum assistance in planning a program.

Senior colleges vary in their recognition of a grade of "D" in a course. Some senior institutions accept a grade of "D" if the student's overall average is "C" or better. Certain senior colleges may require that the student repeat any course in which a "D" has been made.

When enrolling at Odessa College, or before if possible, students should select the senior institution to which they want to transfer after leaving Odessa College. They should become familiar with transfer requirements by contacting the senior institution and then design a suitable course of study to follow while here. Counselors and advisors will assist.

Generally speaking, senior institutions will not accept more than 66 semester credit hours in transfer. Students should avoid exceeding this number of hours. Senior colleges vary greatly in their practice regarding allowance of credit for courses pursued at junior or community colleges.

When students at Odessa College transfer to another institution, no transcripts will be released until all records at Odessa College have been cleared.

### **Technical/Vocational Programs**

Odessa College offers a wide variety of technical/vocational programs designed to enable a student to enter his chosen career field as a skilled employee after one or two years of college work.

These programs were established only after studies verified that employment opportunities will exist at the time students complete training. The community's manpower requirements are matched with the ambitions and goals of the student. This realistic approach to occupational education is made possible by the excellent cooperation of local industry, businesses, and public agencies which look to community colleges for skilled personnel.

Odessa College maintains continuous liaison with prospective employers to assist in placement of graduates and to keep training programs up-to-date with current job requirements. Skills needed on the job are taught in these classes by occupational-technical faculty who have many years working experience, as well as academic training.

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

Technical and vocational courses carry college credit leading to an Associate in Applied Science Degree or to a Certificate of Technology.

### **Developmental Studies**

For students who need extensive development of mathematics, writing, reading, and basic study skills, Odessa College offers a Developmental Studies program. Students may take basic English, basic mathematics, reading, basic speech communication skills, and personal development in this program.

The courses are designed to help students achieve skills which they may not have gained before entering Odessa College. Prior to enrolling for courses in the Developmental Studies program, students, using diagnostic tests offered through the Testing Center, will be able to determine where they need the most skill building.

While enrolled in one or more of the courses in the program, students may request tutoring from other college students and professionals. All courses in Developmental

Studies grant Odessa College credit ranging from one to three credit hours, but credit earned does not apply to any associate degree plan at this institution. If students intend to transfer after attending Odessa College, they should check with the college or university of their choice to determine whether the credit hours will transfer.

### **Evening Classes**

Evening classes represent an extension of curricula offered to day classes and are an integral part of the total educational program. Primarily, evening courses accommodate those individuals of the community who want to carry less than a full college course load because they are employed full-time during the day. A wide variety of courses is offered for those individuals who want to broaden their educational backgrounds.

Students may complete requirements for an associate degree or certificate plan in most programs during evening hours, although the length of time to complete the programs may be longer than suggested for full-time day students.

### **Summer Session**

The summer session consists of two terms of five and one-half 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 six-week session. Credit earned in a course is equivalent to that offered in the same course during a regular semester. Information regarding the summer session can be obtained from the Counseling Center of Odessa College.

### **Midwinter Session**

Odessa College offers a special short-term session to accommodate students who want to complete a course during the interim period between regularly scheduled semesters. An abbreviated but intensive Midwinter Interim Session is held following the end of the fall semester and prior to the beginning of the spring semester. Students may complete a two- or three-semester hour course during this special session.

### **Continuing Education**

Odessa College offers a wide variety of non-credit Continuing Education courses for members of the community who want to broaden their educational experiences but 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.

Non-credit short courses, seminars, and workshops offer a wide range of activities intended to accommodate individuals of all ages. During the year, Odessa College will plan credit-free courses, seminars, and workshops in cooperation with business, industry, health professions, individuals, and organizations in the community. There are no entrance requirements for Continuing Education courses; any individual who can profit from them may enroll.

Almost any course that is of public interest can be organized if 10 or more students ask to be enrolled, provided that a competent instructor and suitable facilities are available. A schedule of credit-free courses may be obtained from the Continuing Education Office, drive-thru registration booth or the News and Information Office.

### **Community Recreation**

Odessa College has developed a community recreation program designed to serve all area citizens—from children through senior citizens. Participants are categorized by

age groups. The program includes special classes in tennis, gymnastics, physical conditioning, aerobics, dance, racquetball, and walking. The college also conducts a series of summer camps, as well as a wellness and physical assessment program.

### **Adult Basic Education**

Odessa College offers basic education classes for adults who have not completed high school. Classes range from level-one instruction to teach adults to read and write to classes that prepare adults to successfully complete the state-administered General Education Development (G.E.D.) test. Classes are free, and textbooks are furnished. During a typical school year, enrollment in the adult basic education classes averages about 2,800 students.

The five major subject areas are math, English, social studies, natural science, and literature. Morning, afternoon, and evening classes are available in numerous locations in Odessa, as well as on the Odessa College campus. Adult Basic Education classes are sponsored not only in Ector County but also in Andrews, Brewster, Culberson, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Ward, and Winkler counties.

Literacy classes, citizenship English as a second language, and junior high-level studies are available. Classes have open registration, are self-paced, and have individualized instruction. A home study, G.E.D. preparation program also is available.

In addition to G.E.D. test preparation classes, Odessa College also sponsors a competency-based program in cooperation with the public schools to allow adults with less than a high school education the opportunity to earn a high school diploma.

High school graduates who have a deficiency in any of the five major areas may apply at the Adult Basic Education office for admission to one of the classes. Standardized tests will be administered, and if interested students function at less than a twelfth-grade level, free admission to the classes is allowed for remedial work.

For more information on class locations and times, call the Director of Adult Basic Education at Odessa College.

### **Extension Centers**

The Regional Extension Center at Pyote (RECAP) provides night classes leading to an associate degree through part-time study. Registration is held in Pyote prior to registration on the main campus; announcement of dates and times will be made through the Student Services Office at Odessa College.

