

# Odessa College Bulletin 81-82





Ann Kim

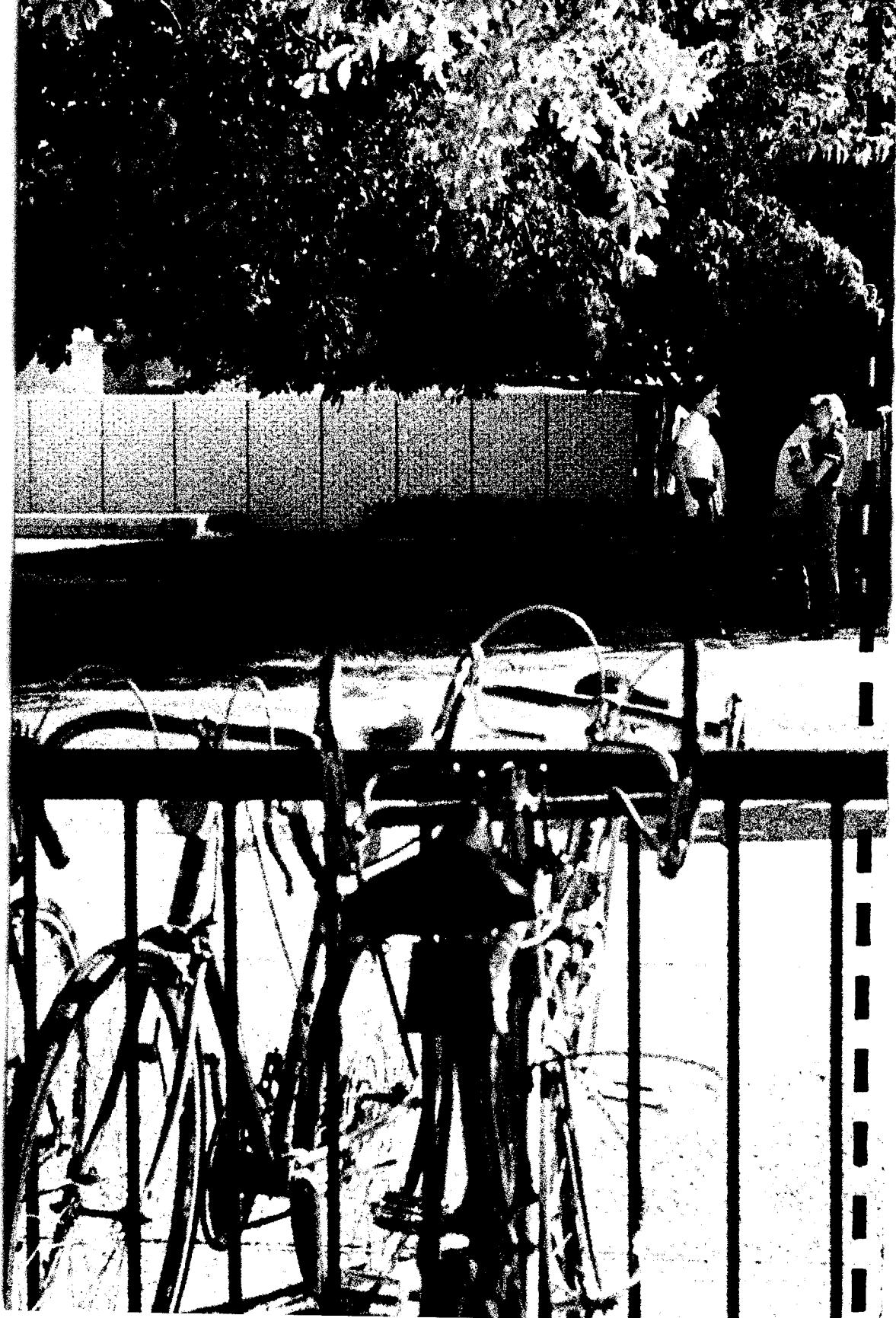
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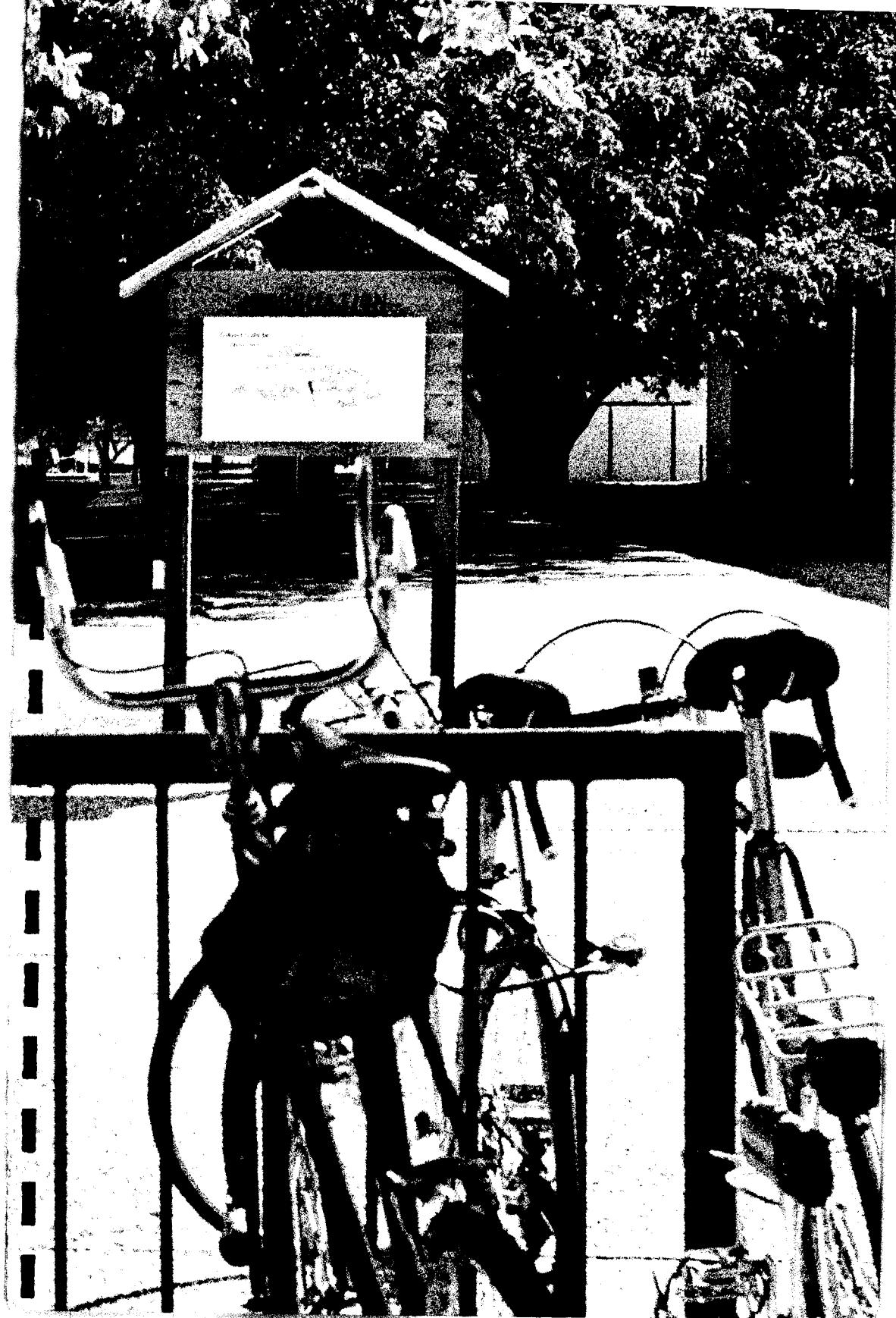
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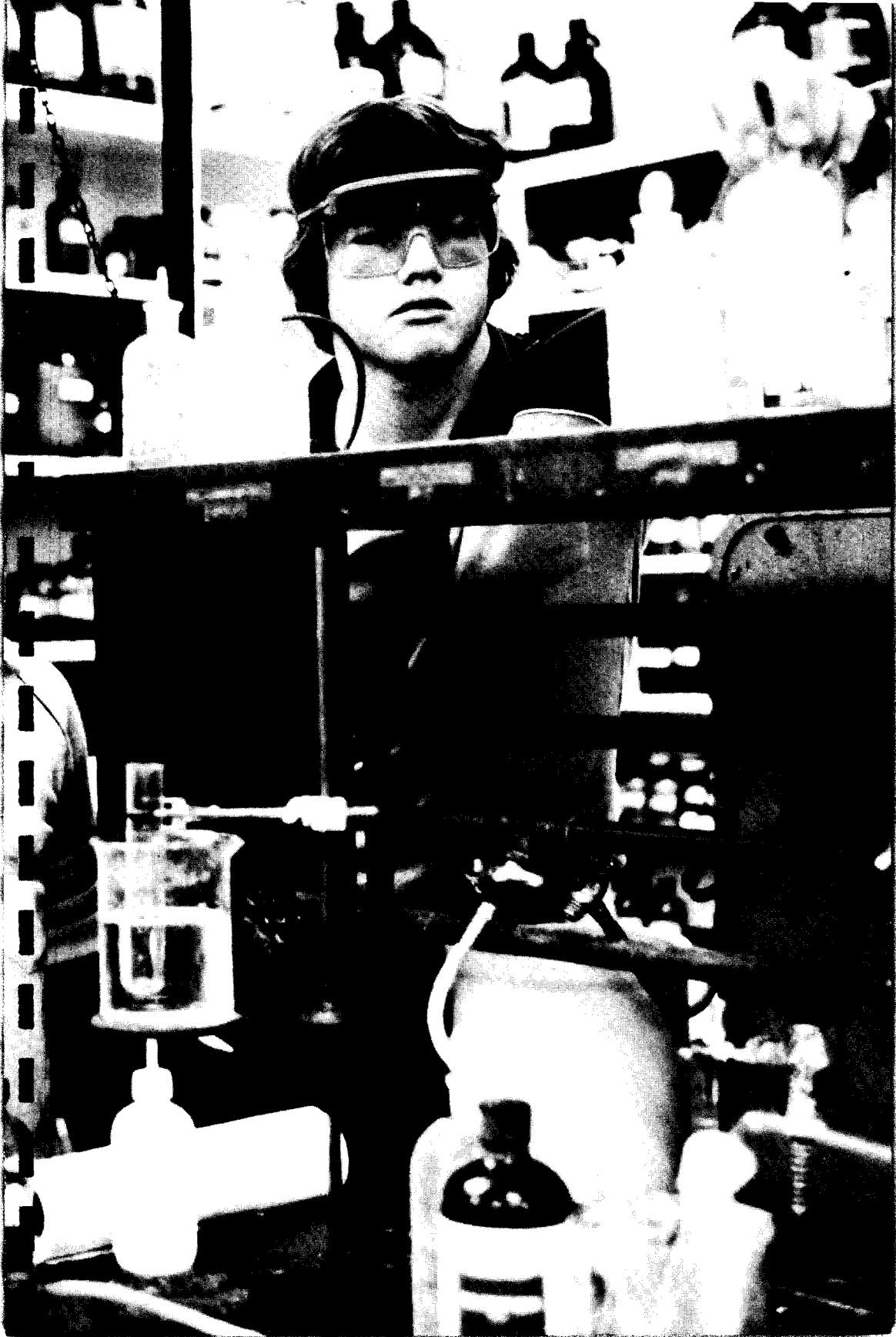


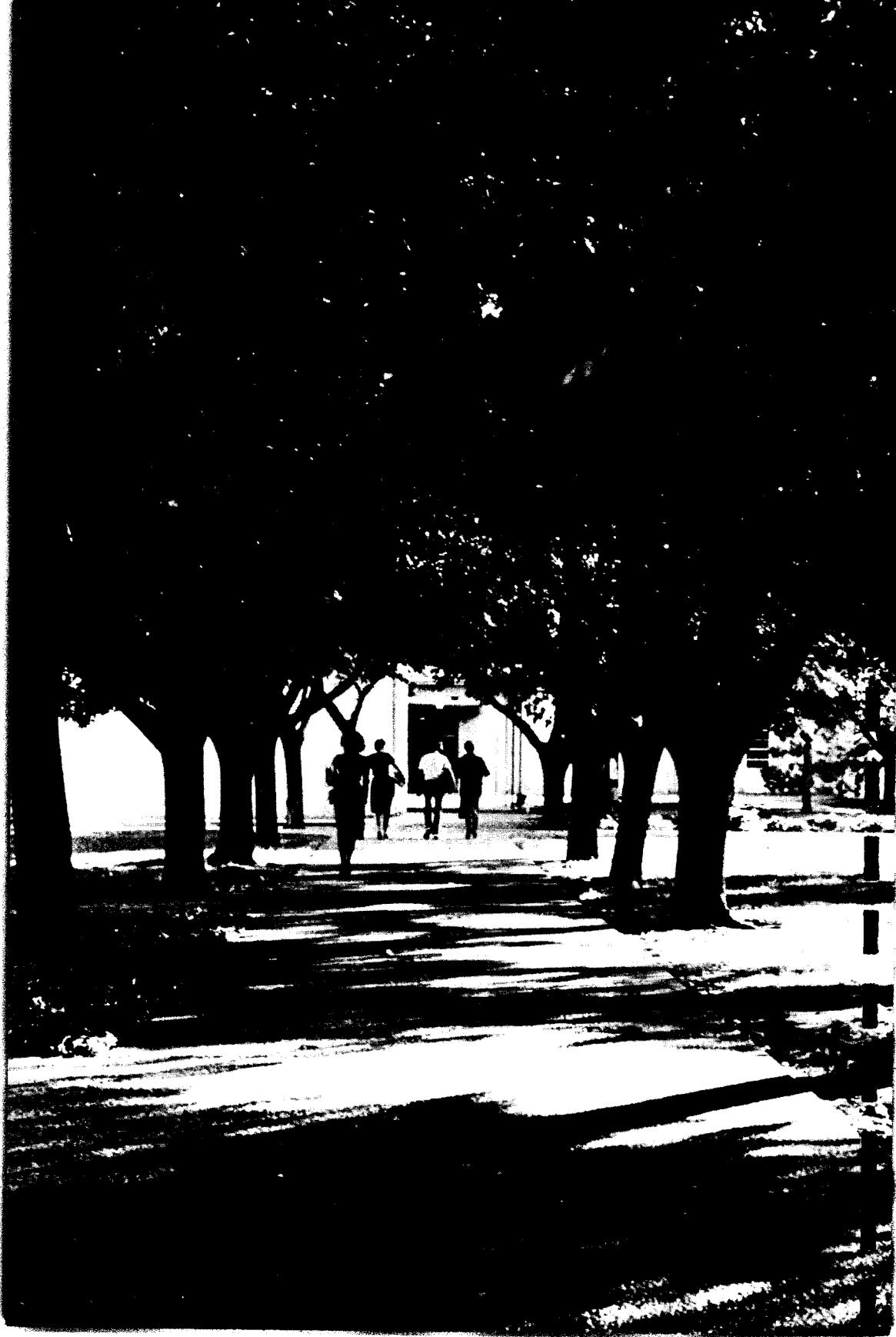
## **Learning Lasts A Lifetime**

*"If a man empties his purse  
into his head, no man can  
take it away from him. An  
investment in knowledge  
always pays the best interest."*

— Benjamin Franklin







## Learning from the Past

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

Beginning with 184 students in 1946, Odessa College's enrollment, programs and services have grown steadily through the last 34 years. Through the various programs and services offered by Odessa College, there are now more than 16,000 enrollments during a single school year. Enrollment in the academic credit courses in the fall of 1980 surpassed 4,100 students. During the same semester thousands of other students were enrolled in adult and continuing education courses.

Initially housed in temporary quarters in Odessa High School, now the home of Crockett Junior High, Odessa College's first classes were conducted after public school hours in the late afternoons and evenings. Ector County taxpayers purchased a five-acre plot in the 2500 block of the Andrews Highway and in 1949 erected Baskin Hall as the college's first permanent structure.

The size of the campus grew to 15 buildings on a 35-acre plot by 1960. Today the \$25-plus million campus is spread over 80 acres and includes some 23 buildings that house more than 150 classrooms and laboratories.

As the college has grown, so has its effectiveness. Quality education and academic excellence have been hallmarks of Odessa College.

More than 25 occupational-technical programs are currently being offered at Odessa College, and additional ones are being planned to meet the needs of citizens who want to learn new or improve existing career skills. Approximately one-half of the college's students are enrolled in occupational-technical programs.

A wide variety of university-preparatory courses also is offered for students planning to finish four-year degrees at senior colleges or universities.

Odessa College is a mature college with a youthful spirit. The college is proud of its heritage, but sees its successful past as a challenge for an even greater future.

As community needs change, Odessa College will remodel its programs to better serve the people.

## Odessa . . . City of Progress

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 wide 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. Odessa boasts a daily newspaper, three television stations, seven 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 upper-level and 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 people are friendly and heartily support the college and its efforts. Newcomers find Odessa a good place to live and rear a family, as well as an enjoyable place to study and work.

## Odessa College's Mission

Odessa College has but one reason for existence — to provide the finest educational opportunities possible for all the people of the Ector County area. The comprehensive community college is dedicated to providing the full spectrum of educational services, limited only by the physical and financial resources that are available.

The open admission policy 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 and to live richer lives and become more responsible and productive members of our society.

Odessa College specifically intends:

- to provide the first two years of college and pre-professional programs, preparing students within a field of study for further education;
- to offer programs in occupational-technical training and provide students with the comprehensive skills and knowledge required in specialized fields;
- to provide a general educational program for all people, preparing them for more effective involvement in society, as well as providing opportunities for increased personal and cultural enrichment;
- to provide opportunities for all 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 educations which will result in upgrading their occupational skills, cultural

enlightenment and personal satisfaction; to have an educational environment which enables every student an opportunity to maximize his potential through complete student services; and to encourage the use of facilities and programs by the citizens of the community.

Odessa College is . . .  
*a comprehensive community college* dedicated to meeting the educational needs of the community. It is responsive to community needs and provides a wide variety of educational services to satisfy those needs . . .  
*a proven college* dedicated to excellence in all of its programs . . .

*a student-centered college* that keeps the personal touch. Students receive individual attention from highly qualified faculty and staff who are interested in helping them to succeed in their educational development . . .

*a progressive college* constantly alert to innovative educational techniques and technologies — a college committed to constructive change . . .

*a multi-faceted college* with a wide variety of programs in university-parallel areas, technical-vocational studies, developmental courses, personal development studies, community recreation, and adult and continuing education. This variety assures students that Odessa College can design a program specifically to fit their needs . . .

*a concerned college* where students are important as individuals. It's the place for students of all ages to begin a promising future.



## College Calendar 1981-82

### Summer, 1981

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

#### First Term

*Early registration . . . . .	May 4-8
Registration. . . . .	June 1 (Mon)
Classes begin. . . . .	June 2 (Tues)
Late registration closes . . . . .	June 4 (Thurs)
Last day to drop or withdraw with automatic "W" . . . . .	June 16 (Tues)
Last day to drop or withdraw with "W" or "WF" . . . . .	June 29 (Mon)
Final examinations, end of term . . . . .	July 7 (Tues)

#### Second Term

Registration. . . . .	July 8 (Wed)
Classes begin. . . . .	July 9 (Thurs)
Late registration closes . . . . .	July 14 (Tues)
Last day to drop or withdraw with automatic "W" . . . . .	July 23 (Thurs)
Last day to drop or withdraw with "W" or "WF" . . . . .	August 5 (Wed)
Final examinations, end of term . . . . .	August 13 (Thurs)

### Fall, 1981

*Early registration . . . . .	July 16-August 20 (No early registration on August 13)
Academic year begins . . . . .	August 24 (Mon)
Registration. . . . .	August 25 (Tues)
Classes begin. . . . .	August 27 (Thurs)
Last day to register for full class load (5 classes or fewer) . . . . .	September 2 (Wed)
Labor Day Holiday. . . . .	September 7 (Mon)
Last day to complete late registration. . . . .	September 9 (Wed)
Last day to drop or withdraw with automatic "W" . . . . .	October 7 (Wed)
Mid-Semester . . . . .	October 22 (Thurs)
Last day to drop or withdraw with "W" or "WF" . . . . .	November 18 (Wed)
Thanksgiving Holiday. . . . .	November 26-27 Begins 5:00 p.m. November 25 . . . . . (Thurs & Fri)
Final examinations. . . . .	December 14-17
End of fall semester. . . . .	December 18 (Fri)
Christmas Holidays, offices closed . . . . .	December 21-January 1

### Midwinter Session, 1981-82

*Early registration . . . . .	To be announced
Registration, classes begin. . . . .	December 28 (Mon)
Holiday, New Year's Day . . . . .	January 1 (Fri)
Final examinations, end of term . . . . .	January 8 (Fri)

### JUNE

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1  
9  
8  
1

### JULY

S	M	T	W	T	F	S
	1	2	3	4		
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

### AUGUST

S	M	T	W	T	F	S
	1					
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

### SEPTEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

### OCTOBER

S	M	T	W	T	F	S
	1	2	3			
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

### NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

### DECEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**JANUARY**

S	M	T	W	T	F	S
			1	2		
1	2	3	4	5	6	7
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**FEBRUARY**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

**MARCH**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**APRIL**

S	M	T	W	T	F	S
	1	2	3			
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

**MAY**

S	M	T	W	T	F	S
	1					
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**JUNE**

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

**JULY**

S	M	T	W	T	F	S
	1	2	3			
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

**Spring, 1982**

\*Early registration . . . . . November 16-December 11  
Offices reopen after Christmas

Holidays . . . . . January 4 (Mon)

Registration. . . . . January 12 (Tues)

Classes begin . . . . . January 14 (Thurs)

Last day to register for full class

load (5 classes or fewer) . . . . . January 20 (Wed)

Last day to complete late

registration. . . . . January 26 (Tues)

Last day to drop or withdraw with

automatic "W" . . . . . February 24 (Wed)

Mid-Semester . . . . . March 11 (Thurs)

Spring Break. . . . . April 5-9

Last day to drop or withdraw with

"W" or "WF" . . . . . April 14 (Wed)

Final examinations. . . . . May 10-13

End of spring semester . . . . . May 14 (Fri)

**Summer, 1982***First Term*

Registration. . . . . May 31 (Mon)

Classes begin . . . . . June 1 (Tues)

Late registration closes . . . . . June 3 (Thurs)

Last day to drop or withdraw with

automatic "W" . . . . . June 15 (Tues)

Last day to drop or withdraw with

"W" or "WF" . . . . . June 28 (Mon)

Holiday . . . . . July 5 (Mon)

Final examinations, end of term . . . . . July 7 (Wed)

*Second Term*

Registration. . . . . July 8 (Thurs)

Classes begin . . . . . July 12 (Mon)

Late registration closes . . . . . July 14 (Wed)

Last day to drop or withdraw with

automatic "W" . . . . . July 26 (Mon)

Last day to drop or withdraw with

"W" or "WF" . . . . . August 5 (Thurs)

Final examinations, end of term . . . . . August 12 (Thurs)

\*Hours for early registration activities will be designated in the schedule of classes for the semester.