Odessa College also offers many of its regular classes at extension centers located in Pecos, Monahans, Andrews, Crane, Kermit, and McCamey. Registration is conducted in each city during the week prior to registration on campus. Exact times and dates for each registration session are announced through local news media. Information about Extension Centers can be obtained from the Director of Off-Campus Programs.

### **More Information**

For more information about Odessa College, its admission procedures, instructional programs, and counseling services contact the Counseling Center in the Student Union Building.

Prospective students interested in enrolling at Odessa College should send their application and transcripts to the Director of Admissions, Odessa College, 201 West University, Odessa, Texas 79764.

### **Accreditation**

The number of agencies and associations that have given accreditation and membership privileges to Odessa College acknowledges the quality of education provided

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here. The college is approved or accredited by the following professional organizations and agencies:

- Texas Education Agency
- Southern Association of Colleges and Schools
- Coordinating Board of the Texas College and University System
- Association of Texas Colleges and Universities
- Texas Educational Theatre Conference
- American Theatre Association
- National Association of Schools of Music
- National League for Nursing
- Radiologic Technology Association of America
- Council on Medical Education of American Medical Association
- Joint Review Committee on Education in Radiologic Technology
- Joint Review Committee on Education in Respiratory Therapy

Odessa College is a member of the following organizations:

- American Association of Community and Junior Colleges
- American Association of University Administrators
- American College Theatre Festival
- American Library Association
- American Theatre Association
- American Association of Collegiate Registrars and Admissions Officers
- Associate Degree Council of Agency Members
- National League for Nursing
- Association of College Unions International
- Association of Community College Trustees
- Association of Texas Junior College Board Members and Administrators
- College Placement Council
- Council for the Advancement and Support of Education
- National Council for Community Relations
- National Association for Foreign Student Affairs
- National Association of College and University Business Officers
- National Association of Collegiate Directors of Athletics
- National Association of Student Financial Aid Administrators
- National Association of Vocational-Technical Education Communicators
- National Entertainment and Campus Activities Association
- National Junior College Athletic Association
- Regional Education Board of the Council on Collegiate Education for Nursing
- Rocky Mountain College Press Association
- Southern Association of Junior Colleges
- Southern Association of Collegiate Registrars and Admissions Officers
- Texas Association of Collegiate Registrars and Admissions Officers
- Texas Association of Community Service and Continuing Education
- Texas Association of Continuing Education in Community and Junior Colleges
- Texas Association of Intercollegiate Athletics for Women
- Texas Association of Junior Colleges
- Texas Association of Public Junior Colleges
- Texas Association of Public Junior College Business Officers
- Texas Association of Schools of Art
- Texas Educational Theatre Association
- Texas Intercollegiate Press Association

Texas Junior College Press Association  
Texas Junior College Teachers Association  
Texas Music Educators Association  
Texas Association of Music Schools  
University & College Designers Association  
Video Tape Network  
Western Junior College Athletic Conference

# Degrees



## Degree Planning and Applying for Degree

Students working toward a degree or certificate from Odessa College should consult a counselor or faculty advisor early in their academic career to ensure that all required courses are being completed. Special degree plans should be completed well in advance of anticipated graduation by students, with the assistance of the appropriate department chairmen and division deans. A written copy of the plan will be filed in the Registrar's Office.

### Catalog Applicability

Students may graduate under the catalog in effect at the time they first enter Odessa College so long as no more than seven years have elapsed since their initial registration. If the time limit has passed and students still wish to be certified on the basis of the requirements of the catalog under which they first entered, they must petition for such certification to the appropriate department chairman.

Graduating students also have the option of graduating under the catalog in effect at the time of completion. The decision as to which catalog will apply for graduation should be made only after consultation with the appropriate academic advisor.

### Second Degrees

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

A Certificate of Completion may not be granted after students have earned any Associate Degree.

### Deadline for Degree Application

Students must complete a degree application within 12 months after completion of their degree requirements. Applications received after the designated time limit will be reviewed and evaluated by the Director of Admissions and Registrar.

### Degree Requirements

#### Associate in Arts Degree

To qualify for the Associate in Arts Degree (A.A.), students must complete the following requirements:

|  |   |
|--|---|
| English .....  | 2 years (12 semester hours)   |
| Foreign Language, or<br>Mathematics, or Science..... | 1 year (6-8 semester hours)   |
| Government .....                                     | Govt 2301 and 2302  |
| History .....  | Hist 2301 and 2302 (Hist 2303 may be substituted for either course) |
| *Physical Education .....                            | Four one-hour activity classes                                      |
| Sophomore Hours.....                                 | 18 or more, 12 of which must be taken at Odessa College             |

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.

Twelve of the last 18 hours, prior to the awarding of the degree, must be done in residency.

Discharge of all financial obligations to Odessa College.

## 172 Degrees

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

\*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of DD-Form 214 to the Registrar's Office.

### Associate in Science Degree

To qualify for the Associate in Science Degree (A.S.), students must complete the following requirements:

|                           |   |
|---------------------------|---|
| English .....             | 2 years (12 semester hours)   |
| Government .....          | Govt 2301 and 2302  |
| History .....             | Hist 2301 and 2302 (Hist 2303 may be substituted for either course) |
| Mathematics.....          | 1 year (6 semester hours)   |
| *Physical Education ..... | Four one-hour activity classes                                      |
| Science .....             | A minimum of 12 semester hours                                      |
| Sophomore hours .....     | 18 or more, 12 of which must be taken at Odessa College             |

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 work taken at Odessa College.

Twelve of the last 18 hours prior to the awarding of the degree must be done in residency.

Discharge of all financial obligations to Odessa College.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

\*Veterans who have two years active service credit may satisfy the PE requirements by submitting a copy of DD-Form 214 to the Registrar's Office.

### Associate in Applied Science Degree

To qualify for the Associate in Applied Science Degree (A.A.S.), students must complete the following requirements:

|                           |  |
|---------------------------|--|
| English and Speech.....   | 6 semester hours as specified in each program                          |
| Government .....          | 3 semester hours as specified in each program                          |
| Mathematics.....          | 3 semester hours as specified in each program (except Nursing)         |
| *Physical Education ..... | 2 one-hour activity classes (except for approved substitutions)        |
| Science .....             | As specified in each program   |
| Sophomore hours .....     | 18 or more semester hours, 12 of which must be taken at Odessa College |

A minimum of 63 semester hours.

The course of study as prescribed in the specified program with a minimum average of "C" (2.0) in all work in that program. Transfer students must also have an average of "C" (2.0) in work taken at Odessa College.

Twelve of the last 18 hours prior to the awarding of the degree must be done in residency. For transfer students, a minimum of one fourth of the course work in their technical specialty must be satisfactorily completed at Odessa College.

Discharge of all financial obligations to Odessa College.

First-year students who have completed fewer than 16 hours and who enroll for 12 or more hours must register for Orientation, HD 1101, during their first semester of attendance. All other beginning students must complete an orientation seminar at the time of registration or at specified times during their first semester.

Students who receive the Associate in Applied Science degree at Odessa College may receive a second associate degree—Associate in Arts or Associate in Science—by meeting all requirements for that degree, including a minimum of 15 semester hours taken at Odessa College since receiving the initial degree.

\*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of DD-Form 214 to the Registrar's Office.

**Certificates of Technology**

Certificates of Technology are awarded for completion of 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 Associate Dean for State and Community Relations.

**Certificates of Completion**

To qualify for the Certificate of Completion, students must complete the following requirements:

One year of English.

Two one-hour activity classes of physical education except for approved substitutions. 18 or more sophomore hours.

A minimum of 63 semester hours.

12 of the last 18 hours prior to the awarding of the degree must be done in residency.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average of "C" (2.0) in work taken at Odessa College.

\*Veterans who have two years active service credit may satisfy the PE requirement by submitting a copy of DD-Form 214 to the Registrar's Office.

**Regional Extension Center at Pyote**

Courses offered at the Regional Extension Center at Pyote are designed to meet Associate Degree requirements at Odessa College. One of the options planned for the Pyote Center is an Associate of Arts degree for students completing the following courses:

| <b>Course and Number</b>                                      | <b>Semester Hours</b> |
|---|-----------------------|
| English 1311, 1312 and two sophomore-level courses.....       | 12                    |
| Government 2301, 2302 .....                                   | 6                     |
| History 2301, 2302.....                                       | 6                     |
| *Physical Education (any four one-hour activity courses)..... | 4                     |
| Biology/Geology (any two laboratory courses).....             | 8                     |
| Math 1313 & 1341, or 1341 & 1343.....                         | 6                     |
| Psychology 1301.....  | 3                     |
| Sociology 1301.....   | 3                     |
| Major or elective concentration.....                          | 15                    |
| Business Administration 1301, 2401, 2402, 2311                |                       |
| Speech 1310, 2340   |                       |
| Sociology 2301, 2302, 2303                                    |                       |
| Economics 2301, 2302  |                       |
| Spanish 1311, 1312  |                       |
| <b>Total Hours.....</b>                                       | <b>63</b>             |

\*Veterans who have two years active service credit may satisfy the PE requirements by submitting a copy of DD-Form 214 to the Registrar's Office.

# Student Services



## **Student Services**

### **Student Development**

Odessa College encourages the growth and awareness of self and others through a comprehensive student development program. The college tries to create a climate that will allow all its students an opportunity to enhance their perception of worth, while increasing their ability to cope within a changing society. The college hopes to provide all students an opportunity to examine thoroughly their potential and to offer opportunities for realizing that potential through the learning experiences offered by the college.

### **Counseling**

The Counseling Center exists to help students make decisions and solve problems. Some of the services available to students are vocational guidance, academic advisement, admissions/transfer information, job placement, crisis intervention, and individual or group counseling.

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 communication and decision-making skills.

The Counseling Center houses the Career and Study Skills Center which contains job listings, career information, Texas and out-of-state university and college catalogs, and a computerized career exploration system. 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 on the second floor of the Student Union Building. Students may drop by or schedule an appointment to see a counselor or to use a variety of resource materials in the Counseling Center. Periodically, special activities, programs, and structured group experiences will be offered as well.

### **Testing Center**

The Testing Center is located on the second floor of the Student Union Building. Ability, career interest, intelligence, personality, and interpersonal tests are offered to students who wish to achieve greater self-awareness or identify strengths for the purpose of decision-making. The GED (General Education Development) test is administered on a regular basis to individuals who want to demonstrate mastery of high school subjects. Other national group tests, such as the Medical College Admission Test, are offered as services to the community. Entrance examinations for special programs, including nursing, are scheduled. Testing and assessment services can be organized for individuals or groups who need specific guidance data. Contact the Director of Testing for additional information, test dates, or individual appointment.

### **Student Housing**

In addition to athletic dormitories, Odessa College provides student housing facilities. Housing in the college's Parker-Downs Hall and College Terrace apartment complex is available to Odessa College students. Housing regulations are distributed by the supervisor and are available in each dorm. The Office of the Dean of Student Services located in SUB 213 can provide further information regarding on or off campus housing.

### **Student Food Service**

The Student Union Cafeteria at Odessa College serves short orders as well as balanced, cafeteria-style meals. Meal tickets are available at discounted rates. A wide variety of restaurants is also available within walking distance of the college.

### **Campus Parking**

Parking permits are available in the Business Office from 8 a.m. to 7:30 p.m., Monday through Thursday, and from 8 a.m. to 12 noon and 1 to 5 p.m. Friday, during the fall and spring terms; and summer hours, limited to Monday through Thursday, will be announced. A permit is required for each vehicle (including motorcycles and mopeds) parked on campus. Extra permits are available for 50 cents each. Additional parking information can be obtained in the Business Office or in the Campus Security Office, located in Parker-Downs Hall.