# Instructional Programs



**Art** *Faculty*  
**Barry Phillips, chairman; Delmos Hickmott, Bill Worrell.**

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 as 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 — such as drawing, painting, ceramics, sculpture, and jewelry.

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Art 1300 or 1371	.....	.3	Art 1312	.....	.3
Art 1311	.....	.3	Art 1321 or 1331	.....	.3
Art 1321 or 1331	.....	.3	Art 1300 or 1372	.....	.3
Engl 1311	.....	.3	Engl 1312	.....	.3
PE	.....	.1	PE	.....	.1
Science	.....	.4	Science	.....	.4

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	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 twelve 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 the student's first semester.

## 14 Art

### **Art 1300 Art Appreciation (3-0) . . . . . 3 hours**

This general course in art appreciation is open to all college students. It is an introduction to the visual arts, presenting the psychological foundations of creative behavior, aesthetic theory and philosophy, and an analysis of the principles, problems, and techniques of the artist. Students may opt for self-paced or lecture course. Prerequisite: None.

### **Art 1311 Drawing I (2-4) . . . . . 3 hours**

This course develops skills in drawing from life and nature. Pictorial composition, perspective, line, value, and wash drawings in a variety of media are included. Emphasis is on the development of hand-eye coordination. Prerequisite: None.

### **Art 1312 Drawing II (2-4) . . . . . 3 hours**

Drawing 1312 is a continuation of Drawing 1311 with additional emphasis on developing sensitivity to art elements in the environment. Prerequisite: Art 1311.

### **Art 1321 Design I (2-4) . . . . . 3 hours**

An introduction to the principles and elements of design is the concern of this course. The development of sensitivity to the principles and elements of design as they exist in the environment is stressed. Prerequisite: None.

### **Art 1322 Design II (2-4) . . . . . 3 hours**

Design 1322 is a continuation of Design 1321 with emphasis on the creation of three-dimensional art products. Prerequisite: Art 1321.

### **Art 1331 Figure Drawing I (2-4) . . . . . 3 hours**

This course develops skill in drawing the human figure. Stress is on handling of form, movement, and proportion. A variety of drawing techniques and media is studied in the course. Prerequisite: Art 1311 or its equivalent.

### **Art 1332 Figure Drawing II (2-4) . . . . . 3 hours**

This course is a continuation of Art 1331. It emphasizes aesthetic factors, style, and creative approaches. Prerequisite: Art 1331.

### **Art 1371 Art History Survey I**

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

Western Man's art heritage from the prehistoric era through the Middle Ages is surveyed in this course. The relationship of great works of art to their respective culture and civilization is stressed. A variety of audio-visual media is used to illustrate the various periods, styles and personalities. Prerequisite: None.

### **Art 1372 Art History Survey II**

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

Art History 1372 is a continuation of Art History 1371. Western Man's art heritage

from the Renaissance to the present is included. Emphasis is on gaining an understanding of the varied forms of modern art through their relationship to contemporary society. Prerequisite: None.

### **Art 2311 Watercolor Painting I (2-4) 3 hours**

An exploration of the various watercolor techniques and their application to a wide range of subject matter is made in this introduction to watercolor. Stress is on the development of basic skills in watercolor expression. Prerequisite: Art 1311 or its equivalent.

### **Art 2312 Watercolor Painting II (2-4) 3 hours**

This course is a continuation of Art 2311. It emphasizes aesthetic factors, style, and creative approaches. Prerequisite: Art 2311.

### **Art 2321 Painting I (2-4) . . . . . 3 hours**

This course is an introduction to various painting media (acrylic or oils) and modes of expression, with emphasis on the 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**

Art 2322 is a continuation of Art 2321 with emphasis on aesthetic factors. Prerequisite: Art 2321 or its equivalent.

### **Art 2341 Art Metals and Jewelry I**

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

Art Metals and Jewelry 2341 is designed to give the student the ability to create original, functional jewelry by using a variety of techniques, media, and shop practices. Prerequisite: None.

### **Art 2342 Art Metals and Jewelry II**

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

Art Metals and Jewelry 2342 is designed to further the student's ability to produce original jewelry by emphasizing the exploration of jewelry techniques, emphasizing casting and more complex construction. Prerequisite: None.

### **Art 2361 Printmaking I (2-4) . . . . . 3 hours**

This course is an introduction to woodcut, dry point, collograph, etching, and silk screen printing techniques and media. Prerequisite: Art 1311 and 1321 or consent of instructor.

### **Art 2362 Printmaking II (2-4) . . . . . 3 hours**

This course is a continuation of Art 2361. It emphasizes aesthetic factors, style, and creative approaches. Prerequisite: Art 2361.

### **Art 2381 Pottery I (2-4) . . . . . 3 hours**

Techniques taught in this course include coil, slab, and wheel methods of creating original pottery forms and the refining of native clays. Also taught are bisque and

glaze firings, plus raku sawdust firings and the mixing and applying of pottery glazes. Prerequisite: None.

**Art 2382 Pottery II (2-4) . . . . . 3 hours**  
This course is a continuation of Art 2381. It emphasizes aesthetic factors, style, and advanced wheel work. Prerequisite: Art 2381.

**Art 2391 Sculpture I (2-4) . . . . . 3 hours**  
Basic instruction in the principles and techniques of sculpture is the concern of this

course. A variety of materials including clay, metal, wood, and plastics are explored along with basic techniques of casting, welding, moulding and assemblage. Prerequisite: Art 1321 or approval of instructor.

**Art 2392 Sculpture II (2-4) . . . . . 3 hours**  
Art 2392 is a continuation of Art 2391 with emphasis on advanced sculpture techniques and design concepts. Prerequisite: Art 2391.

## Auto Body Repair

*Faculty*

Owen Monette, chairman; Dave Atherton.

The auto body repairman has before him a challenge which constantly affords variety and interest. With the increasing costs of automobiles, higher insurance coverage, and more crowded streets, 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.

Program emphasis is on the development of the necessary skills and knowledge required to function successfully in the auto body repair field. The use of modern materials, application of advanced techniques, and an opportunity to develop unique craftsmanship and 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

#### First Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
AB 1401 . . . . .	.4	AB 1402 . . . . .	.4
AB 1404 . . . . .	.4	AB 1403 . . . . .	.4
Math 1313 or Higher . . . . .	.3	DT 1401 or Engr 1301 . . . . .	.4 or 3
AT 2601 . . . . .	.6	Engl 1311 . . . . .	.3
*PE . . . . .	.1	*PE . . . . .	.1

#### Second Year

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
AB 1405 . . . . .	.4	AB 2403 . . . . .	.4
AB 2401 . . . . .	.4	AB 2404 . . . . .	.4
AB 2402 . . . . .	.4	AB 2405 . . . . .	.4
Govt 2301 or 2302 . . . . .	.3	AB 2406 . . . . .	.4
Engl 1312 or Spch 2340 . . . . .	.3		

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses.

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-four hours in AB courses.

Students enrolling in Auto Body Repair may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

## 16 Auto Body Repair

### AB 1401 Auto Body Repair I (2-4) .4 hours

Skill in the use of tools, equipment, and materials of the body shop is taught. Basic metal working techniques and shop safety are emphasized. Prerequisite: None.

### AB 1402 Auto Body Repair II

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

A continuation of Auto Body Repair I, with emphasis on sheet metal replacement and gas and arc welding. Prerequisite: AB 1401 or consent of instructor.

### AB 1403 Auto Paint Refinishing I

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

Refinishing methods and techniques emphasizing the use of sandpapers, primers, thinners, solvents, and paint is presented. The chemical properties of refinishing materials are studied and safety is stressed. Prerequisite: None.

### AB 1404 Auto Body Replacement and

Alignment I (2-4) . . . . . 4 hours

Automotive body component assembly procedures are studied. Methods used to join parts and assemblies to the body shell, sub-assemblies, and the frame are emphasized. Component alignment is stressed. Prerequisite: None.

### AB 1405 Auto Paint Refinishing II

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

A continuation of Auto Paint Refinishing I. Various techniques and procedures for applying paints are stressed. Prerequisite: AB 1403 or consent of instructor.

### AB 2401 Auto Body Replacement and

Alignment II (2-4) . . . . . 4 hours

A continuation of Auto Body Replacement and Alignment I. Mechanical component replacement procedures, procedures for checking frame and suspension damage, and repair methods are emphasized. Prerequisite: AB 1404 or consent of instructor.

### AB 2402 Auto Body Replacement and

Alignment III (2-4) . . . . . 4 hours

A continuation of Auto Body Replacement and Alignment II. Techniques for tie down and pulling auto frames and quarters are thoroughly studied. Emphasis is on clip panels and frame replacement. Prerequisites: AB 1404, AB 2401 or consent of instructor.

### AB 2403 Auto Paint Refinishing III

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

A continuation of Auto Paint Refinishing II. Emphasis is on color mixing, color matching, special painting procedures, and pre-delivery detailing. Prerequisites: AB 1403, 1405 or consent of instructor.

### AB 2404 Auto Body Repair Estimating

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

A detailed study of procedures used in the determination of accurate cost estimates for repairs. The proper use of auto body crash books and methods of preparing and presenting estimates are emphasized. Prerequisites: AB 1401, AB 1403, AB 1404 or consent of instructor.

### AB 2405 Auto Body Shop Maintenance and Management (2-4) . . . . . 4 hours

Shop layout, inventory control and maintenance, personnel management, and legal aspects of management's relationship to employee safety and welfare are emphasized. Prerequisites: AB 1401, AB 1403, AB 2404 or consent of instructor.

### AB 2406 Advanced Auto Body

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

The latest auto body repair techniques are studied. Custom painting and lettering are emphasized. This is an individualized special project course. Prerequisite: All AB courses or consent of instructor.

## Automotive Mechanics

Faculty

Owen Monette, chairman.

Maintaining and servicing automobiles is an immense 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

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

## Second Year

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
AT 2601		.6	AT 2603		.6
AT 2602		.6	AT 2604		.6
Engl 1311		.3	Engl 1312 or Spch 2340		.3
Govt 2301 or 2302		.3	Mgt 1301		.3

\*H.Ed 1301 may be substituted for the two 1-hour physical education courses.

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight hours in AT courses.

Students enrolling in Automotive Mechanics may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

**AT 1601 The Automotive Industry**

(2-8) .6 hours  
This course introduces the student to the auto industry and presents current trends of the industry's employment potential. The student is instructed in proper use of machines and equipment used by the trade. Emphasis is placed on proper use of training materials and reference manuals. Students are given instruction in proper safety procedures. Prerequisite: None.

balancing equipment, and front-end alignment equipment. Theory will be a primary element of the course. Prerequisite: None.

**AT 2601 Automotive Electrical Systems**

(2-8) .6 hours  
Basic electrical fundamentals ranging from the most elementary to the more advanced systems will be studied. Emphasis will be on testing procedures and diagnostic procedures. Equipment used will be diagnostic equipment, ohmmeters, test lights, and oscilloscopes. Prerequisite: None.

**AT 2602 Heating and Air-Conditioning**

(2-8) .6 hours  
The physics of temperature change as it applies to the automobile will be studied. Classroom and laboratory experiences will be designed to instruct the student in current diagnostic principles and repair procedures. Prerequisite: None.

**AT 2603 Transmissions and Power Trains**

(2-8) .6 hours  
This course provides technical studies and practice in repair and maintenance of automotive transmissions, differentials, and related assemblies. Prerequisite: None.

(2-8) .6 hours  
This course emphasizes fuels and emissions as they relate to tune-up procedures.

**AT 1604 Automobile Chassis (2-8) .6 hours**  
This course emphasizes repair procedures as they relate to brakes, front-end alignment, and suspension systems. Laboratory work will include use of brake lathes, wheel

various fuel system components and emission control systems are studied. Emphasis is placed on carburetor overhaul and adjustment. Exhaust emission test equipment is used in conjunction with the engine analyzer. Prerequisite: None.

## 18 Automotive Mechanics

### AT 2604 Automobile Servicing and Shop Management (2-8) .6 hours

This course is designed to prepare students for entry employment and to provide practical experience in diagnosis and shop

management. The course consists of relevant individual project assignments. Prerequisite: None.

## Biology

### Faculty

Dr. Clyde Smith, chairman; Dr. Vincent Coffey, Roger Corzine, Don Huff, Steve Sofge.

Courses offered in the Biology Department are directed toward two objectives. First, they are designed to provide the student majoring in a biological science with a broad and sound foundation for advanced study at an upper-level or pro-

fessional institution. The second objective is to provide the non-science major with information and concepts about himself and the living world around him to help him become a well-rounded citizen.

### Courses of Study for Associate in Science Degree

#### First Year

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

#### Second Year

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

\*The 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 the student's plans for future study. The student is invited to consult with the Biology faculty for information on these courses.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

### Dentistry\*\*

Entrance to a college of dentistry requires a minimum of sixty semester hours of acceptable college or university credit in addition to meeting the special entrance requirements of the chosen college. A

student may satisfy the sixty semester hours of college credit and qualify for the Associate Degree in Science by following the suggested degree plan.

### **Medicine\*\***

It is recommended by most colleges of medicine 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 which are required for entrance to the college of medicine are included. Provisions exist for a student to be admitted to a college of medicine upon completion of

ninety semester hours of college credit provided he satisfies all other requirements for entrance to the college of medicine.

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

### **Veterinary Medicine\*\***

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

that may exist for the college of veterinary medicine.

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

### **Pharmacy\*\***

Entrance to a college of pharmacy may be gained after the 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.

### **Optometry\*\***

Entrance to a college of optometry may be gained after the 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.

\*\*The student who expects to enter a profession in dentistry, law, 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 he expects to transfer after two years at the Odessa College. Odessa College offers courses which are required in the first years by most specialized colleges.

#### **Biol 1100 Medical Terminology**

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

An introduction to medical terminology for students who are planning any sort of health science career. The course will consist of Latin and Greek roots, prefixes and suffixes as well as proper pronunciation and spelling. No prerequisite.

grated manner to allow the relationship between form and function to be clearly demonstrated. Topics for study include the cell, basic chemistry, tissues, and some of the body systems. Prerequisite: None.

#### **Biol 1301 Anatomy & Physiology I**

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

The first of a two-semester course in Anatomy & Physiology presented in an inte-

#### **Biol 1302 Anatomy & Physiology II**

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

This course is a continuation of Biol 1301 and assumes the foundations laid therein. Study will include completion of the body

## **20 Biology**

systems and a major mammal dissection.  
Prerequisite: Biol 1301.

### **Biol 1400 Introduction to Science**

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

Biology 1400 is a preparatory course for those students requiring a science foundation prior to entering a more advanced course of study. Emphasis is placed on chemistry, human biology, and microbiology. Special attention is given to the chemical and anatomical aspects of the human body and the roles microorganisms play in affecting health. Biology 1400 is not intended to meet the biology or science requirement of upper-level institutions for advanced degrees. No prerequisite is required.

### **Biol 1401 General Biology (3-3) . . . 4 hours**

Biol 1401 is a study of the cellular and organ activities of representative plants and animals with the objective of providing the student with an overall picture of the living world and the organizational and functional aspects of living matter. Prerequisite: None.

### **Biol 1402 General Biology (3-3) . . . 4 hours**

This course is a continuation of Biol 1401 and assumes the foundation laid therein. The instructional approach is 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**

This course is a one-semester course dealing with functional anatomy and basic principles of the different systems of the body and their physiological activities. Prerequisite: None.

### **Biol 2201 Marine Ecology (12-36,**

**2 wks.) . . . . . 2 hours**

This is a field course in marine ecology held at Cholla Bay, Puerto Penasco, Sonora, Mexico. The ten-day course is offered between the spring semester and the first summer session, as well as during the Midwinter Session. Emphasis is on field observation and identification of shore and reef animals in Cholla Bay. Shore fish, planktonic forms and marine algae are also studied. Field Collection, identification and preservation techniques are presented along with the systemic, life history and ecological information. Prerequisite: Consent of the instructor.

### **Biol 2301 General Ecology (3-2) . . . 3 hours**

This course deals with the concepts of plant and animal communities, and population dynamics. Other topics include: community classification, environmental sampling methods, and the effects of chemicals on

the biome. Field trips, group discussions, and a written theme are also included. Prerequisite: One semester of either biology or geology, or consent of the instructor.

### **Biol 2302 Introductory Entomology**

**(2-3) . . . . . 3 hours**

This course is an introduction to the study of the classification, structure, physiology, ecology and evolution of insects. Special attention is given to insects of economic significance, their identification, life cycles, and relationships to man, including fundamental biological interactions and controls. Collections and field trips are required. Prerequisite: Consent of instructor.

### **Biol 2401 Comparative Anatomy**

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

A study of the anatomy of type chordates is undertaken from a comparative viewpoint. Lectures deal with the progressive development of the organs and organ systems. A representative animal from each class of the Vertebrata is dissected in the laboratory. Prerequisite: Biol 1401 and 1402.

### **Biol 2402 Introductory Genetics**

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

This course deals with the physical and chemical bases of hereditary variation in the living world. The application of genetic principles is stressed. A laboratory problem involving the identification of the inheritance of several mutations in an experimental organism is required. Prerequisite: Biol 1401 and 1402, or consent of instructor. College algebra is useful but not required.

### **Biol 2403 Microbiology (3-3) . . . . 4 hours**

Microbiology is the course that deals with the structure, cultivation, classification and ecology of microorganisms. Emphasis is placed on the life activities of bacteria and their effects on man and his environment. Prerequisite: One semester of biology or consent of instructor.

### **Biol 2404 General Botany (3-3) . . . 4 hours**

Survey of the plant kingdom from prokaryotic algae through the flowering plants with special emphasis on the plants of the West Texas area. Life histories, form, function, and structure of plant organs, and the plant in relation to its environment will be stressed. The application of basic botanical science to the related fields of Agronomy, Horticulture, Forestry, Physiology, Taxonomy and Paleobotany will be discussed. Biol 2404 is strongly recommended for those students planning on a career in the biological sciences such as biology teaching, research, extension, or in one of the more applied areas. Prerequisite: Biol 1401 and 1402, or consent of instructor.

## Building Trades Faculty John Price, chairman.

The Building Trades program at Odessa College is designed to train students for entry level jobs in the building and construction industry. Specific areas of training include on-site experience in the areas of (1) carpentry; (2) concrete; (3) masonry; (4) plumbing; (5) electrical; (6) mechanical, and (7) architectural drawing and specifications.