### **Security**

The Odessa College Campus Security Office, located in Parker-Downs Hall, serves the student body of the college by helping to maintain the safety and security of all students and their possessions while they are on campus. Campus security personnel are available to assist students and visitors with problems such as vehicles with dead batteries and cars with keys locked inside. Security officers are available on a 24-hour basis for emergencies on campus.

### **Handicapped Students**

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

Handicapped students should contact the Odessa College Counseling Center or the Dean of Student Services for information regarding services available. The college strives to provide a complete range of services for students with special needs such as class arrangement, tutoring, personal counseling, health services, and reserved parking.

### **Health Services**

Health Services, a student-oriented program of preventive medicine and health education, is located in Room 101 of the Student Union Building. The director, a registered nurse, is on campus full-time to help students with their health concerns. Throughout the year, specialized programs such as C.P.R. classes, blood pressure clinics, blood drives, and health-related workshops are presented. TB skin tests, diphtheria-tetanus immunizations, and pregnancy testing are available. Student insurance is also available.

Health Services seeks to establish sound health practices that will enhance students' growth and development, not only while they are at Odessa College, but also after they leave the institution.

### **Children's Center**

The Odessa College Children's Center opened in the fall of 1976, when 14 children enrolled. The center now provides daytime care for some 50 to 60 children of community residents. The center accepts children from the age of six weeks to five 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 day-care service for the community, the Children's Center also serves a learning laboratory for students in the Odessa College Child Development program and in Child Psychology classes.

## Student Life

An active student life program is encouraged at Odessa College, and its impact reaches almost every student.

The college maintains the philosophy that classroom learning is only one part of its students' education. Almost all students feel some need to learn more about themselves. The opportunity for them to grow as individuals is made possible through social and personal experiences, as well as through academic pursuits. Student activities contribute to personal development through educational and social programming and through student organizations. The interactions of students with each other and with the faculty on an informal basis can provide insights and understanding for students about their society and can enrich the quality of their lives.

A student handbook, prepared annually to help explain the many opportunities available to students at Odessa College, details, describes, and explains individual organizations and various activities available to students.

## Student Activities

Odessa College recognizes and encourages a well-rounded education, including the constructive use of leisure time. Student activities can be rewarding learning experiences. They can be relaxing and stimulating, educational and social, passive and active; therefore, the college attempts to provide for constructive use of students' leisure time. Information about a wide range of student extracurricular opportunities may be secured from the Director of Student Activities.

## Student Programming

The Director of Student Activities provides a full schedule of campus-based events designed to be both educational and entertaining. These events are available to student at no charge through the student activity fee. Information regarding specific events is available from the Director of Student Activities.

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

**Clubs and Organizations**—More than nine student organizations are active on campus. Many of these groups are service organizations which 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 handbook.

**Student Congress**—The Student Congress at Odessa College is the voice of the students. As a lobbying group, it plays an important role in influencing the direction of the college on many issues, in addition to sponsoring projects for the welfare of the student body. Students may use the Student Congress to express opinions about the operation of the college based on their individual needs. Students enrolled at Odessa College are encouraged to run for office as well as to vote for the 13 positions. Requirements for Congressional positions and campaigning are outlined in the student handbook.

**Student Intramurals and Game Room**—A well-planned program of intramural activities is offered each semester at Odessa College. Information regarding the intramural schedule can be obtained from the intramural office, located in Room B-4 of the Sports Center. A game room is located on the second floor of the Student Union Building, where numerous games are available. Ping-pong, cards, backgammon, checkers, and chess are popular choices.

**Student Publications**—The college has a student newspaper, "The Roundup." The publication, written and edited by students in journalism classes, serves as a medium

through which students can express their creativity, ideas, opinions, and philosophies. A faculty sponsor assists and advises the students.

**Student Theatre**—An active theatre program at Odessa College allows students to stage three to four major productions each school year. Performances are presented in the main auditorium, on Stage II theatre, and in the Globe of the Great Southwest. The productions are open to the public and afford creative learning situations for students while providing entertainment for the student body and the community.

**Forensics**—Odessa College forensics teams enjoy a national reputation. During the past 15 years, the forensics teams have placed among the Top Ten in national tournaments. In four of those years, the college debate teams have won the National Junior College Forensics tournament. The forensics team travels nationally and competes successfully with teams on the senior college and university level.

**Choir and Band**—Odessa College's A Cappella Choir and Madrigal Singers have gained international recognition for their musical abilities. The college also has an active jazz band that performs regularly on campus and in the community. Annually, the jazz band participates in international festivals which are usually held in Major Mexican cities such as Mexico City, Acapulco, and Guadalajara. The Department of Music also sponsors a Community Band as well as a Community Choir for area citizens who maintain an interest in performing.

**Campus Radio Station**—KOCV-FM, the college-owned and operated radio station, is an educational, non-commercial station. Radio programs are designed and hosted by students, and the station is operated by students, under the supervision of a professionally trained and experienced instructor.

**Campus Television Station**—KOCV-TV, like KOCV-FM, is licensed to Odessa College and is an affiliate of PBS. Student television programs may be used on this public television station. Broadcasting students are supervised by professionally experienced and academically trained instructors. Student television newscasts and other programs are regularly carried on Channel 10 of the local cable television company.

**Art Shows**—A function of the Department of Art is to provide students with the opportunity to exhibit their own work and to see work of professional artists each year through student and traveling art exhibits.

### **Athletics**

Because Odessa College athletic teams hold 37 national titles, the institution has earned a national reputation for its outstanding athletic program. More than 305 athletes from Odessa College have won National Junior College All-American honors in basketball, gymnastics, golf, tennis, track, and baseball. Currently, the athletic program includes teams in women's basketball, gymnastics, rodeo, and tennis. Men's teams compete in basketball, cross-country, golf, rodeo, tennis, and track.