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

#### First Year

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
BT 1601		.6	BT 1603		.6
BT 1602		.6	BT 1604		.6
Engl 1311		.3	Engl 1312 or Speech 2340		.3
HD 1301		.3	*PE		.1
*PE		.1			

#### Second Year

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
BT 2601		.6	BT 2603		.6
BT 2602		.6	BT 2604		.6
Math 1313, 1321, or More Advanced	.3		Govt 2301 or 2302		.3

\*H.Ed. 1301 may be substituted for the two one-hour physical education courses. Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight hours in BT courses.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

#### BT 1601 Principles of Residential

##### Construction I (2-8) . . . . . 6 hours

An introduction to the principles of basic residential construction. Study will include an introduction to hand tools, power tools used in construction trades, safety, building materials, blue-print reading, specifications, surveying and related mathematics. Prerequisite: None.

sheathing, windows and doors, frames, rafters and roofing materials. Prerequisite: BT 1602.

#### BT 2601 Principles of Residential

##### Construction III (2-8) . . . . . 6 hours

A study of the plumbing and masonry trades — codes, specifications and requirements in the plumbing trades as required from city easement to completed installation. Masonry trades will include concrete, bricks, stone and expanded shale blocks. Prerequisite: BT 1603.

#### BT 2602 Principles of Residential

##### Construction IV (2-8) . . . . . 6 hours

A study of the codes, specifications and requirements for the electrical and mechanical trades. Electrical requirements from line to finished installation along with heating and air conditioning will be studied. Prerequisite: BT 1603.

#### BT 2603 Cabinetry and Finish Work

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

Finishing procedures such as fixtures, cab-

#### BT 1602 Carpentry I (2-8) . . . . . 6 hours

Study will include all carpentry skills. Students will study selection and use of materials, carpentry equipment, framing and industrial safety. Prerequisite: None.

#### BT 1603 Principles of Residential

##### Construction II (2-8) . . . . . 6 hours

A continuation of BT 1601. Emphasis will be placed on foundations and form work, masonry and concrete finishing and framing. Prerequisite: BT 1601.

#### BT 1604 Carpentry II (2-8) . . . . . 6 hours

Continuation of BT 1602, to include the actual erection of walls, installation of

## 22 Building Trades

inet work, sheetrocking, acoustical and ceramic tile installation, painting, finishing and all other necessary steps to complete the building will be emphasized. Prerequisite: BT 1604.

### BT 2604 Special Problems (2-8) . . . 6 hours

A study of the erection of residential buildings in modules; construction cost analysis,

bidding procedures, estimating and current research and development related to individual fields of interest. Preparation, procedures and techniques for securing employment in the building trades will also be emphasized. Prerequisite: Approval of department chairman.

## Business Administration

Business administration is a very broad field of study and contains many possible majors. The courses offered include those required by senior colleges at the freshman and sophomore level to obtain the degree of Bachelor of Business Administration. A business major should be aware of the opportunities, requirements and obligations in the various majors of specialization so that a proper choice for study can be made. A student should reserve the decision of choosing an area of emphasis depending on his own capabilities and in-

### Faculty

Dr. Bob Griffith, chairman; Dr. Bill Michalika, Jack Feits, Mary Gilmour, Ronald Orr, Leon Sherman.

terests. Suggested fields of study include accounting, advertising, banking, finance, business, teaching, various phases of management, insurance, retailing, marketing, statistical analysis, pre-law and policy, and environment.

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 of Arts Degree

#### First Year

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

#### Second Year

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
BA 2401	.4	BA 2402	.4
Eco 2301	.3	Eco 2302	.3
Psy 1301	.3	EDP 1401	.3
Govt 2301	.3	Govt 2302	.3
Math 2301	.3	PE	.1
PE	.1	Soc 1301	.3
		**Approved Elective	.3

\*Chemistry, Biological, Physical, or Geological. Must have a laboratory requirement.

\*\*Approved Electives: BA 2311, BA 2312, EDP 2401, EDP 2402, Mgt 1301.

To obtain an A.A. degree, 12 hours of English are required.

To obtain the Associate of Arts degree, six additional hours of English are required.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

#### **Accounting**

The two-year accounting program is designed to prepare persons 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.

NOTE: Some courses may not transfer to senior institutions.

#### **Course of Study for Certificate of Completion in Accounting**

##### **First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Engl 1311		.3	Engl 1312		.3
BA 1301		.3	BA 2402		.4
BA 2401		.4	Psy 1301		.3
Math 1301		.3	EDP 1301		.3
PE		.1	BA 2311		.3
			PE		.1

##### **Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
BA 2303		.3	BA 2304		.3
BA 2305		.3	BA 2306		.3
Eco 2301		.4	Govt 2302		.3
Govt 2301		.3	Eco 2302		.3
Science		.4	*Approved Elective		.3

\*Approved Elective: Math 1302, EDP 1400, EDP 1401, EDP 1403, BA 2312, OE 1207, Engl 2330. Engl (Sophomore Level).

#### **General Business**

**BA 1301 Introduction to Business**  
(3-0) ..... 3 hours  
A general survey of the various field of opportunity in business and industry is made with special emphasis on the aptitudes and the skills required to be successful in these areas. The course includes methods and practices of businessmen and the contribution of business to our society.  
Prerequisite: None.

**Accounting**  
**BA 1304 Elementary Accounting**  
(3-0) ..... 3 hours  
This course is for non-business and non-accounting majors. It is an introduction to the basic theory of double-entry accounting as it applies to the single proprietorship. Emphasis is placed on the complete accounting cycle with special emphasis on forms and procedures, analysis of business transactions, and financial statements. The course may not be accepted for credit by all senior colleges. Prerequisite: None.

**BA 1305 Introduction to Managerial Accounting**  
(3-0) ..... 3 hours  
The emphasis in this course is on managerial uses of accounting data. Topics covered include information systems, financial statements, budgets, controls, analytical techniques and interpretations, and limitations of managerial systems and reports. Prerequisites: None.

**BA 2303 Intermediate Accounting**  
(3-0) ..... 3 hours  
The recording and reporting process is studied with emphasis on the accounting principles underlying the balance sheet, income statement, and statement of retained earnings. Other topics studied include matching costs and revenue; intangible assets, deferred assets; cash, receivables, inventors valuation, and investments. Prerequisite: BA 2402.

**BA 2304 Intermediate Accounting**  
(3-0) ..... 3 hours  
Continues the studies begun in BA 2303 by

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exploring topics involving financial statement reporting and disclosure. Subjects include intangible assets; current, contingent and long-term liabilities; paid-in capital and retained earnings; the statement of changes in financial position; earnings per share statements; the uses of comparative data and special measurements and analysis; statements from incomplete records; and errors and their correction. Prerequisite: BA 2402.

### **BA 2305 Federal Tax Accounting for Individuals (3-0) . . . . . 3 hours**

Topics concerning the theory of tax problems, income tax forms, current Federal Revenue Acts, and application of Federal Tax legislation to everyday personal and business questions are covered in this course. Prerequisite: BA 2402 or consent of instructor.

### **BA 2306 Elementary Cost Accounting (3-0) . . . . . 3 hours**

Principles and techniques of accounting are studied to determine costs of material, labor, and burden under job costs and by continuous process and assembly systems. Consideration is given to prime costs, budgeting, controls, and decision making. Prerequisite: BA 2402.

### **BA 2401 Principles of Accounting (3-3) . . . . . 4 hours**

This course presents the introduction to principles of accounting for proprietorships, the accounting cycle and systems, inventories, deferrals and accruals, and payroll systems. Two practice sets are required during the semester. Prerequisite: None.

### **BA 2402 Principles of Accounting (3-3) . . . . . 4 hours**

This course presents the principles of accounting for partnerships and corporations; accounting for manufacturing and job orders; financial statements and their analysis. Two practice sets are course requirements. Prerequisite: BA 2401.

#### **Business Law**

### **BA 2311 Business Law (3-0) . . . . . 3 hours**

A study is made of legal implications of the average business transaction. Special attention is given to the laws of contracts, agency, employment, negotiable instruments, personal property, bailments, trans-

portation, and sales of personal property. Prerequisite: None.

### **BA 2312 Business Law (3-0) . . . . . 3 hours**

This course is a continuation of the principles of law with particular emphasis on insurance, suretyship and guaranty, partnerships and unincorporated organizations, corporations, real property, mortgages, leases, trusts and decedents' estates, bankruptcy, torts, and crimes. Prerequisite: None.

#### **Mathematics for Business Administration**

### **Math 1301 Elementary Mathematics of Finance (3-0) . . . . . 3 hours**

Skill and accuracy is to be developed in the fundamental mathematical problems of business. Topics studied include 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**

This course provides an introduction to sets, functions, and the algebraic number system; inequalities; variation; logarithms; probability; determinants; and quadratics. Problem solving involves business and decision making applications. Prerequisite: Math 1313 or demonstrated proficiency in algebra.

### **Math 1303 Mathematical Analysis for Business (3-0) . . . . . 3 hours**

This course is designed to develop quantitative methods of analyzing business problems. Topics studied include set theory, symbolic logic, mathematical relationships, vectors and matrices, break-even interpretations, linear programming, probability, expected value, and usage of these topics as an aid to formulating business decisions. Prerequisite: Math 1302 or demonstrated proficiency in college algebra.

### **Math 2301 Business Statistics (3-3) 4 hours**

The course provides an introduction to the techniques of collection, presentation, analysis, and interpretation of numerical data. Application of correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models, and programming are stressed. Prerequisite: Math 1303.

# Chemistry and Physical Science

Faculty  
Dr. Don Taylor, chairman;  
Glen Richardson, Mary  
Richardson.

## Chemistry

The objectives of the Chemistry Department are to prepare pre-professional chemists, chemical engineers, and chemical education majors; also, 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 in Chemistry

#### First Year

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

#### Second Year

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

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

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

#### Chem 1101 Fundamentals of Chemistry

Laboratory I (0-3) ..... 1 hour  
Laboratory which will illustrate and reinforce principles and concepts of Chem 1301 by use of quantitative experiments, emphasizing interpretation and reporting of data, and facility in handling scientific equipment. Corequisite or Prerequisite: Chem 1301.

#### Chem 1102 Fundamentals of Chemistry

Laboratory II (0-4) ..... 1 hour  
Laboratory which will illustrate and reinforce principles and concepts of Chem 1302 by use of qualitative and quantitative experiments, emphasizing interpretation and reporting of data, and facility in handling scientific equipment. Corequisite or Prerequisite: Chem 1302.

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### **Chem 1201 Chemical Calculations**

**(2-0) . . . . . 2 hours**  
Lecture course which is designed as a calculations course for chemistry and chemical engineering majors. This course reviews the mathematics necessary for basic chemistry courses and then applies these mathematical techniques to solving chemical problems. Prerequisite: Chem 1301.

### **Chem 1301 General Inorganic Chemistry I**

**(3-0) . . . . . 3 hours**  
Lecture course which is designed as a first college transfer course for students with some background in physical science. This course covers such topics as atomic structure, formulas, equations, gas laws, solutions, etc. Prerequisite: None. Credit probably not transferable until Chem 1101 is successfully completed.

### **Chem 1302 General Inorganic Chemistry II**

**(3-0) . . . . . 3 hours**  
Lecture course which is a continuation of Chem 1301. Some topics covered in this course include chemical kinetics, equilibrium, coordination chemistry, radio chemistry, and organic and biochemistry. Prerequisite: Chem 1301. Credit probably not transferable until Chem 1102 is successfully completed.

### **Chem 2101 Organic Chemistry Laboratory I**

**(0-4) . . . . . 1 hour**  
Laboratory course which will illustrate and reinforce principles and concepts of Chem 2301 by use of preparative experiments of organic compounds. Corequisite or Prerequisite: Chem 2301.

### **Chem 2102 Organic Chemistry Laboratory**

**II (0-4) . . . . . 1 hour**  
Laboratory course which will illustrate and reinforce principles and concepts of Chem 2302 by use of preparative experiments of organic compounds. NMR and IR as applicable to organic compound identification will be covered. Corequisite or Prerequisite: Chem 2302.

### **Chem 2103 Analytical Chemistry**

**Laboratory I (0-4) . . . . . 1 hour**  
Laboratory course which illustrates and reinforces principles and concepts of Chem 2303 by use of quantitative experiments. Corequisite or Prerequisite: Chem 2303.

### **Chem 2201 Organic Nomenclature**

**(2-0) . . . . . 2 hours**  
Lecture course which is a systematic study of the rules of nomenclature for organic molecules. International Union of Pure and Applied Chemistry rules will be emphasized; common names will also be covered. Prerequisite: Chem 1302. Corequisite: Chem 2301 or permission of instructor.

### **Chem 2301 Organic Chemistry I**

**(3-0) . . . . . 3 hours**  
Lecture course which is a mechanistic approach to an integrated study of aliphatic and alicyclic hydrocarbon compounds and their derivatives. Prerequisite: Chem 1302. Corequisite: Chem 2201 or permission of instructor. Credit probably not transferable until Chem 2201 is successfully completed.

### **Chem 2302 Organic Chemistry II**

**(3-0) . . . . . 3 hours**  
Lecture course which is a continuation of Chem 2301; a mechanistic approach to an integrated study of aromatic hydrocarbons and their derivatives. Also included are introductions to biochemistry and instrumental methods applicable to organic chemistry. Prerequisite: Chem 2301. Credit probably not transferable until Chem 2102 is successfully completed.

### **Chem 2303 Analytical Chemistry I**

**(3-0) . . . . . 3 hours**  
Lecture course which is a study of the fundamental principles of elementary quantitative analysis, both theory and practical. Some topics covered are review of stoichiometric relationships, gravimetric analysis, and volumetric analysis. Corequisite or Prerequisite: Chem 1302. Credit probably not transferable until Chem 2103 is successfully completed.

## **Physical Science**

Physical Science is a survey course of the physical sciences (Physics, Chemistry, Geology, and Astronomy); intended to satisfy a science requirement for the non-science majors. The emphasis throughout is on 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 the mathematical level in general is no more advanced than arithmetic and simple algebra.

### **PhSc 1101 Physical Science Laboratory I**

**(0-3) . . . . . 3 hours**  
Laboratory which will illustrate and rein-

force principles and concepts of PhSc 1301 by use of individual experiments, emphasizing techniques of handling scientific

equipment and analysis of data acquired.  
Corequisite: PhSc 1301.

**PhSc 1102 Physical Science Laboratory II (0-3) .3 hours**  
Laboratory which will illustrate and reinforce principles and concepts of PhSc 1302 by use of individual experiments, emphasizing techniques of handling scientific equipment and analysis of data acquired.  
Corequisite: PhSc 1302.

**PhSc 1301 Physical Science I (3-0) .3 hours**  
Lecture course which is designed to satisfy

a physical science requirement for liberal art, elementary education, etc. majors. This course will concentrate on systems of measurement as related to the physical laws (Physics) and chemical laws (Chemistry). Corequisite: PhSc 1101.

**PhSc 1302 Physical Science II (3-0) 3 hours**  
Lecture course which is designed to satisfy a physical science requirement for liberal art, elementary education, etc. majors. This course will concentrate on the laws and concepts of Geology and Astronomy.  
Corequisite: PhSc 1102.

## Child Development

*Faculty  
Mary Joyce Harding, chairman; Marylin Hair, Carla  
Wells.*

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 can give

love, guidance, and leadership to children.

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 student will concentrate on the special area of Child Development. In both programs, at least 50 per cent of course content will include an actual lab experience with children.

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

#### First Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
CD 1301 . . . . .	.3	CD 1303 . . . . .	.3
CD 1302 . . . . .	.3	CD 1402 . . . . .	.4
CD 1305 . . . . .	.3	CD 1306 . . . . .	.3
CD 1401 . . . . .	.4	CD 1304 . . . . .	.3
Spch 2340 or 2360 . . . . .	.3	Engl 1311 or More Advanced . . . . .	.3

#### Second Year

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
CD 2304 . . . . .	.3	CD 2301 . . . . .	.3
CD 2303 . . . . .	.3	CD 2306 . . . . .	.3
CD 2305 . . . . .	.3	CD 2601 . . . . .	.6
Math 1301 or 1313 . . . . .	.3	Govt 2301 or 2302 . . . . .	.3
*PE . . . . .	.1	*PE . . . . .	.1
**Approved Elective . . . . .	.3		

\*PE 1303, recommended. H.Ed. 1301 may be substituted.

\*\*Approved Elective: CD 2302, CD 2307, Th 2355, or B.A. 2311.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Certificate Plan in Child Development**

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
CD 1301 . . . . .	.3	CD 1303 . . . . .	.3
CD 1302 . . . . .	.3	CD 1402 . . . . .	.4
CD 1305 . . . . .	.3	CD 1306 . . . . .	.3
CD 1401 . . . . .	.4	CD 1304 . . . . .	.3
CD 2305 . . . . .	.3	CD 2306 . . . . .	.3

**CD 1301 Parenting (3-0) . . . . . 3 hours**

This course looks at marriage, family planning, physical and psychological preparation for parenthood, pregnancy, and delivery. The class members learn various ways of helping children grow toward emotional, social and intellectual maturity. Methods of helping children develop self-confidence, competence, and integrity are discussed. The special problems of infants, preschoolers, school-age children, and adolescents are explored. Prerequisite: None.

**CD 1302 Introduction to Child Development (2-2) . . . . . 3 hours**

This course introduces the student to the profession of teaching in the preschool with emphasis on the adult-child relationship. Guidance techniques will be emphasized. An exploration of career opportunities in child development and related fields will be provided in relationship to an introduction to the world of work. Prerequisite: None.

**CD 1303 Child Health Care (2-2) . . . . . 3 hours**

This course concentrates on general principles of personal and community health. Major emphasis is placed on health supervision of the child during infancy, preschool and school years with protection against communicable diseases and accidents. Also included are the relationships of socio-economic problems to child health. Prerequisite: None.

**CD 1304 The Abused and Neglected Child (3-0) . . . . . 3 hours**

This course is designed to educate the individual in the physical, psychological and emotional aspects of child abuse. Current federal, state and local child abuse laws, programs, policies and resources will be reviewed. Prerequisite: None.

**CD 1305 Creative Art, Music and Movement in Preschool Education (2-3) . . . . . 3 hours**

Study of creative arts, music, and movement for the young child is presented. Individual projects are planned and presented in a school laboratory. Prerequisite: None.

**CD 1306 Child Nutrition (2-3) . . . . . 3 hours**

The course emphasizes how food and feeding contribute to and affect child growth, development and learning. Included is the planning, selection and serv-

ing of food to meet children's needs at all levels of development; how children learn and develop desirable eating habits; and examining the nutritive values of foods, purchasing, storage, safe handling and sanitation. Prerequisite: None.

**CD 1401 Child Growth and Development I, Infant through Three (3-3) . . . . . 4 hours**

Emphasis is placed upon the development processes and environmental factors which shape the personality and affect the achievement of the child from birth through three years of age. Laboratory requirements consist of observation and study of preschool children. Prerequisite: None.

**CD 1402 Child Growth and Development II, Ages 4 through 9 (3-3) . . . . . 4 hours**

This is a study of the young child as a person and the influence of his environment in the early years as the child grows and develops within himself, his family, and his community. Prerequisite: None.

**CD 1403 Special Problems I (2-6) . . . . . 4 hours**

This course is designed to provide leadership and guidance for students involved in special projects. Activities may include movement through CDA modules, portfolio construction and/or other special assignments. Registration requires written permission of department chairperson, enrollment and completion of 6 hours of child development and/or work experience with young children. Prerequisite: Permission of the department chairman.

**CD 2301 Personal and Family Management (3-0) . . . . . 3 hours**

Development and relationships of individual family members are studied. The changing role of men and women in society and the family will be discussed in addition to the stages of the family life cycle. Management techniques as applied to the individual and family will be introduced. These techniques include time management, money management, and related topics. Prerequisite: None.

**CD 2302 Management Systems in Preschool Centers (2-3) . . . . . 3 hours**

Emphasis of this course will be on the practical aspects of managing a preschool center. A management system for centers

will be developed by each student. This includes budgeting, record keeping, food, health and referral services, and personnel practices. Prerequisite: None.

**CD 2303 Planning and Teaching Methods in Early Childhood (2-3) . . . . . 3 hours**

This course will emphasize planning and teaching curriculum for children 3-5 years old. Included will be an assessment of children's developmental level, and the planning of yearly to daily curriculums. Parent involvement, setting up physical environments, and classroom management also are included. Prerequisite: CD 1302 and a minimum of 2 of the following courses: CD 1303, 1305, 1306, 2305, 2306 or permission of instructor.

**CD 2304 The Special Child (2-3) . . . . . 3 hours**

This course presents techniques for identifying and serving the child with a special need. Included are studies of physical, emotional, language and/or mental disabilities. Constructing the environment in a manner that will enable the child with special needs to function to his or her maximum capabilities within the group structure will also be emphasized. Ways of working with the parents of the special child in order to bring out the maximum home-center coordination will be emphasized. Prerequisite: None.

**CD 2305 Literature and Language**

**Development (2-3) . . . . . 3 hours**  
This course introduces techniques for the development of early childhood language experiences in listening, speaking, and readiness for reading and writing. Included are criteria for selecting and using children's literature in the preschool. Methods of story writing and story telling with and without audiovisual aids will be introduced.