The Wranglers are members of the National Junior College Athletic Association and the Western Junior College Athletic Conference. Each sport has a full schedule, and some of the athletic teams at the college compete in national tournaments every school year.

Some of the honors and titles won by Odessa College athletic teams include:

**Basketball**—The Wranglers have had an active basketball program since 1952. The cagers were runners-up in the Region V Tournament in 1958, and co-champions in the Western Junior College Athletic Conference in 1979. Two players have been designated All-American.

The Lady Wranglers have won the conference championship three times—1979-80, 1983-84 and 1984-85; the regional championship twice—1979-80 and 1984-85. They finished second in the National Tournament, 1984-85. Five out of eight years they have

produced All-Americans; 24 All-Conference players; 56 All-Regional players; three Kodak All-District players; eight straight years national rank; three times ranked number one in the nation. Coach Hefner was chosen Converse National Coach of the Year for 1984-85.

**Golf**—In 1959, Odessa College hosted the first National Junior College Golf Championship ever conducted. Odessa College won the national title in 1959, 1960, 1961, 1962, 1963, and 1965. The Wranglers have captured the Western Junior College Athletic Conference title 16 of the last 24 years and have had 27 All-Americans in Golf. Again in 1979, Odessa College hosted the National Championship tournament.

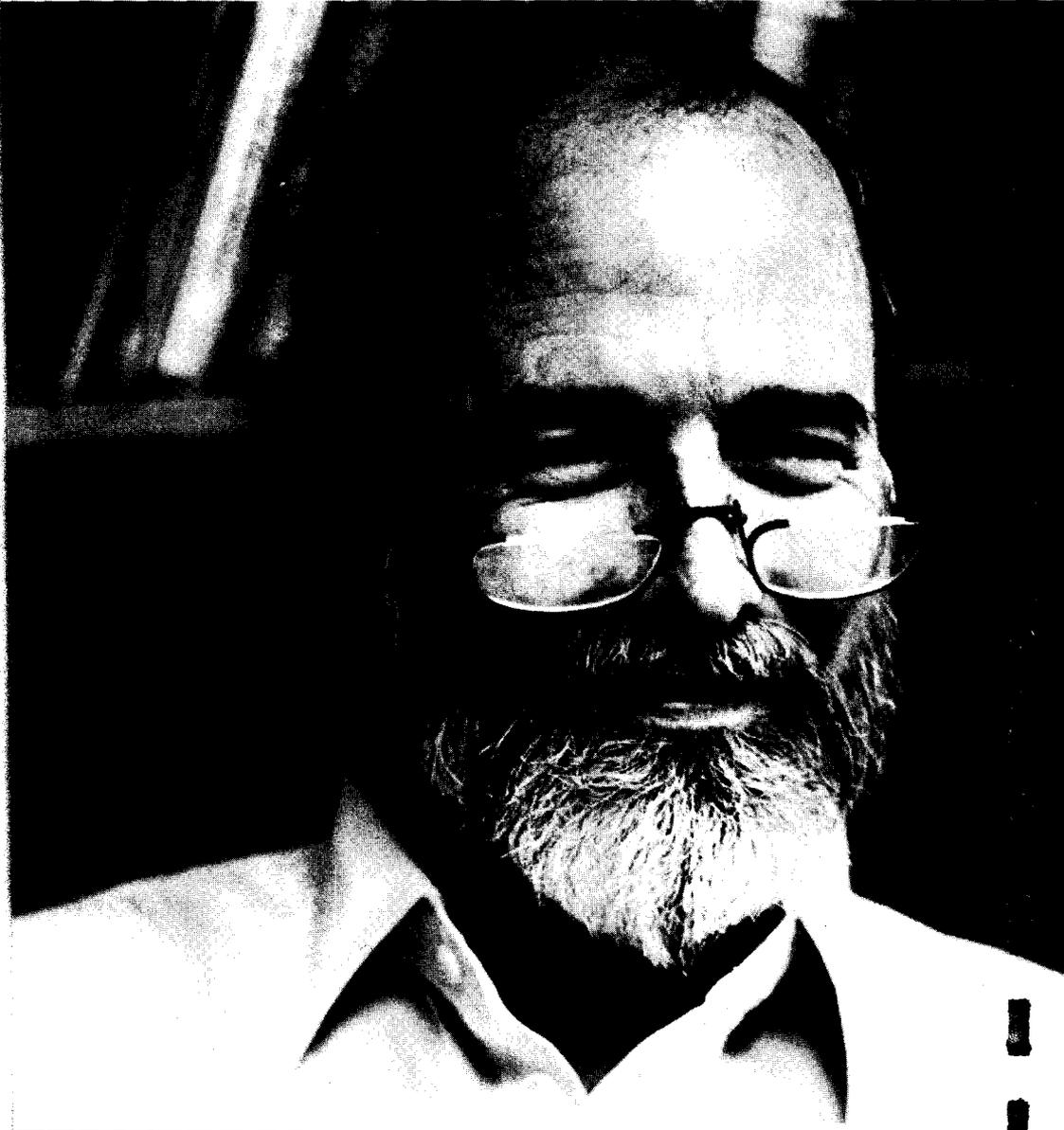
**Gymnastics**—A women's gymnastics program was started at Odessa College in 1978-79, and the team won the national title its first year. The team won second place in nationals in 1983.

**Tennis**—Odessa College tennis teams have consistently won titles in both junior and senior college competition. In the spring of 1978 and 1979, both the men's and women's teams won the NJCAA national championships, a feat never before accomplished by a junior college. More than 30 members of OC tennis teams have been named All-Americans. OC women's teams won the national singles and team championships in 1967, 1977, and 1978, and the national doubles and team championship in 1970, 1977, and 1979, as well as being runnerup for the team title in 1972 and 1975. In 1977 and 1978 Odessa College women netters gained United States Tennis Association All-American honors.