An introduction to bilingual language development will be included. Prerequisite: None.

**CD 2306 Science and Math Activities for Children (2-3) . . . . . 3 hours**

This course is an attempt to apply the scientific approach to a child's world. It will include lectures and laboratory activities designed to acquaint the child with nature, ecology and the world around him. Math concepts such as forms, shapes, etc. will be included. Prerequisite: None.

**CD 2307 Infant and Toddler Activities**

**(2-2) . . . . . 3 hours**  
This course is designed to give insight into the joys and problems of working with infants and toddlers. Emphasis will be placed on physical and emotional needs of children under two years of age with suggested activities to encourage proper developmental growth. Prerequisite: None.

**CD 2408 Special Problems II . . . . . 4 hours**

This course is a continuation of CD 1403 and may include completion of CDA modules, the assessment process and/or other special assignments. Registration requires written permission of the department chairperson, enrollment and/or completion of 6 hours of child development and/or work experience with young children. Prerequisite: Permission of the department chairman.

**CD 2601 Application of Learning Theories**

**(1-17) . . . . . 6 hours**  
The student enrolled in the course must show evidence of being a competent child care worker before a passing grade can be awarded. Prerequisite: 24 hours of Child Development including CD 1302, 1401, 1402, and 2303 and permission of the instructor. A grade of C or better is required.

## Communication and Theatre

**Journalism, Photography, Radio,  
Speech, Television, Theatre**

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. The fields in this

*Faculty*  
Darlyne Ervin, chairman; Tom Barnett, TV; Jane Ann Crum, theatre; Wally Jackson, radio; Bill Murchison, photography; Dr. Don Nichols, speech; John McCarroll, journalism.

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, capable of adjusting and contributing to the world in which he lives.

## **Journalism**

The journalism program at Odessa College seeks to fulfill a dual purpose. One course of study has been established to prepare a student to transfer to a senior college where he will work toward a bachelor's degree in any of several journalism areas. Also, Odessa College has set up a unique certificate program to prepare journalists to go directly to work in community journalism.

A variety of courses is offered through the journalism program. 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 the student will learn how to produce and create under deadline pressures and will be able to see his finished product in the hands of the Odessa College student body. The journalism courses not only prepare students who are interested in a career in journalism, but also the courses are useful electives for non-journalism majors.

## **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
Jour 1111		1	Jour 1112		1
Jour 1311		3	Jour 1131		1
Jour 1313		3	Jour 1312		3
Lang 1411		4	Lang 1412		4
PE		1	PE		1

First Semester		Second Year		Second Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.	Course	Sem. Hrs.
Engl (Sophomore Level) . . . . .	3	Engl (Sophomore Level) . . . . .	3		
Govt 2301 . . . . .	3	Govt 2302 . . . . .	3		
Phot 1331 . . . . .	3	Jour 2112 . . . . .	1		
Jour 2111 . . . . .	1	Jour 2132 . . . . .	1		
Jour 2131 . . . . .	1	Jour 2330 . . . . .	3		
Jour 2310 . . . . .	3	Lang 2312 . . . . .	3		
Lang 2311 . . . . .	3	Spch 1310, Phot 1332 or approved			
PE . . . . .	1	elective . . . . .			3

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

## **Certificate Plan in Community Journalism**

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 1350	.3
Jour 2330	.3	Jour 2310	.3
Phot 1331	.3	Jour 2350	.3

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		

### Journalism

<b>Jour 1111, 1112, 2111, 2112 Newspaper Laboratory (0-2) . . . . .1 hour each</b> Students earn credit by working on staff of the campus newspaper, "The Roundup." Participation is required of Journalism 1311, 1312, 2310 and 2340 students. Any student may register for Newspaper Laboratory only with the consent of instructor. Prerequisite: None.
<b>Jour 1131, 1132, 2131, 2132 Magazine Laboratory (0-2) . . . . .1 hour each</b> Students earn credit by working on the staff of the campus magazine, "The Scene Today." Participation is required of Journalism 1312 and 2310 students. Any student may register for Magazine Laboratory only with the consent of instructor. Prerequisite: None.
<b>Jour 1311 Reporting I (3-3) . . . . .3 hours</b> This course is an introduction to the fundamentals of newswriting. Emphasis is on the development of news judgment and a clear, concise writing style. Lectures, discussions and in-laboratory work provide training under deadline pressures in writing a variety of basic news stories. Enrollment in Journalism 1111 is required. There are three hours of lecture and three hours of laboratory work each week. Prerequisite: None.
<b>Jour 1312 Reporting II (3-3) . . . . .3 hours</b> This course emphasizes specialized areas of news writing. The journalism student is encouraged to sharpen his skills in writing and interpretation of news. Emphasis is also placed on philosophy of news selection and moving the student to recognize his own limitations and responsibilities in reporting. Enrollment in Journalism 1112 is required. There are three hours of lecture and three hours of laboratory each week. Prerequisite: None.
<b>Jour 1313 Introduction to Mass Communications (3-0) . . . . .3 hours</b> This course is a survey of basic factors affecting human interaction through mass communication, as well as an examination of the evolution of today's concepts in mass communications. Prerequisite: None.

### Jour 1350 Photojournalism (2-4) . . . . .3 hours

In this specialized course the student learns basic aspects of newspaper and magazine photography. Enrollment in Journalism 1111 or Journalism 1131 is required. Actual practice is gained through working on the campus publications. Prerequisite: Phot 1332 or consent of instructor.

### Jour 2310 News Editing and Reporting

#### (3-3) . . . . .3 hours

This course is a comprehensive study of copy editing for errors of fact and newspaper style. Page makeup, proof-reading and headline writing are stressed. Enrollment in Journalism 2111 or Journalism 2131 is required. Prerequisite: Jour 1312 or consent of instructor.

### Jour 2320 Graphic Arts (3-3) . . . . .3 hours

This course introduces the student to the history of printing, typography and advertising design. The student will gain experience through designing publications for distribution on campus. Enrollment in Journalism 1111 or Journalism 1131 is required. Prerequisite: None.

### Jour 2330 Feature and Editorial Writing

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

This course stresses the writing of "soft" news, features, columns, reviews and editorials. The study centers on the forms, techniques, styles and needs of newspapers and magazines. An overview of journalism and how these articles fit into the scheme are presented. The student will write and submit for publication representative articles to student and general publications. Prerequisite: None.

### Jour 2340 Principles of Advertising

#### (3-2) . . . . .3 hours

The emphasis in this course is on the print media. Preparation of advertisements will make up the bulk of the course work. Students will study appeals, copy writing, layout techniques and typography. Enrollment in Journalism 1111 or 1131 is required. Prerequisite: None.

### Jour 2350 Public Relations (3-0) . . . . .3 hours

This course is an overview of public rela-

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tions principles and practices. The course ties in journalistic and human relations principles. Through readings, lectures and projects, the student will gain practical experience in dealing with public relations questions. Prerequisite: Jour 1312 or consent of instructor.

### Jour 2601 Application of Learning Theories (1-14) ..... 6 hours

The student enrolled in this course must show evidence of having mastered certain

skills of journalism before being awarded the Certificate in Community Journalism. The student will be employed by qualified professionals in the field of community journalism. Through employer assessment and seminar participation, the student will be awarded his grade. A grade of "B" or better is required to receive the Certificate in Community Journalism. Prerequisite: Completion of 28 hours in journalism courses and approval of 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, and

various aspects of color. Opportunities are provided for use of the student's creative talents.

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

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

#### First Year

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

#### Second Year

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Govt 2301 or 2302 .....	.3	Engl (Sophomore Level) .....	.3
BA 2311 .....	.3	Phot 2312 .....	.3
Phot 2311 .....	.3	Phot 2332 .....	.3
Phot 2331 .....	.3	Phot 2372 .....	.3
Phot 2371 .....	.3	**Approved Elective .....	.3
Spch 2340 .....	.3		

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses.

\*\*Approved electives: Phot 1350, Phot 2200, Phot 2340, Phot 2360, Phot 2380, Phot 2390, MCom 1300, Mgt 1301, or Mgt 2303.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

### Photography

#### Phot 1331 Basic Photography I

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

This beginning course introduces the student to the basic applied and aesthetic aspects of photography. The course con-

tent includes a study of basic theories of film, exposure, development, filters, and printing. Prerequisite: None.

**Phot 1332 Basic Photography II**

(2-4) ..... 3 hours  
This course is a continuation of Photography 1331 and is designed for additional experience in the photographic medium. Prerequisite: Phot 1331.

**Phot 1350 Photojournalism (2-4) . . . 3 hours**

In this specialized course the student learns the basic aspects of newspaper photography with some emphasis on photojournalism. Actual practice is gained through working on the campus newspaper and the college magazine. Prerequisite: Phot 1332 or consent of instructor.

**Phot 1361 Photo Lab Technique I**

(2-4) ..... 3 hours  
This course has been designed to give the student experience in darkroom printing and developing procedures. The successful completion of this course will qualify the student to work as a lab technician in the photographic industry. Included in the semester's work will be projection printing, contact printing, black and white print finishing, toning and the mixing of photographic chemistry. Prerequisite: Phot 1332.

**Phot 1362 Photo Lab Technique II**

(2-6) ..... 3 hours  
This course is a continuation of Photography 1361 and is designed to give the student additional experience in photo lab work. Prerequisite: Phot 1361 or consent of instructor.

**Phot 2200 Print Finishing and Negative Retouching (1-2) . . . 2 hours**

This course will be concerned with print finishing and negative retouching. Most of the time will be spent in the field of color work since this is the major emphasis of present-day studio work. Prerequisite: None.

**Phot 2311 Commercial Photography I**

(2-6) ..... 3 hours  
The basics in this course will give the student a working knowledge in the specialized field of commercial photography with emphasis given to the use of a large negative format and the view camera. Photographic problems will include magazine article illustration, product photography, fashion, architectural studies and window displays. Prerequisite: Phot 1332 and Phot 1362.

**Phot 2312 Commercial Photography II**

(2-6) ..... 3 hours  
This course will provide additional experience in the commercial field and is a continuation of Photography 2311. Prerequisite: Phot 2311.

**Phot 2331 Portrait Photography I**

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

This will be two semesters of learning the basics of professional portraiture. This first semester will deal basically with studio type portraits. The student will practice by making photographs through actually working with adult and children models. Prerequisite: Phot 1332.

**Phot 2332 Portrait Photography II**

(2-4) ..... 3 hours  
This course will be a continuation of Photography 2331. Additional experience will be gained in the area of studio portraiture and emphasis will be given to outdoor portraiture. Prerequisite: Phot 2331.

**Phot 2340 Salon Photography**

(2-4) ..... 3 hours  
This course includes the making of salon prints, using such subjects as landscapes, classical portraits, environmental photography, character studies, and documentary photography. The student will be expected to present an extensive portfolio of his semester's work. Prerequisite: Phot 1332.

**Phot 2360 Expressive Photography**

(2-4) ..... 3 hours  
The student is given an opportunity to explore the formal, personal, and individual uses of photography. The student's goal will be the personal development of the art of seeing, and capturing, what is seen through the photographic process. Prerequisite: Phot 1332.

**Phot 2371 Color Photography I**

(2-4) ..... 3 hours  
The first semester of this course will consist of taking photographs with color film, both negative and transparency, and the basics of color printing. Prerequisite: Phot 1332.

**Phot 2372 Color Photography II**

(2-4) ..... 3 hours  
This will be a continuation of the first semester of color photography, Photography 2371, with additional work being given in the area of sensitometry and advanced lab technique. Prerequisite: Phot 2371.

**Phot 2380 Photographic Problems**

(1-5) ..... 3 hours  
This course, with the approval of and under the direct supervision of the instructor, allows the advanced student to pursue a particular project or theme utilizing the photographic process. Weekly progress reports will be mandatory. This course will be offered alternately with Phot 2340 and Phot 2360. Prerequisite: Phot 1332 and Phot 1362.

**Phot 2390 Graphics (2-4) . . . 3 hours**

This will be a one-semester course designed to teach advanced copying work and the use of special copy works and the use of special copy cameras. Work will be

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done in copying of continuous tone and line drawings. The student will learn layout

makeup and the use of specialized films and developers. Prerequisite: Phot 1332.

### **Radio — Television**

An outstanding "plus" for the radio-television student at the college is the opportunity to work in the college-owned and operated FM radio station. KOCV-FM is an educational non-commercial radio station

designed to entertain and enlighten area and campus listeners.

In the area of television, a considerable amount of TV programming is being done in conjunction with Cablevision of Odessa.

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

#### **First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Engl 1311	.....	3	Engl 1312 or Spch 2340	.....	3
Math 1313 or More Advanced	.....	3	Hist 2302	.....	3
PE	.....	1	PE	.....	1
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**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Engl (Sophomore Level)	.....	3	Engl (Sophomore Level)	.....	3
Radio 2111	.....	1	MCom 1300	.....	3
R/TV 2310	.....	3	Radio 2112	.....	1
R/TV 2360	.....	3	R/TV 2320	.....	3
Th 1310	.....	3	R/TV 2330	.....	3
TV 2131	.....	1	Govt 2301 or 2302	.....	3
Approved Elective	.....	3	TV 2132	.....	1

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

### **Radio — Television**

### **Course of Study for Associate in Applied Science Degree Announcer-Operator Option\***

#### **First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Engl 1311	.....	3	ET 1403	.....	4
ET 1401	.....	4	ET 1404	.....	4
Math 1313 or More Advanced	.....	3	Math 1341 or More Advanced	.....	3
PE	.....	1	PE	.....	1
Radio 1111	.....	1	Radio 1112	.....	1
R/TV 1310	.....	3	R/TV 1320	.....	3
TV 1131	.....	1	TV 1132	.....	1

**Second Year**

Third Semester		Fourth Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
ET 2400	.4	Engl 1312 or Spch 2340	.3
ET 2201	.2	ET 2404	.4
ET 2401	.4	Govt 2301 or 2302	.3
Radio 2111	.1	Radio 2112	.1
R/TV 2310	.3	R/TV 2320	.3
TV 2131	.1	TV 2132	.1
R/TV 2330	.3		

\*This option is operated in conjunction with the Department of Electrical and Electronics Technology.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

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

This is a survey of the American system of broadcasting including personnel, equipment, terms, station and network organization. The student is given practical experience in station operation procedures. Prerequisite: None.

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

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

This is a continuation of the history of broadcasting with emphasis on "inside" station operational procedures. Prerequisite: None.

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

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

The course deals with the principles of voice production and the techniques of interpretation as they relate to broadcasting. The student, working with tape recorders, learns to properly announce commercial copy, news, interviews, and panel discussions. Prerequisite: None.

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

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

Mass media writing techniques are studied. Continuity writing of announcements and commercials is mastered, along with dramatic scripts, news programs, and the documentary. Prerequisite: None.

**R/TV 2330 Radio and Television Production**

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

This is a study of radio production with emphasis on the problems posed by the

documentary, panel, special event, music programs, and announcements. The course includes a study of television production techniques with emphasis on the creative aspects of the producer's problems. Prerequisite: None.

**R/TV 2360 Voice and Diction for Radio and Television**

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

The course deals with basic principles of diction, voice development, and interpretation. Intensive application through classroom exercises and special projects is designed to meet individual vocal needs and professional objectives. It is necessary to master the International Phonetic Alphabet. Prerequisite: None.

**Radio 1111, 1112, 2111, 2112 Radio**

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

These laboratory courses are for students who participate extensively in work at the campus radio station KOCV-FM. A minimum of one hour per day must be spent working at the station. Prerequisite: Approval of the faculty director to work at KOCV.

**TV 1131, 1132, 2131, 2132 Television**

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

The laboratory courses are for students who participate intensively in basic television production at Odessa College. Projects include the production of educational, informational and instructional television programs on cable television. Prerequisite: Approval 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 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**

Course	First Semester	Sem. Hrs.	Second Semester	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	.....	.1
Spch 1310	.....	.3	Spch 2360	.....	.3
			Th 1310	.....	.3

**Second Year**

Course	Third Semester	Sem. Hrs.	Fourth Semester	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			

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Speech****Spch 1310 Introduction to Speech****Communication (3-0) ..... 3 hours**

Theory and practice of speech communication in interpersonal, small group, and public communication situations are included in this course. Prerequisite: None.

**\*Spch 1131, 1132, 2131, 2132 Forensics****Laboratory (0-2) ..... 1 hour each**

This laboratory prepares the student for intercollegiate speech competition. Prerequisite: None.

**Spch 2320 Introduction to Oral****Interpretation (3-0) ..... 3 hours**

This course includes both theory and technique of oral interpretation of literature. The course includes preparation and presentation of selections including prose, poetry, and dramatic literature. Prerequisite: None.

**Spch 2330 Argumentation and Debate****(3-0) ..... 3 hours**

Analysis and application of the fundamental principles and techniques of argumentation and debate are included in the course. Also included are 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**

Theories and skills of speech communication as applied to business and professional situations are included in this course. Prerequisite: None.

**Spch 2360 Voice and Diction****(3-0) ..... 3 hours**

This course deals with basic principles of

diction, voice development, and interpretation. Intensive application through classroom exercises and special projects is designed to meet individual vocal needs

and professional objectives. It is necessary to master the International Phonetic Alphabet. Prerequisite: None.

\*This is a laboratory that prepares the student for intercollegiate participation in the various types of speech contests. Participation in tournaments is required for credit.

### Theatre

The Theatre Department 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 department is basically that done in 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\*

##### First Year

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Th 1111		.1	Th 1112		.1
Th 1123		.1	Th 1124		.1
Th 1310		.3	***Engl 1312		.3
Engl 1311		.3	Th 1315		.3
Th 1314		.3	Th 1340		.3
Th 1330		.3	Th 2360		.3
**Elective		.3	Elective		.3
**Foreign Language, Math, or Science					
***Engl 1312 (Film) recommended					

##### Second Year

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Th 1125		.1	Th 1126		.1
Th 2111		.1	Th 2112		.1
Th 2330		.3	Govt 2302		.3
Govt 2301		.3	Hist 2302		.3
Hist 2301		.3	Th 2340		.3
Engl (Sophomore Level)		.3	Th 2370 or Th 1320		.3
****Elective		.3	Engl (Sophomore Level)		.3
****Spch 2320 recommended					

\*Those students wishing to fulfill requirements for the Associate in Arts or the Associate in Fine Arts Degree should consult Degree Requirements listed in the catalog.

**Course of Study for Minor in Theatre****First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Th 1111		.1	Th 1112		.1
Th 1310		.3	Th 1340		.3
Th 1330		.3	Th 2360		.3

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	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 twelve 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 the student's first semester.

**Theatre****Th 1111, 1112, 2111, 2112 Rehearsals and Performance (0-2) . . . . . 1 hour each**

These courses are required of students registered for drama. They are laboratory courses in which theatre students will be assigned to the cast or crews of each show. Prerequisite: None.

**Th 1123, 1124, 1125, 1126 Modern Dance: Theatre Dance Form (0-3) . . . . . 1 hour each**

These courses are designed to teach the student dance for the theatre. Prerequisite: None.

**Th 1310 Introduction to the Theatre (3-0) . . . . . 3 hours**

This course is a general survey of the major field of theatre art and an introduction to various types and styles of plays. Practical experience in play production is required. Prerequisite: None.

**Th 1314 Acting I (3-0) . . . . . 3 hours**

Basic skills and techniques of acting are developed via work of voice, body, and imagination. Exercises in creative play, improvisation, and pantomime are practiced. Prerequisite: None.

**Th 1315 Acting II (3-0) . . . . . 3 hours**

A continuation of Acting I, this course introduces beginning character study, period acting styles, and more advanced scene work for the student actor. Prerequisite: Th 1314.

**Th 1320 Stage Makeup (0-3) . . . . . 3 hours**

This course deals with the basic principles of applying theatrical makeup. It is open to all theatre students. Prerequisite: None.

**Th 1330 Stagecraft I (3-3) . . . . . 3 hours**

All basic aspects of stagecraft, costume,

and make-up are covered in three lectures a week, with laboratory hours to be arranged to provide practical experience on production crews. Prerequisite: None.

**Th 1340 Stagecraft II (3-3) . . . . . 3 hours**

This course is a continuation of Th 1330 with advanced aspects of stagecraft and design concerned with the production of sets, costumes, makeup, and props for dramatic productions in theatre. The course work is covered in three lectures per week plus three laboratory hours. Prerequisite: Th 1330.

**Th 1350 Theatre Workshop I (1-5) . . . . . 3 hours**

This course includes all phases of play production activities (acting, stage managing, scenery, properties, lighting, costumes, publicity, and box-office) by actually working in a play from rehearsal to production. Prerequisite: None.

**Th 2330 History of the Theatre I (3-0) . . . . . 3 hours**

This survey of the theatre, from its beginning to the 18th century, presents a study of drama in each period as a part of the total culture of the time. Plays of important authors are read. Prerequisite: None.