The men's teams won the flight-three national singles title and the national team title in 1978. The men also won the national doubles and team championships in 1968 and 1979, as well as the national doubles and team runnerup honors in 1969 and 1974. Men's teams also won the national team, singles, and doubles championships in 1975 and 1976.

**Track**—Odessa College track teams have won more than 60 team championships over the past 12 years. In 1971, the track team placed second at the national Junior College Championships and won third in 1975. In 1979, the tracksters won the conference, regional, and state track championships. In 1980, they placed third at both the National Junior College Outdoor and Indoor meets. In 1981, 1982, 1983, 1984, and 1985, the Odessa College track team won back-to-back National Junior College Outdoor and Indoor championships. Since 1965, more than 250 members of the Odessa College track teams have been named All-American by the National Junior College Athletic Association. The head coach is a former world record holder in 440 and 800 relays and was a representative of the United States team in Moscow in 1958. He was a coach of the U.S. track team at the 1979 World University Games and coach of the South Team in the 1983 National Sports Festival. He was named NJCAA Coach of the Year in 1980 and 1985.

# Staff



## College Staff

### Board of Trustees

|                           |                |
|---------------------------|----------------|
| Bob Clark                 | Bill Masterson |
| W. Michael Furman         | Phil Parker    |
| Roy Gentry                | Bill Sanders   |
| James H. Gilliland        | Joe Zant, Jr.  |
| Dr. Radames Martinez, Jr. |                |

### Administration

|  |  |
|--|--|
| Philip T. Speegle, B.A., M.Ed., Ed.D.    | President                              |
| Roger A. Coomer, B.A., M.A.              | Vice President for Business Affairs    |
| Miles A. Eckert, B.S., M.Ed., Ed.D.      | Vice President for College Services    |
| Bernhard T. W. Sedate, B.A., M.A., Ph.D. | Vice President for Instruction         |
| Joe C. Buice, B.A., M.A., M.A., Ph.D.    | Dean of Humanities                     |
| Lee R. Buice, B.A., B.S., M.A., Ph.D.    | Dean of Instructional Services         |
| Roy H. Hart, C.C., B.S., M.Ed., Ed.D.    | Dean of Student Services               |
| Don L. Huff, B.S., M.S., Ed.D.           | Dean of Science and Health             |
| Kenneth H. Hurst, B.S., M.S., Ed.D.      | Dean of Occupational/Technical Studies |
| B. Gayle Noll, B.A., M.A.                | Dean of Continuing Education           |
| David L. Paterno, A.A., B.A., M.A.       | Dean of Administrative Affairs         |

### College Services

#### Adult Basic Education

|  |                                   |
|--|-----------------------------------|
| Maija D. Wimer, B.A., M.A., M.Ed., Ph.D. | Director of Adult Basic Education |
| Gloria Aguirre, B.A.                     | Head Teacher, Learning Center     |
| David H. Reyes, B.A.                     | ESL Instructor                    |

#### Athletics

|                                |  |
|--------------------------------|--|
| Barry Rodenhaver, B.S., M.A.   | Director of Athletics/Golf Coach           |
| Jay Box, A.A., B.S.            | Tennis Coach                               |
| Fletcher Cockrell, B.S., M.Ed. | Assistant Men's Basketball Coach           |
| Tim Dopp, B.S., M.H.Ed.        | Women's Gymnastic Coach                    |
| Ken Hefner, B.A.               | Women's Basketball Coach                   |
| Danny King, B.S.               | Assistant Track Coach and Athletic Advisor |
| Archie Myers, A.A., B.A.       | Men's Basketball Coach                     |
| Craig Obermeyer, B.S., M.S.    | Athletic Trainer                           |
| James Segrest, B.S., M.Ed.     | Track Coach                                |
| Jim Watkins, B.S.              | Rodeo Coach                                |

#### Continuing Education

|                             |  |
|-----------------------------|--|
| Letha Ashley, B.A.          | Director of Special Programs           |
| Jennifer Cochran, B.S.      | Homemaking Programs Coordinator        |
| Darlyne Ervin, B.A., M.A.   | Director of Occupational Programs      |
| Betty Fredrickson, B.S.     | Director of Community Recreation       |
| Karen Johnson, B.A., M.A.   | Director of Business/Industry Programs |
| Carla Wells, B.S.H.E., M.S. | Director of Community Service Programs |
| Sheryl Yauk, R.N., B.A.     | Allied Health Coordinator              |

**News and Information**

Retha Lindsey, A.A., B.A..... Director of News and Information  
 Connie Anderson, B.F.A..... Art Director  
 Lorrie Molli, B.S..... Writer

**Student Development**

Sherry Burke, B.A., M.Ed..... Director of Student Development  
 Fred Gaither, B.A., M.Ed..... Counselor  
 Mary James Koeninger, B.M.Ed., M.M., M.Ed..... Director of Student Activities  
 Sherrie Lang, B.S., M.Ed..... Counselor  
 Madylon Lawrence, R.N., A.D.N..... Director of Health Services  
 Betsy Ray, B.S., M.Ed..... Counselor  
 Rena Ventura, B.S..... Guidance Associate  
 Clara L. Willis, B.S., M.Ed., Ph.D..... Counselor  
 Scott Q. Wright, B.S., M.A., Ed.D..... Director of Testing

**Student Services**

Glenn N. Davis, B.A..... Director of Financial Aid  
 Tanya Hughes, B.B.A..... Assistant Director of Financial Aid  
 Wayne Johnson, B.A., M.A..... Registrar/Director of Admissions  
 Edwin Shipman, B.S., M.Ed., Ph.D..... Director of Off-campus Programs  
 Terri J. Trotter, B.A..... Assistant Director of Admissions

**Support Staff****Business Office**

Virginia Chisum, B.B.A..... Assistant Controller  
 Linda James..... Grants Accountant  
 Lionel Loya..... Custodial Manager  
 Horace McAdams..... Director of Bookstore  
 Beverly Parker..... Postmistress  
 Roxana Patton, B.B.A..... Controller  
 Barbara Tolbert..... Printer

**Campus Security**

Alfredo Fonseca..... Campus Security Chief and Director of Parker Downs Hall

**Children's Center**

Marlyn Hair, B.S., M.S..... Director of Children's Center  
 Debbi Fahey, B.S., M.S..... Assistant Director of Children's Center

**Computer Center**

W. Frank Wells, B.B.A..... Director of Data Processing  
 Charles Everett, A.A..... Senior Systems Analyst  
 April Falkner, A.A.S..... Programmer Analyst  
 Anna Rangel..... Computer Operator

**Developmental Studies Program**

Clayton Alred, B.S., M.Ed., Ph.D..... Director of Developmental Studies  
 Lynn Whitson, B.A., M.A..... Lab Coordinator of Developmental Studies

**Learning Resources Center**

Ellis Hodgkin, B.A., M.S.L.S., M.A..... Associate Dean of Learning Resources  
 David Carson, B.A., M.S..... Learning Resources Specialist  
 Susan Elliott, B.S..... Learning Resources Paraprofessional

John Hillier, B.F.A., M.F.A.....Media Paraprofessional  
 Martha Huff, B.A., M.S.L.S., Ed.D.....Learning Resources Specialist  
 Ronald R. Roloff, A.A., B.B.A., M.L.S.....Learning Resources Specialist

**Physical Plant**

Tom Reynolds, A.S. .... Director of Physical Facilities  
 Everisto Cortez ..... Controls Foreman  
 Verlon Horn ..... Assistant Director of Physical Facilities  
 Bob Chastain ..... Mechanic Foreman  
 Max White, B.S..... Grounds Supervisor

**President's Office**

Wanda Gregory ..... Assistant to the President

**Television Station KOCV-TV**

John B. McCarroll, B.S., M.A. .... Station Manager  
 Robert Borum ..... Chief Engineer  
 Doris Roberts..... Office/Volunteer Coordinator  
 Gloria Munson, B.A. .... Program/Traffic Director

**Department and Program Chairmen**

Anthropology.....Brent McAfee  
 Art ..... Delmos Hickmott  
 Auto Body Repair ..... Dave Atherton  
 Automotive Mechanics ..... Steve Mapes  
 Biology ..... Dr. Clyde Smith  
 Broadcasting..... John McCarroll  
 Building Trades..... Thomas Wilburn  
 Business Administration ..... Jack Felts  
 Chemistry..... Dr. E. Don Taylor  
 Child Development ..... Maryln Hair  
 Clinical Laboratory Sciences ..... Joel Smith  
 Communication & Theatre..... Paula Thompson  
 Computer Information Systems..... Rayford Ball  
 Cosmetology..... Faye Morgan  
 Developmental Studies..... Dr. Clayton Alred  
 Diesel Mechanics ..... Steve Mapes  
 Drafting ..... Dr. Kenneth Hurst  
 Economics ..... Dr. Dick Kennedy  
 Education Aide ..... Maryln Hair  
 Electricity & Electronics..... Dr. George Willis  
 Emergency Medical Technology ..... Phyllis Howard  
 Engineering..... Dr. Charles Sweatt  
 English ..... Imogene Pilcher  
 Fashion Merchandising ..... Paul Tittle  
 Fire Protection ..... Bill Cooksey  
 Foreign Languages..... Jeffrey Gilbreath  
 Geology ..... Brent McAfee  
 Government ..... Dr. Dick Kennedy  
 History..... Dr. Dick Kennedy  
 Humanities..... Delmos Hickmott  
 Human Services ..... Gordon Gillette  
 Journalism ..... Paul Roberts  
 Law Enforcement..... Bill Cooksey

|   |                    |
|---|--------------------|
| Literature & Languages.....                       | Imogene Pilcher    |
| Machine Shop.....                                 | Bobby Butler       |
| Maintenance Technology.....                       | Bobby Butler       |
| Mathematics.....                                  | Dr. Charles Sweatt |
| Mid-Management.....                               | Paul Tittle        |
| Music.....  | Jack Hendrix       |
| Nursing, Odessa College Campus.....               | Dorothy Jackson    |
| Nursing, Odessa College Evening Program.....      | Marilyn Kelly      |
| Nursing, Kermit/Monahans Vocational Program.....  | Norma Drennon      |
| Office Education.....                             | Kay Rutherford     |
| Petroleum Technology.....                         | Gary Gay           |
| Philosophy.....                                   | Truett Hilliard    |
| Photography.....                                  | Steve Goff         |
| Physical Education.....                           | L. E. McColloch    |
| Physics, Physical Science.....                    | Dr. Ashok Khosla   |
| Psychology, Sociology, and Education.....         | Gordon E. Gillette |
| Radio.....  | Bruce Drushel      |
| Radiologic Technology.....                        | Kay Flood          |
| Reading.....                                      | Dr. Clayton Alred  |
| Real Estate.....                                  | Paul Tittle        |
| Refrigeration & Air Conditioning.....             | Norman Witcher     |
| Religion.....                                     | Dr. Dick Kennedy   |
| Respiratory Therapy.....                          | Allen Barbaro      |
| Social Sciences.....                              | Dr. Dick Kennedy   |
| Solar Energy.....                                 | Norman Witcher     |
| Speech & Forensics.....                           | Dr. Don Nichols    |
| Surgical Technology.....                          | Leola Rutledge     |
| Television.....                                   | Tom Barnett        |
| Theatre.....                                      | Paula Thompson     |
| Welding.....                                      | Duane Nobles       |
| Welding Inspection (Non-Destructive Testing)..... | Duane Nobles       |