**Th 2340 History of the Theatre II (3-0) . . . . . 3 hours**

This course is a study of the modern theatre including American, English, and Continental plays from the 18th century to the present. Prerequisite: None.

**Th 2350 Theatre Workshop II (1-5) . . . . . 3 hours**

This course includes special phases of theatrical participation: Children's Theatre, creative dramatics, advanced scene study,

and design projects. The course will be offered to meet the special needs of advanced students. Prerequisite: Th 1314, Th 1315, and Th 1330.

#### Options

<b>Th 2151 Children's Theatre Workshop</b>	(1-5) . . . . . 1 hour
	This five-week workshop is designed to meet the special needs of the actor when performing a play for children. The course entails the actual presentation and study of a play written for children. Prerequisites: Th 1314, Th 1315, and Th 1330.
<b>Th 2152 Advanced Scene Study (1-5) 1 hour</b>	
	This is a five-week course for the advanced study of characterization, play analysis, and portrayal of scenes for a selected audience. Prerequisites: Th 1314, Th 1315, and Th 1330.

<b>Th 2153 Design Project (1-5) . . . . .</b>	<b>1 hour</b>
	This is a five-week supervised design project in costuming, lighting, and/or set design. Prerequisites: Th 1314, Th 1315, and Th 1330.

#### Th 2355 Creative Dramatics (3-0) . . . 3 hours

This course is designed to help teachers develop skills that will enable them to work with the development of the whole child through improvised drama. Special attention is given to story dramatization, dramatic play situations, storytelling, and using these skills with the pre-school, elementary, and special education child. This course is open to all majors and non-majors. Prerequisite: None.

#### Th 2360 Voice and Diction (3-0) . . . 3 hours

The course deals with basic principles of diction, voice development, and interpretation. Intensive application through classroom exercises and special projects meets individual needs and professional objectives. It is necessary to master the International Phonetic Alphabet. Prerequisite: None.

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

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

This course includes vocal production, beginning work in stage dialects, and practical application of audition techniques. Prerequisite: Spch 2360, Th 2360, or R/TV 2360.

## Cosmetology

#### Faculty

Faye Morgan, chairman; Mary Kaye Barbour, Lou Ann Hitt, Donna Rogers.

Cosmetology courses at Odessa College seek to provide the student 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 a personal interview with the depart-

ment director, a physical examination by a licensed physician, and a \$10 fee to the Texas Cosmetology Commission for a student permit. The student is also required to purchase a cosmetology kit. For admission, applicants should apply to the college and to the department director.

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

#### Program Outline For Cosmetology Operator

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

##### First Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
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.

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Second Year			
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Engl 1311 . . . . .	.3	Engl 1312 . . . . .	.3
**Approved Electives . . . . .	.4	Math 1313 or More Advanced . . . . .	.3
Govt 2301 . . . . .	.3	Mgt 1341 . . . . .	.3
Psy 1301 . . . . .	.3	Psy 2301 . . . . .	.3
*PE . . . . .	.1	*PE . . . . .	.1

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of thirty-six hours in Cosmetology courses.

\*H.Ed. 1301 may be substituted for the two one-hour physical education courses.  
\*\*Electives to be approved by division chairman.

### Program Outline For Cosmetology Operator

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

##### First Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
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	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Engl 1311 . . . . .	.3	Eng 1312 . . . . .	.3
**Approved Electives . . . . .	.5	Math 1313 or More Advanced . . . . .	.3
Govt 2301 . . . . .	.3	Mgt 1341 . . . . .	.3
Psy 1301 . . . . .	.3	Psy 2301 . . . . .	.3
PE . . . . .	.1	Soc 1301 . . . . .	.3
		PE . . . . .	.1

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of thirty-two hours in Cosmetology courses.

\*H.Ed. 1301 may be substituted for the two one-hour physical education courses.  
\*\*Electives to be approved by division chairman.

#### Cos 2601 Orientation (5-27.5) . . . . . hours

An introductory course to the field of cosmetology. Emphasis is on the basic principles and practices involving hair dressing, personality development, visual poise, good grooming, sanitation, and safety habits. Prerequisite: None.

Students learn an appreciation for safe work habits, and orderly and systematic procedures for performing tasks relating to the field of cosmetology. Prerequisite or corequisite: Cos 2601.

#### Cos 2602 Introduction to Cosmetology

(5-27.5) . . . . . hours  
The introductory course in cosmetology involves developing a fundamental knowledge and understanding of technical and related sciences and mathematics which find practical application in cosmetology.

**Cos 2603 Cosmetology I (5-27.5) . . . . . hours**  
This course gives instruction of a preparatory type in the development of manipulative skills, knowledge and desirable attitudes to equip students for gainful employment in the field of cosmetology. Rules, regulations and preparation for the State Cosmetology Commission examination in order to obtain a license to practice

cosmetology are stressed. Prerequisite: Cos 2602.

**Cos 2604 Cosmetology II (5-27.5) .6 hours**

The basic manipulative skills for rendering personal beauty services, including all skills pertaining to hairdressing, nail care and skin care, are taught. Selection, care, and proper use of commercial beauty products are emphasized. Prerequisite: Cos 2603.

**Cos 2605 Cosmetology III (5-27.5) .6 hours**

This course emphasizes the basic principles of chemistry, especially those that are important in work as a cosmetologist. The student will become familiar with chemicals that are used to color, straighten, and curl hair. Emphasis is on the basic chemical characteristics of the various kinds of cosmetics used in beauty salons. Prerequisite: Cos 2604.

**Cos 2606 Cosmetology IV**

(5-27.5) ..... .6 hours  
This course provides the student with important principles to be followed in planning a salon, including location, space allotment and installation cost. Knowledge regarding the financial aspects of salon operation, including operating expenses and the profit and loss statement, are stressed. Students will become familiar with the types of insurance coverage needed by salon operators

and with legal requirements with regard to wages, hours and working conditions. Prerequisite: Cos 2605.

**Cos 2811 Orientation and Lesson Plan**

**Development (8-24.5) .....6 hours**  
A study to develop methods and techniques of teaching skills. Basic unit planning and daily lesson plan development are emphasized. Prerequisite: Cosmetology Operator's License.

**Cos 2812 Practical Clinical Management**

**(8-24.5) .....6 hours**  
A study to develop practical clinic management techniques. This study includes supervision of student skills in classroom situations. Prerequisite or Corequisite: Cos 2811.

**Cos 2813 Classroom Teaching of**

**Informational Theory (8-24.5) ..6 hours**  
A study to develop methods and techniques of teaching informational theory relative to cosmetology. Prerequisite: Cos 2812.

**Cos 2814 Preparation for State  
Cosmetology Commission**

**(8-24.5) .....6 hours**  
A study designed to prepare the student to pass the Texas Cosmetology Commission examination of 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**

The student will learn all aspects of manicures and pedicures. Emphasis will be placed on the proper way to file nails, apply

polish and give hand and arm massages. Successful completion will allow the student to test for state licensure as a manicurist.

#### Facial Specialist Program (300 Clock Hours)

A Facial Specialist license authorizes the holder to practice facials, application of facial cosmetics, manipulations, eye tab-

bing, arches, lash and brow tints, and the temporary removal of facial hair in a licensed beauty or facial salon.

**Cos 1603 Facial Specialization ....6 hours**

A course designed to provide the student with the knowledge and skills needed to pass the state exam for license as a facial specialist. Emphasis will be placed on ap-

plication of facials, facial cosmetics, and manipulations. Eye tabbing, arches, lash and brow tints, and the temporary removal of facial hair will be covered.

#### Shampoo-Conditioning Specialist Program (300 Clock Hours)

A Shampoo Specialist license authorizes the holder to practice the art of shampooing, scalp manipulation, and scalp

treatment. It also allows for the application of conditioners, rinses and shampooing hair goods in a licensed establishment.

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### Cos 1602 Shampoo and Conditioning

**Specialization . . . . . 6 hours**  
The student will learn all aspects of shampooing and conditioning of the hair. Chemistry of shampoos and conditioners and chemistry of the skin and scalp will be

emphasized. Disorders of the skin, scalp and hair as well as treatment of these disorders will be included. Successful completion will qualify the student to test for state licensure as a Shampoo-Conditioning Specialist.

## Developmental Studies

### Faculty

Clayton Alred, director; Lynn Whitson, lab coordinator.

Odessa College offers a Developmental Studies program for those students who need extensive development in or who wish to review the fundamentals of mathematics, reading, writing, and basic study skills. Courses available in the program are English 1101, 1102, 1103, 1104, 1105, and 1300; Math 1311; and College Reading 1101, 1102, 1103, and 1301; and Human Development 1101. 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 coursework. The recommendation to enroll in one, some, or all of the developmental courses is made on the basis of diagnostic testing 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 or to a senior college or university of their choice 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

##### The Writing Lab

The Writing Lab is located in Wilkerson Hall, Room 211. It offers supplemental, individualized 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 lab courses provide practical, immediate help in selected areas of basic English. They focus specifically on principles of the simple sentence, the compound and the complex sentences, and on spelling. Students and other interested adults are guided into the courses according to their performance on diag-

nostic pre-tests. They may enroll in self-paced or classroom instruction for non-credit or for one, two, or three sequential hours of institutional credit.

English 1101, 1102, and 1103 equate to English 1300, Basic English, described in the English course offering in the Literature and Languages Department.

##### Engl 1101 The Sentence (0-16) . . . . 1 hour

English 1101 reviews parts of speech, patterns of the simple sentence, transformations of the simple sentence, and principles of agreement. The course improves the student's ability to write grammatical sentences. Prerequisite: None.

##### Engl 1102 Coordination and Subordination (0-16) . . . . . 1 hour

English 1102 extends the student's understanding of the simple sentence to more complex structures and transformations. The course focuses on basic relationships between ideas and helps the student ex-

pand the amount of information conveyed in sentences through the techniques of embedding and sentence combining. Prerequisite: None.

**Engl 1103 The Paragraph (0-16) . . . .1 hour**

English 1103 applies the student's understanding of coordination and subordination to paragraph writing, the beginning level of formal written discourses. The course focuses on the topic sentence, unity, coherence, supporting detail, organization, and general form. It prepares the students to write the multi-paragraph papers required in Engl 1311. Prerequisite: None.

**Engl 1104 Techniques of Research**

(0-16) . . . . .1 hour  
Techniques of research — use of card catalog, journal and periodical indexes, etc.; footnote and bibliography form; restricting a research topic; paraphrasing, etc. — are taught in a self-paced course. Prerequisite: None.

**Engl 1105 Spelling (0-16) . . . . .1 hour**

English 1103 reviews principles of spelling — including phonics, syllabication, spelling patterns, prefixes, suffixes, plurals, hyphenation, and selected problems in word usage and meaning. Prerequisite: None.

**Reading**

**College Reading Techniques**

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 noncredit or for one, two, or three hours of credit. Noncredit enrollment is also available for junior and senior high school students. Standardized tests are

given to ascertain the reading performance level and to determine specific areas for improvement. After diagnosis, a self-paced plan of action is developed through student-instructor conferences to set immediate and long-range goals.

Materials covered and skills learned in Reading 1101, 1102, and 1103 equate to Reading 1301, College Reading.

importance of vocabulary and the degree of comprehension he may expect when reading in a variety of materials at a variety of speeds. Prerequisite: Consent of the instructor.

**Read 1101 Improving Reading Skills (0-24) . . . . .1 hour**

The function of Improving Reading Skills is to improve the student's ability to understand his relationship with the academic demands of the college. Following diagnosis, the student will be taught study skills, vocabulary skills, reading skills, listening skills, and spelling skills in an individualized setting. Prerequisite: None.

**Read 1103 Improving Reading Rate and Comprehension (0-12) . . . . .1 hour**

The function of this course is to provide the student an opportunity to become a trained, successful reader, one who can handle large amounts of written material by emphasizing purpose, concentration, recall, good vocabulary, and rapid reading. Prerequisite: Consent of the instructor.

**Read 1102 Improving Reading Flexibility (0-12) . . . . .1 hour**

The function of Improving Reading Flexibility is to make the student aware of the

**Mathematics and Human Development**

Math 1311, Basic Math, and various Human Development classes — HD 1101, Orientation; HD 1301, College Skills Training; HD 1302, Educational and Career Planning; HD 2301, Interpersonal Relationships; and HD 2302, Special Topics/Directed Studies — are other

courses available in the Developmental Studies program. Math 1311 is described in the Mathematics Department course offerings, and the Human Development courses are described in the Human Development course offerings.

**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 are enrolled in courses which satisfy degree requirements. This

service is provided free of charge, and 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

#### First Year

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
AB 1401	.....	.4	DM 1602	.....	.6
DM 1601	.....	.6	DM 1604	.....	.6
DM 1603	.....	.6	Engl 1312 or Speech 2340	.....	.3
Engl 1311	.....	.3	*PE	.....	.1
*PE	.....	.1			

#### Second Year

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
DM 2601	.....	.6	DM 2602	.....	.6
DM 2603	.....	.6	DM 2604	.....	.6
Math 1313, 1321 or More Advanced	.....	.3	Govt 2301 or 2302	.....	.3

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses. Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight hours in DM courses.

Students enrolling in Diesel Mechanics may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

#### DM 1601 Principles of Diesel Engines I

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

An introduction to the basic principles and repair of high compression gasoline and diesel engines, cooling systems, and lubricating systems. The use and care of hand tools, precision instruments, and test equipment will be stressed. Prerequisite: None.

#### DM 1602 Principles of Diesel Engines II

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

This course is a continuation of DM 1601, Principles of Diesel Engines I with emphasis on troubleshooting. Prerequisite: DM 1601.

#### DM 1603 Electrical Systems and Control Circuits (2-8) ..... 6 hours

An introduction to the basic principles of electricity. Repair and testing procedures for storage batteries, electric starters, gen-

erators, alternators, warning devices, lighting systems and switches. The use of electrical test equipment also will be emphasized. Prerequisite: None.

#### DM 1604 Fuel Injection, Testing and Rebuilding (2-8) ..... 6 hours

This course provides theory and practice in repair, maintenance, and troubleshooting of fuel injection systems and components. Various types of fuel injection systems are covered including Cummins, Detroit, and Roosa Master. Prerequisite: DM 1602.

#### DM 2601 Transmissions, Power Trains and Accessories I (2-8) ..... 6 hours

This course provides theory and practice in repair and maintenance of transmissions, differentials, brakes and related assemblies. Various types of special units including pumps, gas and air compression machinery, turbo-chargers, super-chargers,

and hydraulic equipment are studied. Prerequisite: DM 1601.

**DM 2602 Transmissions, Power Trains and Accessories II (2-8) . . . . . 6 hours**

This course is a continuation of DM 2601, Transmissions, Power Trains and Accessories I. Prerequisite: DM 2601.

**DM 2603 Advanced Diesel Repair I**

(2-8) . . . . . 6 hours  
This course provides extensive shop prac-

tice in major engine overhaul, including fuel system analysis with emphasis on injector testing and timing. Troubleshooting procedures are also included. Prerequisite: DM 1602.

**DM 2604 Advanced Diesel Repair II**

(2-8) . . . . . 6 hours  
This course is a continuation of DM 2603, Advanced Diesel Repair I. Prerequisite: DM 2603.

**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 student may register for the following pro-

gram 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 Counseling Center.

Course No.	Course Name	Clock Hours	Semester 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 Circuits . . . . .	160	4	8
DM 1846	Transmissions, Power Trains & Accessories . . . . .	240	8	12
DM 1847	Fuel Systems . . . . .	240	8	12

Estimated cost of books and safety equipment — \$100.

**DM 1445 Electrical Systems & Control**

**Circuits [(3-17) for 8 Weeks] . . . . . 4 hours**  
This is an introductory course in electricity. Its language, usage, testing and repair are emphasized. All areas of D.C. circuitry applied to a vehicle will be studied. Starting systems, charging systems, lighting systems, instrumentation, accessories, troubleshooting, testing, and safety will be stressed. Prerequisite: None.

**DM 1841 Introduction to Diesel Engines**

**[(4-16) for 11 Weeks] . . . . . 8 hours**  
This course provides instruction on the correct use of tools and precision measuring instruments and the theory of operation of the many types of internal combustion engines in use today. The introductory phase covers the application and use of dial indicators, micrometers and calipers. Construction, application and troubleshooting will be studied. Tune-ups on equipment using special tools and diag-

nostic methods is required. Personal and shop safety will be observed at all times. Prerequisite: None.

**DM 1846 Transmissions, Power Trains, and Accessories [(2-18) for 12 Weeks] . . . . . 8 hours**

Power Trains, drive line components, and accessories will be studied. Students will be required to remove, disassemble, inspect, evaluate, repair and/or rebuild, reassemble, and test all components. "Live" work will be used when possible. Safety will be stressed in the laboratory and classroom. Prerequisite: None.

**DM 1847 Fuel Systems [(4-16) for 12**

**Weeks] . . . . . 8 hours**  
This is an introductory course to fuel injection systems, language, troubleshooting, testing, and practical applications. The fuel systems may be taken separately to meet student requirements. Students working toward a degree program will be required to

## 46 Diesel Mechanics

complete all systems. The systems to be studied are Detroit, Caterpillar, Cummins, Roosa-Master, American Bosch, and C.A.V. Fuel injection pump and nozzle rebuild techniques will be emphasized. "Live" equipment will be used when possible. Safety will be stressed in the classroom and laboratory. Prerequisites: DM 1841, DM 1942, DM 1943, DM 1944, or industrial experience.

**DM 1942 Detroit Diesel Engines [(3-17) for 14 Weeks] . . . . . 9 hours**

This block of instruction is to introduce the student to the Detroit Diesel Engine. All major and minor components will be disassembled, evaluated, repaired, and/or rebuilt according to manufacturer's specifications. Included in the study will be operating principles, cooling systems, lubrication systems, air intake systems, exhaust systems, troubleshooting, and dynamometer operation. Special precision measuring tools and general tools will be used. This phase of instruction will be beneficial to those wishing to update their current skills and professional knowledge. "Live" engines will be used when possible. Shop safety will be stressed at all times. Prerequisite: DM 1841 or industrial experience.

**DM 1943 Cummins Diesel Engines [(3-17) for 14 Weeks] . . . . . 9 hours**

This block of instruction is to introduce the student to the Cummins Diesel Engine. All major and minor components will be disassembled, evaluated, repaired, and/or re-

built according to manufacturer's specifications. Included in the study will be operating principles, cooling systems, lubrication systems, air intake systems, exhaust systems, troubleshooting, and dynamometer operation. Special precision measuring tools and general tools will be used. This phase of instruction will be beneficial to those wishing to update their current skills and professional knowledge. "Live" engines will be used when possible. Shop safety will be stressed at all times. Prerequisites: DM 1841, DM 1942, or industrial experience.

**DM 1944 Caterpillar Diesel Engines [(3-17) for 14 Weeks] . . . . . 9 hours**

This block of instruction is to introduce the student to the Caterpillar Diesel Engine. All major and minor components will be disassembled, evaluated, repaired, and/or rebuilt according to manufacturer's specifications. Included in the study will be operating principles, cooling systems, lubrication systems, air intake systems, exhaust systems, troubleshooting, and dynamometer operation. Special precision measuring tools and general tools will be used. This phase of instruction will be beneficial to those wishing to update their current skills and professional knowledge. "Live" engines will be used when possible. Shop safety will be stressed at all times. Prerequisites: DM 1841, DM 1942, DM 1943, or industrial experience.

## Drafting *Faculty* 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. There is a large demand for draftsmen throughout the nation. Students completing the program will receive an Associate in Applied Science degree.

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

#### First Year

Course	First Semester	Sem. Hrs.
Art 1311		.3
DT 1401 or Engr 1301		.4 or 3
Engl 1311		.3
Math 1313, 1321, or More Advanced		.3
*PE		.1

#### Second Semester

Course	Second Semester	Sem. Hrs.
DT 2401		.4
Engl 1312 or Speech 2340		.3
Engr 1303		.3
Math 1341, 1323, or More Advanced		.3
*PE		.1
**Approved Elective		.4

\*\*Approved Elective

**Second Year**

Third Semester		Fourth Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
DT 2402 . . . . .	.4	DT 2404 . . . . .	.4
DT 2403 . . . . .	.4	DT 2405 . . . . .	.4
Math 1343 or More Advanced . . . . .	.3	DT 2406 . . . . .	.4
**Approved Elective . . . . .	.3	**Approved Elective . . . . .	.3
Govt 2301 or 2302 . . . . .	.3		

\*H.Ed. 1301 can be substituted for the two 1-hour physical education courses.

\*\*Approved Electives: DT 2411, 2412, 2413, Phys 1401, Read 1301, Engr 2303, 2304, Mgt 1301, 2302, MT 1601, WT 1601, any Advanced Math, and any EDP.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**DT 1401 Technical Drafting I (2-4) . .4 hours**

A basic course in the fundamentals of drawing and sketching for the technical student. Included in the course will be lettering, geometric construction, sketching and shape description, multiview projection, sections, dimensioning techniques, auxiliary views, and interpretation of industrial sketches and prints. Emphasis is placed on development of skills as well as theory. Prerequisite: None.

other mechanical equipment are prepared. Prerequisite: DT 1401 or Engr 1301.

**DT 2405 Electronic Drafting (2-4) . .4 hours**

This is a basic course concerning drafting techniques as they are applied to the field of electronics. Electronic symbols and their application in printed and conventional circuits will be studied. Prerequisites: DT 1401 or Engr 1301.

**DT 2406 Structural Drafting (2-4) . .4 hours**

This course is a study of the design and development of details and specifications for industrial structures. Emphasis will be placed upon structural steel, pipe, and reinforced concrete. Prerequisite: DT 1401 or Engr 1301.

**DT 2411 Advanced Architectural Drafting (2-4) . .4 hours**

This course is a continuation of Drafting Technology 2401 with emphasis on commercial and industrial construction. Prerequisite: DT 2401.

**DT 2412 Advanced Machine Drafting (2-4) . .4 hours**

This course is a continuation of Drafting Technology 2402. A thorough study of position dimensioning and tolerancing will be made. Prerequisite: DT 2402.

**DT 2413 Advanced Technical Illustration (2-4) . .4 hours**

This course is a continuation of Drafting Technology 2403. The areas covered include inking, shading, and airbrush rendering. Prerequisite: DT 2403.

**DT 2401 Architectural Drafting (2-4) 4 hours**

This course is an introductory course in the field of architectural drafting. Prerequisite: DT 1401 or Engr 1301.

**DT 2402 Machine Drafting (2-4) . .4 hours**

This course deals with engineering sketches, conventional practices, detail and assembly drawings, machine fastenings, and pipe drawings. Prerequisite: DT 1401 or Engr 1301.

**DT 2403 Technical Illustration (2-4) . .4 hours**

A study of pictorial drawings used in industrial catalogs, training aids, engineering designs, assembly sheets and promotional literature. Orthographics, axonometrics and perspectives are used extensively. Prerequisite: DT 1401 or Engr 1301.

**DT 2404 Piping Drafting (2-4) . .4 hours**

This course is a study of pipes and pipe fittings, symbols, and specifications of process systems. Drawings of flow diagrams, pumps, compressors, and various

**Educational Aide**

*Faculty*  
**Mary Joyce Harding, chairman; Mary Barker, Maryln Hair, Carla Wells.**

With increased need for individualized instruction of children beginning with pre-school, 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 cler-

ical, 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 the students employed as an educational aide, 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	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Math 1313 or higher . . . . .	.3	Engl 1311 . . . . .	.3
Spch 1310 . . . . .	.3	CD 1303 . . . . .	.4
CD 1401 or Psy 2302 . . . . .	.4/3	CD 1402 or CD Approved Elective . . . . .	.4/3
CD 1305 . . . . .	.3	*PE 1303 . . . . .	.3
EA 1300 . . . . .	.3	CD 1306 or CD 2306 . . . . .	.3

\*Counts as PE Activity Credit

**Second Year**

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Govt 2302 . . . . .	.3	Soc 1301 . . . . .	.3
Spch 2360 or 2340 . . . . .	.3	CD 2305 . . . . .	.3
EA 2300 . . . . .	.3	CD 2304 . . . . .	.3
CD 1304 . . . . .	.3	EA 2600 . . . . .	.6
EA 2301 . . . . .	.3		
**CD Approved Elective . . . . .	.3		

\*\*Approved Electives: CD 1301, CD 1305, CD 1306, CD 2301, CD 2304, CD 2305, CD 2306, HEd 1301, Govt 2301, Engl 1312, Span 1411, Span 1412, Span 2311, Span 2312.

First-year students have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Course of Study for Associate in Applied Science Degree  
Special Education Option****First Year**

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Math 1313 or Higher . . . . .	.3	Engl 1311 . . . . .	.3
Spch 1310 . . . . .	.3	CD 1303 . . . . .	.3
CD 1401 or Psy 2302 . . . . .	.4/3	CD 1402 or CD Approved Elective . . . . .	.4/3
CD 2304 . . . . .	.3	*PE 1303 . . . . .	.3
EA 1300 . . . . .	.2	EA 2302 . . . . .	.3

\*Counts as PE Activity Credit

**Second Year**

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

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's 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.
Math 1313 or Higher	.3	Spch 2340	.3
OE 1401	.4	Engl 1311	.3
EA 1300	.3	OE 1402	.4
CD 1401 or Psy 2302	.3/4	**CD 1402 or Approved Elective	.4/3
		*PE 1303	.3

\*Counts as PE Activity Credit

**Second Year**

Third Semester		Fourth Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Govt 2302	.3	Soc 1301	.3
Spch 2360	.3	EA 2600	.6
EA 2300	.3	OE Elective	.3
OE 1203 & 1204	.4	CD 1301 or CD 1304	.3
CD 2306	.3		
CD 1303	.3		

\*\*Approved Electives: CD 1301, CD 1305, CD 1306, CD 2301, CD 2304, CD 2305, H.Ed. 1301, Govt 2301, Engl 1312, Span 1411, Span 1412, Span 2311, Span 2312.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

<b>First Year</b>			
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Math 1313 or Higher . . . . .	.3	Engl 1311 . . . . .	.3
Spch 2340 . . . . .	.3	CD 1303 . . . . .	.3
CD 1401 or Psy 2302 . . . . .	.4/3	CD 1402 or CD or EA Approved	
EA 1300 . . . . .	.3	Elective . . . . .	.4/3
CD 1306 . . . . .	.3	**PE 1303 . . . . .	.3
*Span 1411 . . . . .	.4	CD 2306 . . . . .	.3
		*Span 1412 . . . . .	.4
		*May test out if proficient in Spanish	
		**Counts as P.E. activity credit.	

<b>Second Year</b>			
Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Govt 2302 . . . . .	.3	Soc 1301 . . . . .	.3
Spch 2360 . . . . .	.3	EA 2600 . . . . .	.6
EA 2300 . . . . .	.3	CD 2305 . . . . .	.3
CD 1302 . . . . .	.3	CD 2304 . . . . .	.3
EA 2301 . . . . .	.3	CD 1301 or 2301 . . . . .	.3
Span 2311 . . . . .	.3	Span 2312 . . . . .	.3

Students not desiring the AAS 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 twelve 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 the student's first semester.

**EA 1300 School Procedure (3-0) . . . 3 hours**

This is an orientation course covering school organization, procedures, general practices, individual instruction and staff utilization. The roles of the teacher and assistant teacher will be explored. Prerequisite: None.

individualized instruction and classroom management. Prerequisite: None.

**EA 2302 Special Child (2-3) . . . . . 3 hours**

This is a continuation of CD 2304, The Special Child. The student will identify disability areas on which to concentrate studies. These studies will be conducted at the lab site, largely by individualized instruction. Prerequisite: CD 2304 or permission of instructor.

**EA 2600 Application of Learning Theories (1-17) . . . . . 6 hours**

Students enrolled in this class will spend lab time with children under the direction of an experienced teacher. The student enrolled in the course must show evidence of being a competent teacher aide before a passing grade can be awarded. Prerequisite: 24 hours of EA and CD, including EA 1300 and EA 2301, and/or permission of instructor. A grade of "C" or better is required.

**EA 2300 Media (2-3) . . . . . 3 hours**

The course is designed to introduce the student to the instructional media used in public schools. Included in the course will be the preparation and application of visual materials such as transparency processing, lettering, and duplicating. Each student will be expected to demonstrate competencies in operating all audio-visual classroom equipment.

**EA 2301 Teaching Skills (2-3) . . . . . 3 hours**

Techniques of assisting the teacher in teaching their areas of interest, such as math, reading, reading readiness, phonics, science, writing, and spelling are included. A component of this course will include

## Electrical and Electronics

The Electrical and Electronics Technology curriculum is designed to prepare individuals for technical careers in electronics communications, industrial electrical and electronics, and consumer electronics servicing. Emphasis is placed on transistors, integrated circuits, special

*Faculty*  
Dr. George Willis, chairman.

purpose tubes, and circuits in power supplies, amplifiers, oscillators, transmitters, receivers, television, microwave, and digital logic devices. Power distribution, measuring instruments, electrical machinery, and controls are also studied.

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

#### First Year

Course	First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Engl 1311		.3	Engl 1312 or Spch 2340	.3
ET 1401		.4	ET 1403	.4
ET 1402		.4	ET 1404	.4
II 1303		.3	Math 1323, or More Advanced	.3
Math 1321, or More Advanced		.3	Govt 2301 or 2302	.3
*PE		.1	*PE	.1

#### Second Year

Course	Sem. Hrs.	Course	Sem. Hrs.
DT 1401 or Engr 1301	.4 or 3	***ET Electives	.12
ET 2400	.4	**Approved Electives	.6
ET 2410	.4		

#### Electrical Electronics Majors

\*\*\*To satisfy the 12-semester-hour ET elective requirement the second-year student should follow the guidelines listed under each major. E.T. electives are any E.T. courses not specifically required in the degree plan.

\*\*To satisfy the 6-semester-hour approved elective requirement the second-year student should select from the approved elective list those courses which will provide training most closely related to his occupational objective.

##### Electrical Technology Major:

- ET 2406 Electrical Machinery
- ET 2407 Electrical Control Circuits
- ET 2408 Digital Circuits II
- or approved substitutions

##### General Electronics Servicing:

- ET 2405 Consumer Electronics
- ET 2408 Digital Circuits II
- ET 2409 Electronic Instruments
- or approved substitutions

##### Electronic Technology Majors:

###### Communications

- ET 2201 Rules & Regulations
- ET 2401 Electronic Communications I
- ET 2404 Electronic Communications II
- ET 2408 Digital Circuits II
- or approved substitutions

##### Electronic Manufacturing:

- ET 2407 Electrical Control Circuits
- ET 2408 Digital Circuits II
- ET 2409 Electronic Instruments
- or approved substitutions

\*H.Ed. 1301 may be substituted for the two 1-hour PE courses. Veterans may receive PE credit for military duty and should contact the registrar for details.

\*\*Approved electives are: AT 2601; BA 1301, 2311, 2312, 2314; DM 1603; DT 2405; Eco 1301; any EDP; any II; any Math higher than those required above; Mgt 1301, 1303, 1361, 1362, 2302, 2303; MT 1601; Phys 1401, 1402; R/AC 1302, 1312; Read 1301, 1302; WT 1601.

## **52 Electrical and Electronics**

Credit in beginning ET courses may be awarded by passing an Advanced Standing Exam. Persons with prior training or experience may wish to apply. Contact the department chairman.

Students not desiring the A.A.S. degree may receive a Certificate of Technology by completing a minimum of 36 semester hours of electronics courses and the necessary 6 semester hours of prerequisite math courses.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

### **Associate in Applied Science Degree With Announcer-Operator Option**

This option is designed to prepare people for employment in the smaller radio stations as a combination technician, announcer, disc jockey, etc.

The student will work toward the Federal Communications Commission's First Class Radiotelephone license for the technical portion of this option. In addition, the student will study announcing, writing, diction, and production and will be ex-

pected to work in the college radio station KOCV-FM.

The Announcer-Operator option is conducted in conjunction with the Department of Communication and Theatre, and the suggested course of study is located in that portion of the catalog. Students selecting this option will be considered R/TV majors.

**ET 1401 D.C. Circuits (3-3) . . . . . 4 hours**  
In this course a study is made of the principles of direct current electricity and their application to electrical testing and circuitry. Specific topics include Ohm's law, series-parallel circuits, batteries, meters, magnetism, conductors, insulators, and color code. Prerequisite: high school algebra. Recommend Math 1321 or 1341 or higher to be taken in advance or at least concurrently.

**ET 1402 Digital Circuits I (3-3) . . . . . 4 hours**  
Logic circuitry basic to computers, telemetry, and automation is studied. Specific topics include: gates; counters; adders, I/O; D/A & A/D converters; storage devices, binary, octal, BCD, hexadecimal systems; and an introduction to Boolean algebra. Prerequisite: high school algebra or take Math 1321 or 1341 concurrently.

**ET 1403 A.C. Circuits (3-3) . . . . . 4 hours**  
This is a study of the principles of alternating current and voltage, the application of basic laws and formulas to electrical circuits and testing, induction, capacitance, reactance, impedance, complex numbers, and filters. Student will need an electronic calculator. Prerequisite: ET 1401, Math 1321 or 1341.

**ET 1404 Electronics I (3-3) . . . . . 4 hours**  
This is an introductory course on the fun-

damentals of vacuum tubes and solid state devices such as power supplies, amplifiers, FET, Bipolar transistors, diodes, regulators, and linear integrated circuits. Prerequisite: ET 1401. Corequisite: ET 1403.

**ET 2201 Rules & Regulations (2-0) . . . . . 2 hours**  
Preparation for the Federal Communication Commission's second class license examination. Prerequisite or corequisite: ET 2401.

**ET 2400 Electronics II (3-3) . . . . . 4 hours**  
A continuation of ET 1404. This course includes topics of operational and differential amplifiers, oscillators; multivibrators, UJT, SCR, Diacs, Triacs, varactors, RF amplifiers. Prerequisite: ET 1401, 1402, 1403, 1404.

**ET 2401 Electronic Communications I (3-3) . . . . . 4 hours**  
Principles of amplitude and frequency modulation, antennas, RF detection, Single Sideband, automatic frequency and gain devices, noise suppression, and RF frequency and power measurements and adjustments. Emphasis is placed on applications in two-way radios. Corequisite or prerequisite: ET 2201, 2400, six semester hours of math.

- ET 2404 Electronic Communications II**  
**(3-3) . . . . . 4 hours**  
A combination of laboratory, electronic theory, and rules and regulations for commercial radio and television broadcast, and the FCC first class license. Prerequisites: ET 2201, 2401, or hold FCC second class license.
- ET 2405 Consumer Electronics**  
**(3-3) . . . . . 4 hours**  
Principles of operation and servicing techniques of various products such as stereo, TV, tape recorders, public address systems, etc. Prerequisites: ET 1401, 1402, 1403, 1404.
- ET 2406 Electrical Machinery**  
**(3-3) . . . . . 4 hours**  
An investigation into the theory, principles, performance and construction of electric motors, generators, transformers, voltage regulators and other electrical apparatus used in industry is included in this course. Effects of leading and lagging power factors are explored, and corrective methods applied. A very well equipped laboratory permits thorough independent study of all characteristics. Prerequisites: ET 1401, 1403, and six semester hours of math beginning with Math 1321 or higher. An electronic calculator is necessary.

- ET 2407 Electrical Control Circuits**  
**(3-3) . . . . . 4 hours**  
This course covers the development of circuits for the controls of motors, generators, and other apparatus. Analysis, troubleshooting and the making and reading of complex control diagrams is emphasized. Solid state, static (logic) and servo controls will be included. Prerequisite: ET 1401,

1403, and six semester hours of math beginning with Math 1321 or higher. An electronic calculator is necessary.

- ET 2408 Digital Circuits II (3-3) . . . . 4 hours**  
A state-of-the-art control and logic handling course wherein the microprocessor and associated integrated circuits accomplish by the use of software that which formerly required extensive hard-wired circuitry. It involves programming, machine and assembly languages, octal and hexadecimal systems, and interfacing methods. Included are such devices as RAM, ROM, EROM, UART, PROM, and others as well as the microprocessor chip. Prerequisite: ET 1401, 1402.

- ET 2409 Electronic Instruments**  
**(3-3) . . . . . 4 hours**  
Classroom, laboratory, and practical applications of skills in trouble shooting and repair of various electrical and electronic instruments such as meters, oscilloscopes, power supplies, generators, counters, controls, etc. Prerequisite: ET 1401, 1402, 1403, 1404, and 2400.

- ET 2410 Electrical Power Distribution**  
**(3-3) . . . . . 4 hours**  
Emphasis is placed on the National Electric Code which specifies methods and principles for residential, commercial, and industrial applications. Topics include single and polyphase systems, grounding, voltage drop, over current controls, and safety practices. The lab portion is practical work involving common switching circuits, fixtures, services, armored cable, non-metallic cable, buss duct, and other wiring materials. Prerequisite: ET 1401 or approval of department chairman.

## **Electronic Data Processing**

*Faculty*  
Rayford Ball, chairman; Dr. Thom Luce.

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 Electronic Data Processing Technology 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 electronic data processing equipment will be supplemented with technical information and study designed to give the student an understanding of his civic 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 data processing 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.

**54 Electronic Data Processing**

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

**Business Programming Option**

		<b>First Year</b>	
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
BA 1301 . . . . .	.3	EDP 1402 . . . . .	.4
EDP 1401 . . . . .	.4	EDP 1403 . . . . .	.4
Engl 1311 . . . . .	.3	Engl 1312 or Spch 2340 . . . . .	.3
Math 1341 or 1302 . . . . .	.3	Math 1303 . . . . .	.3
*PE . . . . .	.1	*PE . . . . .	.1

		<b>Second Year</b>	
Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
EDP 2402 . . . . .	.4	EDP 2404 . . . . .	.4
EDP 2403 . . . . .	.4	EDP 2405 . . . . .	.4
BA 2401 or OE 1404 . . . . .	.4	**Approved Electives . . . . .	.7
EDP Elective . . . . .	.4	Govt 2301 or 2302 . . . . .	.3

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses.

\*\*Approved Electives: ET 1402; ECO 1301; Read 1301; Mgt 1301; Mgt 1303; Mgt 2302; Mgt 2303; any Math, BA, Physics, Engr, Chem, or EDP not already required.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

		<b>First Year</b>	
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
EDP 1401 . . . . .	.4	EDP 1402 . . . . .	.4
Engl 1311 . . . . .	.3	Engl 1312 or Spch 2340 . . . . .	.3
Math 1341 . . . . .	.3	Math 1343 . . . . .	.3
Chem 1301 . . . . .	.3	Math 1345 . . . . .	.3
Chem 1101 . . . . .	.1	OE 1401 . . . . .	.4
*PE . . . . .	.1	*PE . . . . .	.1

		<b>Second Year</b>	
Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
EDP 2406 . . . . .	.4	EDP 1403 . . . . .	.4
EDP Elective . . . . .	.4	Govt 2301 or 2302 . . . . .	.3
Math 2331 . . . . .	.3	Math 1361 or 2301 . . . . .	.3
Phys 1401 . . . . .	.4	Math 2333 . . . . .	.3
		**Approved Elective . . . . .	.3

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses.

\*\*Approved Electives: ET 1402; Eco 1301; Read 1301; Mgt 1301; Mgt 1303; Mgt 2302; Mgt 2303; any math, BA, Physics, Engr, Chem, or EDP not already required.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**EDP 1301 Data Entry (2-2) . . . . . 3 hours**

This course is designed to qualify a student in the operation of various data entry devices such as keypunch, verifier, CRT, and others. Laboratory sessions involve practice in using the data entry devices. Prerequisite: None; however, some typing skill is desirable.

**EDP 1400 Programming in BASIC**

**Language (3-3) . . . . . 4 hours**  
BASIC language is used to program most mini-computers. It is also applicable to many large computers. Some users of this language are: business firms for record keeping; industry for computer control of various devices; electronic technicians for servicing mini-computers; and the owners of personal computers. The course and lab consists of writing and executing programs on the UNIVAC 1100 computer. Prerequisite: None.

**EDP 1401 Introduction to Computer**

**Programming (3-3) . . . . . 4 hours**  
This course is designed to develop abilities needed in programming for business and scientific applications. The course includes problems definition, flowcharting, documentation techniques, and development of basic programming concepts. The laboratory consists of preparing flowcharts and coding problems in one or more higher-level languages and executing them on the UNIVAC computer. A simple subset of these languages will be used. Prerequisite or Corequisite: Math 1313 or equivalent.

**EDP 1402 Computer Operations**

**(3-3) . . . . . 4 hours**  
This course covers the basic operations present in a typical data processing installation. This coverage includes the duties and responsibilities of the various departments, the operation of the actual machinery, and some of the more important concepts utilized in a good operating system. This course is designed to be independent of any specific computer system; however, the student will spend a small portion of his lab time operating the college's UNIVAC 1100/10 computer system. Prerequisite: EDP 1401.

**EDP 1403 COBOL Programming I**

**(3-3) . . . . . 4 hours**  
In addition to the rules for utilizing the COBOL language, emphasis is placed on the application of data processing to current business problems in accounting procedures. File organization and record formats are studied. The laboratory consists of utilizing the computer to solve business problems. Lab problems will be coded in COBOL. Prerequisite: EDP 1401 or approval of instructor.

**EDP 1404 Programming in PASCAL**

**(3-3) . . . . . 4 hours**  
There is growing concern in the data processing community for methods leading to the design and development of good, reliable programs. This concern has lead to top-down design and structured programming techniques, among others. PASCAL is a language which is growing in popularity, especially on small computers, and is well suited for the study of current concepts in program design. Prerequisite: Math 1313.