**Faculty**

|                                |  |
|--------------------------------|--|
| <b>Irma Aguilar</b> .....      | Assistant Professor of Nursing<br>B.S.N., West Texas State University; M.A., University of Texas of the Permian Basin                                  |
| <b>E. Maurice Alfred</b> ..... | Professor of Vocal Music<br>B.S., Hardin-Simmons University; M.Mu.Ed., Texas Tech University; Ph.D., Texas Tech University                             |
| <b>Clayton E. Alred</b> .....  | Director of Developmental Studies/Reading<br>B.S., Angelo State University; M.Ed., Sul Ross State University; Ph.D., The University of Texas at Austin |
| <b>David L. Atherton</b> ..... | Department Chairman and Associate Professor of Auto Body<br>B.A., University of Northern Iowa  |
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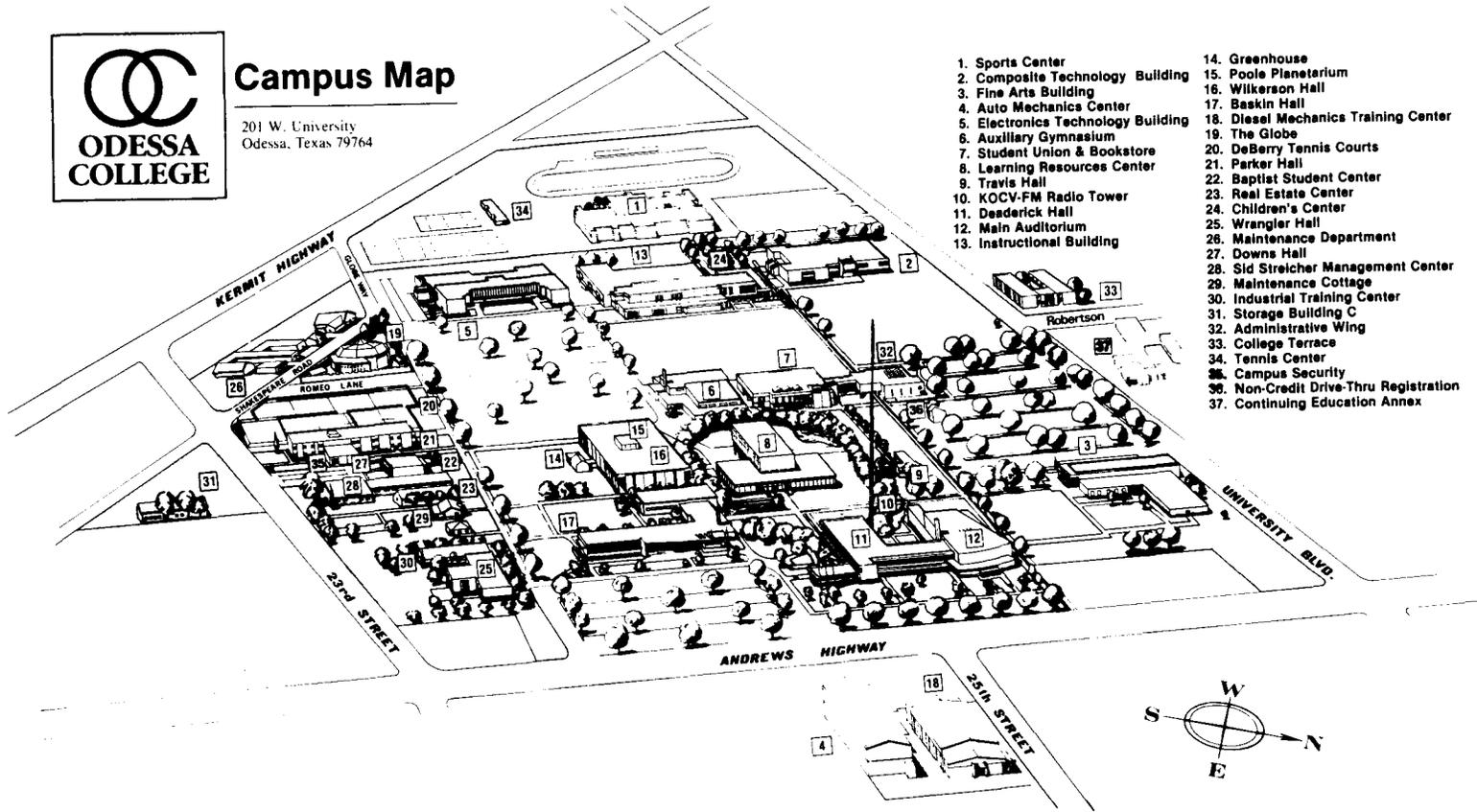
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## Campus Map

201 W. University  
Odessa, Texas 79764



1. Sports Center
2. Composite Technology Building
3. Fine Arts Building
4. Auto Mechanics Center
5. Electronics Technology Building
6. Auxiliary Gymnasium
7. Student Union & Bookstore
8. Learning Resources Center
9. Travis Hall
10. KOCV-FM Radio Tower
11. Dederick Hall
12. Main Auditorium
13. Instructional Building
14. Greenhouse
15. Poole Planetarium
16. Wilkerson Hall
17. Baskin Hall
18. Diesel Mechanics Training Center
19. The Globe
20. DeBerry Tennis Courts
21. Parker Hall
22. Baptist Student Center
23. Real Estate Center
24. Children's Center
25. Wrangler Hall
26. Maintenance Department
27. Downs Hall
28. Sid Streicher Management Center
29. Maintenance Cottage
30. Industrial Training Center
31. Storage Building C
32. Administrative Wing
33. College Terrace
34. Tennis Center
35. Campus Security
36. Non-Credit Drive-Thru Registration
37. Continuing Education Annex