**EDP 2401 Assembly Language**

**Programming (3-3) . . . . . 4 hours**  
This course will use OPAL, a simulated assembly language, to explore characteristics and features found in most assembly languages. Application of the general principles will then be made to UNIVAC's 1100 series assembly. Both assembly languages will be used to study selected topics not usually covered in higher level language courses at the community college level. Prerequisite: EDP 1403 or EDP 2402 or EDP 2406.

**EDP 2402 FORTRAN 77 Programming**

**(3-3) . . . . . 4 hours**  
The application of FORTRAN 77 programming to both business and scientific problems will be emphasized. The course is designed for data processing majors. The student will be required to solve business and scientific problems utilizing the FORTRAN 77 programming language. Prerequisite: EDP 1401, Math 1303.

**EDP 2403 COBOL Programming II**

**(3-3) . . . . . 4 hours**  
This is an advanced course that is a continuation of EDP 1403. Concepts of direct access and magnetic tape processing through the use of realistic programming problems will be presented. Instruction will include direct, sequential and index sequential processing, COBOL subroutines, segmentation, system design, and other advanced COBOL programming techniques. Laboratory consists of using the computer to solve business problems. Prerequisite: EDP 1403 or approval of the instructor.

**EDP 2404 RPG II Programming**

**(3-3) . . . . . 4 hours**  
This course is designed to further the student's study of computers and computer applications. Practical business data processing problems are solved using the RPG programming language. The utilization of RPG in the small data processing shop as well as in the larger shops is studied. The role of RPG in the single-language shop as well as in multi-language shops is shown.

## **56 Electronic Data Processing**

Prerequisite: EDP 1401, or approval of instructor.

### **EDP 2405 Business Systems Design and Development (3-3) . . . . . 4 hours**

This is a fundamental course in systems analysis which will include the following: a basic introduction and analysis of data and information processing concepts; and in-depth treatment of data base concepts; a discussion of systems work presented in the form of a methodology for the development of information systems; and a discussion of ideas and topics important to information systems theory and practice. Prerequisite: EDP 1403.

### **EDP 2406 Scientific Programming**

(3-3) . . . . . 4 hours  
This is an introductory programming course for science and engineering majors. The course is designed to familiarize the student with the FORTRAN 77 programming language and the application of this language to the solution of problems of a scientific nature. Prerequisite or corequisite: Math 2331. Recommended prerequisite: EDP 1401.

### **EDP 2407 PL/I Programming (3-3) . 4 hours**

The application of PL/I programming to both business and scientific problems is emphasized. The student is required to solve business and scientific problems utilizing the PL/I programming language. Prerequisite: EDP 1401.

### **EDP 2408 Programmable Calculator**

Programming (3-3) . . . . . 4 hours  
The programmable calculator is rapidly be-

coming an important aid to the engineer, scientist, and businessman. This course is an introduction to the functions and programming techniques of calculators having algebraic operating systems (AOS). In the lab, students will be required to solve scientific and business problems on a programmable calculator (either AOS or reverse polish notation — RPN — may be used in solving lab problems). Prerequisite: Math 1341 or equivalent.

### **EDP 2410 Data Base Management Systems (3-3) . . . . . 4 hours**

Data Base Management Systems (DBMS) are designed to allow all information in an organization to be considered, and processed, as an integrated whole rather than a series of independent, often overlapping, files. This course is an introduction to models of DBMS organization and their implementation in currently available DBMS systems. UNIVAC's DMS-1100 will be used for hands-on lab work. Prerequisite: EDP 2403.

### **EDP 2499 Special Problems (0-6) . 4 hours**

### **EDP 2399 Special Problems (0-4.5) . 3 hours**

### **EDP 2299 Special Problems (0-3) . 2 hours**

### **EDP 2199 Special Problems (0-1.5) . 1 hour**

These courses are designed to allow the student to work on an approved special project of his/her choosing and receive a maximum of (4) semester hours EDP elective credit. The project and the semester hours credit must be approved by the EDP department chairman. Prerequisite: department chairman approval.

## **Emergency Medical Technology**

### **Faculty**

**Daniel Finley, chairman;**  
**Dr. Robert Rowntree, III,**  
**lecturer.**

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, policemen, firemen, 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 con-

sidered 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 apply early to insure 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**

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Biol 1100		1	EMT 1301		.3
Biol 1401		4	EMT 1402		4
Engl 1311		3	Engl 1312		3
Govt		3	Biol 1402		4
Math 1313		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.

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
RT 1301		3	EMT 2802		.8
Chem 1301		3	EMT 2302		3
EMT 2801		8	Psy 1301		3
Biol 1403		4	Spch 1310		3

Successful completion of 2nd 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 twelve 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 the student's first semester.

**Emergency Medical Technology Certificate Program**

**Summer Session**

Course	First Term	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
EMT 1301		3	EMT 1402		4

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
EMT 2801		8	EMT 2802		.8

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

**EMT 1301 Basic Emergency Care of the Sick or Injured (3-0) .3 hours**

An introductory course designed to define the roles and responsibilities of the Emergency Medical Technician. A functional approach to anatomy and physiology, and medical terminology is utilized to enable the student to become proficient in the emergency care of the sick and injured. Topics covered include vital sign recognition, cardiac and pulmonary problems, wounds,

fractures, and miscellaneous injuries. Prerequisite: None.

**EMT 1402 Emergency Care of the Sick or Injured (3-3) .4 hours**

This course is a continuation of EMT 1301. It emphasizes medical and environmental emergencies, extrication and rescue, and ambulance operation. The practicum includes 48 hours of in-hospital training with a minimum of 24 hours spent in the emergency room. The remaining 20 hours ex-

## **58 Emergency Medical Technology**

perience will be gained in the recovery room, delivery room, and intensive care unit. The student must also make at least five ambulance runs. Successful completion of this course will allow the student to write the examination for Registry for Class A, Basic Emergency Medical Technician (EMT). Prerequisite: EMT 1301 and consent of instructor.

### **EMT 2200 Emergency Medical Review**

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

The National Highway Safety Bureau and the National Academy of Sciences/National Research Council consider it important that a means be provided for maintaining a uniformly high level of skill among Emergency Medical Technicians (EMT's) who have successfully completed basic training in emergency medical care. This refresher course has been developed to provide for periodic review and updating of EMT skills and knowledge. Prerequisite: EMT Registry.

### **EMT 2300 Advanced Paramedic Review**

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

A refresher course in Advanced Paramedic technique designed to provide for review and updating of paramedic skills and knowledge. This course is in compliance with U.S. Department of Transportation and Texas Department of Health guidelines for paramedic recertification. Prerequisite: Paramedic Registry.

### **EMT 2302 Introduction to Human**

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

This course provides an introduction to the fundamentals of human disease followed by a review of principal diseases of major organ systems. Emphasis is placed on the

nature, prevention, control, diagnosis, and treatment of common diseases. A comprehensive examination of human pathology designed to meet the educational needs of the allied health student. Prerequisite: None.

### **EMT 2801 Advanced Emergency Care of the Sick or Injured I (6-6) . . . . . 8 hours**

An advanced course on the care of the acutely ill with emphasis on respiratory and cardiovascular care. Additional topics include diagnostic techniques, pharmacology, and shock and fluid therapy. The practicum will include clinical experience in the emergency room, operating room, recovery room, intensive care unit, coronary care unit, and blood bank. In addition, the student must complete ambulance runs as required for certification. Prerequisite: Registered Class A-EMT and consent of instructor.

### **EMT 2802 Advanced Emergency Care of the Sick or Injured (6-6) . . . . . 8 hours**

A continuation of EMT 2801 with emphasis on central nervous system, soft tissue, and musculoskeletal injuries. Additional topics include medical emergencies, obstetrics, pediatrics, rescue techniques, communications, and management of the emotionally disturbed. The practicum will include clinical experience in the emergency room, pediatric unit, labor suite, morgue, and psychiatric unit. The student must also complete ambulance runs as required for certification. Successful completion will allow the student to write the examination for Registry for Class A-Advanced Paramedic. Prerequisite: EMT 2801 or consent of instructor.

## **Engineering**

*Faculty*  
Rayford Ball, chairman; Jim Fields,  
Delmos Hickmott, Kenneth  
Hurst.

The curriculum in engineering has been designed for those students wishing to prepare for professional engineering degrees — mechanical, chemical, civil, and electrical. The student should be aware of specific requirements of the college or

university to which he may ultimately plan to transfer. The program below is a suggested one and may be modified to conform to requirements of the student's chosen transfer institution.

### **Course of Study for Pre-Engineering**

#### **First Year**

##### **First Semester**

Course	Sem. Hrs.
Chem 1301 and 1101 . . . . .	.4
Engl 1311 . . . . .	.3
Engr 1301 . . . . .	.3
Math 1345 . . . . .	.3
Math 2331 . . . . .	.3
PE . . . . .	.1

##### **Second Semester**

Course	Sem. Hrs.
Chem 1302 and 1102 . . . . .	.4
Engl 1312 . . . . .	.3
Engr 1303 or EDP 2406 . . . . .	.3 or 4
Math 2333 . . . . .	.3
PE . . . . .	.1
Phys 1403 . . . . .	.4

**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
PE	.1	PE	.1
Phys 2401	.4	Phys 2402	.4

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

Note: 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.

**Engineering Technology**

The Engineering Technology program is designed to prepare a person to work as an assistant to an engineer. Emphasis is placed on courses basic to a professional degree; primarily mathematics, engineer-

ing, physics, and electronic data processing. The courses incorporated in the program afford the graduate flexibility in the selection of engineering fields.

**Course of Study for Associate in Science Degree in Engineering Technology****First Year**

First Semester		Second Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Engl 1311	.3	Engl 1312	.3
Engr 1301	.3	Engr 1303	.3
Math 1345	.3	Hist 2302	.3
Hist 2301	.3	Math 2331	.3
*PE	.1	*PE	.1
Chem 1301 and 1101	.4	Phys 1403	.4

**Second Year**

Third Semester		Fourth Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Engr 2303	.3	Govt 2302	.3
EDP 2406	.4	Engr 2304	.3
Govt 2301	.3	Math 2351	.3
Math 2333	.3	Phys 2401	.4
Engl (Sophomore Level)	.3	Engl (Sophomore Level)	.3
*PE	.1	*PE	.1

\*H.Ed. 1301 may be substituted for two of the four 1-hour physical education courses.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

## 60 Engineering

### Engr 1301 Engineering Drawing

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

The care and use of drawing instruments, free-hand lettering, geometric construction, general drafting principles, multiview projection, revolutions, auxiliary views, and sections are studied. Included also are isometric and cabinet projection, threads, bolts, rivets, helices, dimensioning, principles of working drawings, pattern development, and oblique drawing. Prerequisite: None.

### Engr 1303 Descriptive Geometry

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

A study is made of the principles of descriptive geometry, auxiliary views, developments, intersections, double-curved and warped surfaces, point, line, and plane problems, and their applications to prob-

lems of engineering and architecture. Prerequisite: Engr 1301.

### Engr 2303 Mechanics I (3-0) ..... 3 hours

This is a basic mechanics course utilizing vectors and tensors. Statics, including concepts of free-body diagrams, friction forces, and virtual-work; motion of particles, including momenta, energy, and work concepts are also studied. Prerequisite or Corequisite: Math 2333.

### Engr 2304 Mechanics II (3-0) ..... 3 hours

The 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 are studied. Prerequisite: Engr 2303.

## Fire Protection *Faculty*

Dr. Oliver Nordmarken, chairman.

Fire Technology is designed to assist in the development of meaningful educational experiences for pre-service and in-service firemen. Emphasis is placed on practical application in understanding building designs, classification of fires, exposure protection, toxic fumes, arson investigation, hazards, fire fighting techniques and standards. Fire administration

is surveyed 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	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Chem 1301 and 1101	.4	Chem 1302 and 1102	.4
Engl 1311	.3	Fire 1303	.3
Fire 1301	.3	Fire 1304	.3
Fire 1302	.3	Fire 1305	.3
Math 1313, 1321 or More Advanced	.3	PE	.1
PE	.1	Spch 2340	.3

#### Second Year

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Engl 2330	.3	Fire 2304	.3
Fire 2301	.3	Fire 2405	.4
Fire 2302	.3	Fire 2306	.3
Fire 2303	.3	Elective (Fire Protection or EMT)	.3
Govt 2301	.3	Electives	.6
Elective (Fire Protection or EMT)	.3		

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Fire 1301 Fundamentals of Fire Protection**

(3-0) ..... 3 hours  
History and philosophy of fire protection; review of statistics of loss of life and property by fire; introduction to agencies involved in fire protection; current legislative developments and career orientation; recruitment and training for fire department; position classification and pay plans; employee organizations; a discussion of current related problems and review of expanding future fire protection problems. Prerequisite: None.

**Fire 1302 Industrial Fire Protection I**

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

**Fire 1303 Industrial Fire Protection II**

(3-0) ..... 3 hours  
Development of fire and safety organizations in industry; relation between private and public fire protection organizations; current trends, deficiencies and possible solutions for industrial fire problems; role of insurance and other special organizations; and 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. Field trips to selected plants and demonstrations of new techniques, equipment and innovations. Prerequisite: None.

**Fire 1304 Fire Protection Systems**

(3-0) ..... 3 hours  
Study of the required standard for water supply; special hazards protection systems; automatic sprinklers and special extinguishing systems; automatic signaling and detection systems; rating organizations and underwriting agencies. Prerequisite: None.

**Fire 1305 Fire Prevention (3-0) . . . 3 hours**

The objectives and views of inspections, fundamental principles, methods, techniques, and procedures of fire prevention administration. Fire prevention organization; public cooperation and image; recognition of fire hazards; insurance problems and legal aspects; development and imple-

mentation of a systematic and deliberate inspection program; survey of local, state, and national codes pertaining to fire prevention and related technology; relationship between building inspection agencies and fire prevention organizations. Engineering as a solution to fire hazards. Prerequisite: None.

**Fire 2301 Fire and Arson Investigation**

(3-0) ..... 3 hours  
A study of the detection of arson, investigation techniques, case histories, gathering and preserving of evidence; preparing for a court case; selected discussion of laws, decisions and opinions; kinds of arsonists, 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  
Fundamental consideration and exploration of building construction and design with emphasis on fire resistance of building materials and assemblies, exposures, and related data focused on fire protection concerns; review of related statutory and suggested guidelines, both local and national in scope. Review of Model Building Codes and Life Safety Code. Prerequisite: None.

**Fire 2303 Fire Administration I**

(3-0) ..... 3 hours  
An in-depth study of the organization and management as related to a fire department including budgeting, maintenance of records and reports, and management of fire department officers. Personnel administration and distribution of equipment and personnel and other related topics, including relation of various government agencies to fire protection areas. Fire Service Leadership as viewed from the Company officer's position. Prerequisite: None.

**Fire 2304 Fire Administration II**

(3-0) ..... 3 hours  
Study to include insurance rates and ratings, preparation of budgets, administration and organization of training in the fire department; city water requirement, fire alarm and communications systems; importance of public relations, report writing and record keeping; measurements of results, use of records to improve procedures, and other related topics; legal aspects relating to fire prevention and fire protection with stress on municipal and state agencies; design and construction of fire department buildings. Prerequisite: None.

## 62 Fire Protection

### Fire 2306 Hazardous Materials I

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

Study of chemical characteristics and behavior of various materials that burn or react violently related to storage, transportation, handling hazardous materials, i.e., flammable liquids, combustible solids, and gases. Emphasis on emergency situations and most favorable methods of handling fire fighting and control. Prerequisite: None.

### Fire 2307\* Fire Safety Education

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

A survey of physical, chemical, and electrical hazards and their relationship to loss of property and/or life. Study of codes, laws, problems, and cases. Detailed examination and study of the physical and psychological variables related to the occurrence of casualties. Safe storage, transportation and handling techniques are stressed to eliminate or control potential risks. Prerequisite: None.

### Fire 2308\* Fire Service Communications

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

The development of fire alarm systems, the various types of systems, installation, operation and testing of the most common systems; receiving, dispatching, and radio communication procedures; F.C.C. regulations, the fire alarm operations office, mutual aid systems, fire station communications and facilities, response and fire ground procedures, emergency operations, code and numbering systems, required records and reports; technological advances. Prerequisite: None.

### Fire 2309\* Urban Fire Problem Analysis

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

Intensive study of the urban fire problem. Problems covered by lack of zoning and other land use laws. Operation research techniques, and systems engineering are utilized as analytic procedures for the technological assessment of public fire protection, including water supply, fire alarm, and fire department traditional assessment methods and urban analysis. Socio-economic and management factors as related to city planning. Environment problems incurred should be studied in-depth. Prerequisite: None.

### Fire 2310\* Fire Hydraulics and Equipment

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

Application of the laws of mathematics and physics to properties of fluid states, force, pressure and flow velocities. Emphasis in applying principles of hydraulics to fire fighting problems. Evaluation of water sup-

ply, 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

An in-depth study of computerized systems that may be utilized for storing and retrieval of fire loss statistics, also techniques and procedures for programming various types of records and reports valuable to the fire service. Exploration of the new systems of microfilming including the modern technology of COM (Computer Output Microfilm) and the systems utilizing microfiche, including reduction ratios and various type readers. A review of standards for the uniform coding for fire protection as developed by the NFPA in pamphlet 901 and 901AM. Prerequisite: None.

### Fire 2312\* Fire Insurance Fundamentals

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

The relationships between the fire defenses, fire losses, and insurance rates are studied. 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 are stressed. Relationship of insurance to modern business; principles of property and casualty insurance contracts; corporate structure of insurance companies. Prerequisite: None.

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

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

A study of legal rights and duties, liability concerns and responsibilities of the fire department while carrying out their duties. Introduction and basic concepts of Civil and Criminal law, the Texas and federal judicial structure, and cites liability for acts of the fire department and fire prevention bureaus. An in-depth study of various cases concerning fire fighters, fire departments, and municipalities. Prerequisite: None.

### Fire 2314\* Hazardous Materials II

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

Hazardous materials covering storage, handling, laws, standards, and fire fighting techniques associated with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuel, and radioactive materials. The formation of toxic fumes and health hazards is also stressed. Ignition and combus-

\*Approved electives.

tion characteristics of gases, liquids, and solids related to free-burning fire and explosion phenomena. Familiarization with radiological instruments, human exposure to radiation, decontamination procedures, common uses of radio-active materials and operational procedures. Prerequisite: None.

**Fire 2405 Fire Fighting Tactics and Strategy (3-1) . . . . . 4 hours**  
Essential elements in analyzing the nature

of fire and determining the requirements. Efficient and effective utilization of manpower, equipment and apparatus. Emphasis to be placed on pre-planning, study of conflagration problems, fire ground organization problem solving related to fire ground decision making and attack tactics and strategy. Use of Mutual Aid and large scale command problems. Prerequisite: None.

## **Geology, Anthropology, Astronomy, Geography, and Earth Science**

*Faculty*  
Ed Orton, chairman;  
Robert Blake, Brent  
McAfee.

### **Geology**

Geology is a study of the earth, its history, its materials, its changing life, and the processes that have resulted in its present form. For the student who does not wish more than a year of geology, the principal value will be primarily in an increased interest in and understanding of his environment. However, for those majoring in geology, petroleum or civil engineering,

ecological studies or some closely related subject, the first year of geology courses provides the 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 in Geology**

#### **First Year**

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Chem 1301 and 1101 . . . . .	.4	Chem 1302 and 1102 . . . . .	.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	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Anth 2301 . . . . .	.3	Engl (Sophomore Level) . . . . .	.3
Engl (Sophomore Level) . . . . .	.3	Geol 2301 . . . . .	.3
Govt 2301 . . . . .	.3	Govt 2302 . . . . .	.3
Phys 1401 . . . . .	.4	Phys 1402 . . . . .	.4
Math 1345 or Math 2331 . . . . .	.3	Math 2331 or Anth 2302 . . . . .	.3
PE . . . . .	.1	PE . . . . .	.1

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

## 64 Geology, Anthropology, Astronomy, Geography & Earth Science

### Geology

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

This course involves study of geologic features and processes of the earth. It is a foundation course for all additional work in geology and a general course for cultural development. Prerequisite: None.

#### Geol 1402 Historical Geology

(3-3) .....4 hours  
The Geologic history of the earth is given

emphasis in this course. It provides basic knowledge required for additional study in geology or for cultural development. Prerequisite: None.

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

Geologic interpretation of the origin, development, and classification of land forms. Prerequisite: Geol 1401 or permission of instructor.

### Anthropology

Anthropology is a comprehensive study of man and his works. Within it are included human origin and development, variation in physical types, and aspects of human culture such as family patterns and

#### Anth 2301 Physical Anthropology

(3-0) .....3 hours  
This course is an introduction to the study of the physical characteristics of man. Comparisons are made between modern man, fossil man, and the higher primates. Physical characteristics of modern races are also studied. Prerequisite: None.

customs, economics, religions, languages, and handicrafts and technology. Anthropology 2301 and 2302 will fulfill social science requirements at many colleges.

#### Anth 2302 Cultural Anthropology

(3-0) .....3 hours  
The study of human culture is presented in historical perspective by examining the development of culture as well as by comparing present cultures. Prerequisite: None.

### Astronomy

The astronomy classes are primarily designed for the non-science major, either to satisfy a science requirement or as an elective for the interested student. Either course should satisfy a general lab

#### Astr 1401 Descriptive Astronomy

(3-3) .....4 hours  
This is a survey course, including the sky as seen from earth, the development of man's concept of the universe from ancient to modern times, and a study of our current knowledge of the solar system. The planetarium will be used as a learning aid and some of the labs will consist of field trips to use the telescope.

science requirement at most colleges. There is no prerequisite, but familiarity with high school algebra will make the course more meaningful.

#### Astr 1402 Descriptive Astronomy II

(3-3) .....4 hours  
This is a survey course covering the universe beyond the solar system. It includes a study of galaxies, nebulae, and stars. Methods of determining distance, composition, and aging of these bodies are examined and practiced in lab sessions. The planetarium is utilized as a learning aid, and telescope sessions will be held in place of several of the labs.

### Geography

Courses in geography are designed to acquaint the student with the world and its peoples. Major aspects of both physical and cultural geography are studied in an

#### Geog 2301 Principles of Geography

(3-0) .....3 hours  
This course deals with the physical and cultural geography of the countries of North and South America. Prerequisite: None.

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 2302 Principles of Geography

(3-0) .....3 hours  
This course deals with the 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 the non-technical major. The material covered includes earth

processes such as mountain building, erosion, and sedimentation; the nature and composition of the earth with its at-

## **Geology, Anthropology, Astronomy, Geography & Earth Science 65**

mosphere and the relationship of the earth to the solar system and galaxy. Principles

### **Ea Sc 1401 Nature of the Earth and**

#### **Universe (3-3) . . . . . 4 hours**

This course is concerned with a study of the planet Earth, its history, and the processes and agents that shape the surface and the interior. The Earth's relationships to the solar system and to the universe are also studied. Many principles of other sciences are included in terms of easily visualized natural processes. Prerequisite: None.

of physics and chemistry are included where appropriate.

### **Ea Sc 1402 Nature of the Earth and**

#### **Universe II (3-3) . . . . . 4 hours**

Earth Science 1402 is a continuation of Earth Science 1401 or Astronomy 1401 with additional emphasis on the oceans, the atmosphere, and weather. Prerequisite: None.

## **Human Development**

### *Faculty*

Dr. Stephen Southern, chairman; Dr. Philip Booth, Fred Gaither, Dr. Edwin Shipman, Dr. Clara Willis.

Human Development offers psychological education and personal growth experiences to promote individual effectiveness. Student success and well-being at Odessa College, in the world of work, and among persons in daily life are major emphases.

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. 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 the beginning of each semester.

Other students are encouraged to enroll in one or more Human Development courses to achieve the personal growth which is an important facet of college life and learning. 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**

The main purpose of this course is to help the student gain the skill and knowledge necessary to function effectively in the college environment. Information about Odessa College rules and regulations, course offerings, degree requirements, transfer procedures, and related matters will be discussed. In addition, students will select from a variety of learning experiences those components needed to assist them in realizing academic, career, and personal goals. Developing study skills, completing personal assessment or appraisal, exploring career opportunities, improving planning and decision-making, and forming meaningful interpersonal relationships are areas in which the student may elect to become involved. A self-paced unit of instruction is provided as an option for students who cannot invest sixteen hours in personal development activities during the semester.

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

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

This course addresses individual needs in the areas of study skills and learning pref-

erences. "Surviving in college" will be facilitated by offering individualized study opportunities 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. Special sections of the course will be created for students with identified concerns, including individuals who participate in the Developmental Studies program.

### **HD 1302 Educational and Career Planning (3-0) . . . . . 3 hours**

This course is intended to explore academic and career alternatives. At the outset, a career assessment battery of tests will be administered to determine interests, aptitudes, and other individual factors which influence occupational choice. Guided career exploration, including specification of college educational plans, will be conducted. The concept of "career" as lifelong learning will provide the focus for the course. Depending upon the needs of students in specific sections, some instructional components receive special em-

## 66 Human Development

phases. The instructional components include self-appraisal, occupational information, socioeconomic influences upon career, psychological and behavioral influences upon career, problem-solving and decision-making, job acquisition and maintenance, resume writing and job interviewing, and career advancement.

### **HD 2301 Interpersonal Relationships**

(3-0) . . . . . 3 hours  
The goals of instruction in this course are to develop understanding of human interactions and group dynamics and to build skills in assertion, communication, and intimacy. Small group training activities and classroom instruction will be enlisted to develop effective helping, leadership, and social behaviors. The course is designed to address significant interpersonal relations, including dating, marriage, and parenting; therefore, some exposure to course work in human development, psychology, child development, and sociology is desirable.

### **HD 2102 Special Topics/Directed Studies**

(1-0) . . . . . 1 hour  
The purpose of this course is to provide opportunities for intensive study of areas within Human Development which are specialized according to population, problem,

or technique. Recurrent areas of concern or interest that warrant special attention include "Stress Management," "Women in Transition," "Sleep and Dreaming," "Behavior Modification," "Psychodrama," "Transactional Analysis," "Healthy Lifestyling," and "Cross-Cultural Education." Directed Studies sections will be created according to specific learning agreements initiated by students and approved by faculty members who have interest and expertise in proposed topical areas. May be repeated for credit when topics vary.

### **HD 2202 Special Topics/Directed Studies**

(2-0) . . . . . 2 hours  
The purpose of this course is to provide greater opportunities for intensive study of Human Development areas which are specialized according to population, problem, or technique.

### **HD 2302 Special Topics/Directed Studies**

(3-0) . . . . . 3 hours  
The purpose of this course is to provide greater opportunities for intensive study of Human Development areas which are specialized according to population, problem, or technique. This course is offered as a special topic section, meeting in the classroom three hours weekly.

## **Humanities** *Faculty* **Barry Phillips, 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 Fine Arts degree (A.F.A.).

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 involvements.

### **Course of Study for Associate in Fine Arts Degree\***

#### **(Art Emphasis)**

#### **First Year**

##### **First Semester**

Course	Sem. Hrs.
Art 1311	.3
Art 1321	.3
Engl 1311	.3
Hum 1310	.3
PE 1123	.1
Relg 1301	.3
Mu 1328	.3

##### **Second Semester**

Course	Sem. Hrs.
Art 1312 or 1300	.3
Engl 1312	.3
Th 1310	.3
R/TV 1310	.3
Phot 1331	.3
PE 1124	.1

### **Course of Study for Associate in Fine Arts Degree\***

#### **(Art Emphasis)**

#### **First Year**

##### **First Semester**

Course	Sem. Hrs.
Art 1311	.3
Art 1321	.3
Engl 1311	.3
Hum 1310	.3
PE 1123	.1
Relg 1301	.3
Mu 1328	.3

##### **Second Semester**

Course	Sem. Hrs.
Art 1312 or 1300	.3
Engl 1312	.3
Th 1310	.3
R/TV 1310	.3
Phot 1331	.3
PE 1124	.1

**Second Year**

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
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

\*The suggested course of study is designed for the A.F.A. degree with a concentration in Art. Similar plans can be designed for music, photography, theatre, etc. First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Hum 1310 Introduction to the Fine Arts**

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

This is a self-paced course which surveys the Fine Arts areas of visual art, photography, music, theatre, and dance. The course is designed to interrelate the aesthetic

concepts common to each art form while involving the student in the excitement and action of fine arts activities and personalities. Prerequisite: None.

**Industrial Instrumentation**

Automatic control systems and industrial instrumentation are becoming increasingly important to industrial growth in the Permian Basin area. The operating and maintenance of this equipment in modern industrial installations requires persons that have highly developed skills in installing, operating, and maintaining complicated

*Faculty*  
Kenneth Hurst, chairman; Ben Turpen.

control systems and instruments.

The program in Industrial Instrumentation is designed to provide the student with the skills and the knowledge required for employment as a maintenance and operation technician, instrument shop supervisor, or technical representative for a manufacturing concern.

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

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Engl 1311 . . . . .	.3	Spch 2340 . . . . .	.3
ET 1401 . . . . .	.4	ET 1403 . . . . .	.4
II 1301 . . . . .	.3	II 1302 . . . . .	.3
II 1303 . . . . .	.3	II 1304 . . . . .	.3
Math 1313 or More Advanced . . . . .	.3	Math 1341 or More Advanced . . . . .	.3
*PE . . . . .	.1	*PE . . . . .	.1

**Second Year****Third Semester****Fourth Semester**

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
ET 1402 . . . . .	.4	ET 1404 . . . . .	.4
II 2301 . . . . .	.3	II 2302 . . . . .	.3
II 2303 . . . . .	.3	II 2304 . . . . .	.3
Govt 2301 or 2302 . . . . .	.3	DT 1401 or Engr 1301 . . . . .	.4 or 3
Phys 1401 . . . . .	.4		

\*H.Ed 1301 may be substituted for the two 1-hour physical education courses.

Students not desiring the AAS degree may receive a Certificate of Technology by completing 24 semester hours in Industrial Instrumentation courses and the necessary electronic prerequisites.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**II 1301 Pneumatic Instrumentation I**

(1-3) ..... 3 hours

This course is designed to provide basic instruction in pneumatic instrumentation: principles of operation and maintenance of most common primary elements, controllers, recorders, valves, and meters. Students will perform a wide variety of experiments with instruments in current industrial use. Prerequisite: None.

**II 1302 Pneumatic Instrumentation II**

(1-3) ..... 3 hours

This course will cover a variety of types of control loops in detail. Set up, calibration, and tuning procedures are included. Considerable time will be spent in the laboratory working with actual plant equipment. This course is recommended for anyone interested in how controllers actually work. Prerequisite: II 1301, or equivalent industrial experience.

**II 1303 Elementary Principles &**

**Terminology (1-3) ..... 3 hours**

This course presents basic principles of flow temperatures, pressure, level, and other primary physical measurements; terminology of mechanical and pneumatic measurement and control equipment; symbols, nomenclature, schematics and applications. Laboratory experiments and practical problems are included. Prerequisite: None.

**II 1304 Basic Instrument Engineering**

(1-3) ..... 3 hours

This course will cover valve and orifice sizing, practical consideration in designing control systems, techniques of specifying instruments, proper instrument installation practices, and related subjects. This is not a control theory course but is a highly practical course dealing with how to instrument a process. It especially is recommended for instrument men or engineers who want to know what instrumentation is

really about. Prior knowledge of pneumatic and electronic control equipment is desirable. Prerequisite: II 1301.

**II 2301 Electronic Instrumentation I**

(1-3) ..... 3 hours

This course covers the design principles, construction, calibration and maintenance of standard electrical instrumentation. Operation of solid state devices in electronic instruments will be presented. Includes hands-on laboratory sessions on measurement, calibration, and troubleshooting, using electrical test equipment. Prerequisite: ET 1401 or equivalent industrial experience.

**II 2302 Electronic Instrumentation II**

(1-3) ..... 3 hours

This course presents a continuation of operation and methods of troubleshooting of electronic instruments used in process control. Hands-on experience with simulated processes and complete control loops will be included. Also includes electronic converters and transducers, and principles and practice of control loop wiring. Prerequisite: II 2301 and ET 1402.

**II 2303 Process Control (1-3) ..... 3 hours**

Control terminology, control systems, and controller functions. Equipment specifications for process applications including cascade, ratio, override and feed-forward control with their uses is defined. Prerequisite: II 1301, 1303, 1304.

**II 2304 Process Analytical Instrumentation**

(1-3) ..... 3 hours

This course will cover gas chromatographs, infrared spectrographs, most types of oxygen and moisture analyzers and pH and similar electrochemical devices. The course will cover how the analyzers work, what their limitations are, and why they fail. Students will work with several types of analyzers in the laboratory. Prerequisite: None.

## Law Enforcement/Criminal Justice

*Faculty*

Oliver Nordmarken, J.D.,  
chairman; Sydney Lyle,  
George Scarpa.

Odessa College believes that the protection of the person and property of the citizenry, the preservation of peace and the maintenance of order are indispensable in the preservation of a democratic society. Therefore, those who enter into the field of criminal justice as police officers, correctional officers, or continue on into the legal profession will contribute to

the preservation of our democratic way of life.

Because criminal justice practitioners today must be versatile as well as superior persons, the law enforcement degree program at Odessa College gives students a comprehensive understanding of the law enforcement profession.

The associate degree program consists

of law enforcement courses, as well as a study of other academic subjects. The Odessa College program will also serve as the first two years of study for baccalaureate and graduate degree programs in criminal justice or law enforcement in senior colleges and universities. An overview of the entire criminal justice system is given through an introductory course. The police role in crime and delinquency is studied as students review the myriad of theories as to cause of crime and suggestions for curbing crime. A realistic view of law enforcement is presented to inform students about actual operations in the career field.

Presented is a study of the Texas and

United States laws, which define what types of acts are crimes, the punishment for each offense, who is a law enforcement officer, what powers an officer has, the court system and its powers, the rules governing what evidence can be presented in court, and the new Juvenile Procedure Code.

Law enforcement courses also are helpful to students studying such fields as sociology, psychology, government, and other humanities.

The job market in the law enforcement field continues to be open, with many employment opportunities for both men and women, not only as law enforcement officers, but in related positions.

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Engl 1311		3	Engl 1312 or Spch 2340		3
LE 1301		3	LE 1303		3
LE 1302		3	LE 1304		3
Math		3	Elective		3
Elective		3	Elective		3
			PE		1

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Govt 2301		3	Govt 2302		3
LE 2301		3	LE 2304		3
LE 2302		3	LE 2305		3
LE 2303 or LE 2309		3	LE 2306		3
Elective		4	Elective		3
			PE 1119		1

**Electives:** Engl (Sophomore level), Psy 1301, Soc 1301, Hist 2301, Hist 2302, Hist 2303, Chem 1301 and 1101, Span 1311, Span 1411, H.Ed. 1301, EMT 1301, PE 1149, LE 2307, LE 2308, Read 1301, OE 1210.

Any variance from prerequisites or any substitute courses must have the prior written approval of the Department Chairman.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Course of Study for Associate in Arts Degree****First Year**

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Engl 1311 . . . . .	.3	Engl 1312 . . . . .	.3
Foreign Language or Math/Science . . . . .	.4	Foreign Language or Math/Science . . . . .	.4
LE 1301 . . . . .	.3	LE 1304 . . . . .	.3
LE 1302 . . . . .	.3	Elective . . . . .	.3
PE . . . . .	.1	Elective . . . . .	.3
		PE . . . . .	.1

**Second Year**

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Engl (Sophomore level) . . . . .	.3	Engl (Sophomore level) . . . . .	.3
Govt 2301 . . . . .	.3	Govt 2302 . . . . .	.3
Hist 2301 . . . . .	.3	Hist 2302 . . . . .	.3
LE 2301 . . . . .	.3	LE 2304 . . . . .	.3
LE 2302 . . . . .	.3	LE 2305 . . . . .	.3
PE . . . . .	.1	PE 1119 . . . . .	.1

H.Ed. 1301 or EMT 1301 may be substituted for three 1-hour PE courses.

Electives: Soc 1301, Span 1311, LE 1303, LE 2303, LE 2306, LE 2307, LE 2308, LE 2309.

Seven LE subjects have been designated by Texas accreditation agencies as "Core" subjects creditable toward any LE/Criminal Justice Degree offered in Texas, namely LE 1301, LE 1302, LE 1304, LE 2301, LE 2302, LE 2304, LE 2305. (Obtain written confirmation from the University of choice as to scope and extent of acceptance.)

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**LE 1301 Introduction to Law Enforcement**

(3-0) . . . . . 3 hours  
History, development, and philosophy of law enforcement in a democratic society; introduction to agencies involved in the Administration of Criminal Justice; career orientation, Interface between Social Theories and Police Realities. Prerequisite: None.

**LE 1302 Police Role in Crime and**

Delinquency (3-0) . . . . . 3 hours  
An overview of the crime problem designed to introduce the Police Officer to the extent and expansion of its scope; the theories which have been developed as to the cause of crime and the efforts to prevent crime and delinquency; the agencies which deal with the criminal and the direction and progress of efforts at rehabilitation. Prerequisite: None.

**LE 1303 Patrol Administration**

(3-0) . . . . . 3 hours  
An overview of the administration, scope and inner workings of the "Cutting Edge" of the Criminal Justice System, the Police Patrol, delineating the interrelationship of the first line supervisor and the man in the car, the breadth of responsibilities and the significance of the operation. Prerequisite: None.

**LE 1304 Legal Aspects of Law Enforcement**

(3-0) . . . . . 3 hours  
History, development, basic design of criminal law; the elements of criminal offenses generally and specifically under Texas Law; review of classic cases illustrative of general criminal law precepts; discussion of modern theories and direction of criminal law. Prerequisite: LE 1301.

**LE 2301 Police — Community Relations**

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

A review of the history of the police and their image in the eyes of the community; detailing the fluctuations in police acceptance through the years and the vital necessity for public acceptance and support for successful police operation; a review of the potential methods for improving and enlisting community participation and support with a special emphasis on the many current efforts in this direction. Prerequisite: None.

**LE 2302 Criminal Procedure and Evidence**

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

An overview of the criminal law heritage as it applies to the judicial process; organization of state and federal courts; procedures from arrest to release; history and philosophy of the rules of evidence; terminology and procedural practices in assuring admissibility with special reference to the Texas State Code of Criminal Procedure and current court interpretations governing searches and seizures and the exclusionary rule. Prerequisite: LE 1304.

**LE 2303 Traffic Management and Supervision (3-0) ..... 3 hours**

This course examines police responsibilities in traffic planning and law; identification of police policies and procedures in education, engineering, and enforcement responsibilities; analysis of special traffic problems, motor vehicle laws, and accident investigation techniques. Prerequisite: None.

**LE 2304 Criminal Investigation**

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

The fundamentals of investigative techniques; recording and identifying investigative notes and evidentiary matter; informants, interview and interrogation; follow up procedures and preparation and participation in trial. Prerequisite: LE 2302.

**LE 2305 Police Administration (3-0) 3 hours**

Principles of organization and management as applied to the peculiar problems of the law enforcement agency; delineation of the problems and functions of the administrator and the vital importance of understanding and cooperation by all participants to reach established goals; each phase explored

from the administrative viewpoint. Prerequisite: LE 2302.

**LE 2306 Juvenile Procedures (3-0) .3 hours**

This course provides an in-depth study of the history, background, and philosophy of court procedures for the handling of juveniles as separate and distinct from adult procedures. The Juvenile Court Act is discussed as generally applied under the laws of the State of Texas. General problems in the handling of juveniles are considered to provide the officer with a working knowledge of the proper methods to be used in the arrest, detention, interview and processing, to assure compliance with current court decisions. Prerequisite: None.

**LE 2307 Probation and Parole**

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

This course introduces the student to the many faceted subject of criminal corrections. He will study the history and background of the entire field including the evolution through the years to the present philosophy and practice in this area. He will learn the extreme importance of these functions in the attempt to successfully rehabilitate the criminal and the problems and progress under current conditions. Prerequisite: None.

**LE 2308 Penology (Jail Operation and Management) (3-0) ..... 3 hours**

This course will afford the student an opportunity to acquaint himself with the basic concepts, practices and policies as applied by the present day criminal justice official in the care and custody of the criminals who are under his care. The history and evolution of the prison systems will be studied and the entire situation reviewed in light of the present problems in jail planning, coordination, and in its impact on the community. Prerequisite: None.

**LE 2309 Traffic Law (3-0) ..... 3 hours**

This course involves a detailed study of the basic principles of traffic control, traffic law enforcement and traffic court procedures in the context of the Texas traffic laws. An in-depth study of the history and background of the traffic law, problems in interpretation and application and accepted procedures in enforcement. Prerequisite: None.

## Literature and Literature

English, Literature, French,  
German, Spanish

### Faculty

Dr. Elizabeth Gillette, chairman; Lois Ball,  
Dr. Rudolph Brewster, Dr. Joe Buice,  
Dr. Judith Cornes, William Feeler,  
Dr. John Kilman, Dr. Daryl Lane, Imogene  
Pilcher, Matt Rees, Rosendo Reyes, Stan  
Williams.

### English

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 the relative merits of various procedures. To be successful, language activities demand precision and forcefulness.

Consequently the student must learn to express himself clearly and effectively. While learning to communicate, he 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.

### Course of Study for Associate in Arts Degree in English

#### First Year

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

#### Second Year

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

\*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 twelve 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 the student's first semester.

### English

#### Engl 1300 Basic English (3-0) . . . . . 3 hours

This compensatory course is designed to improve the student's basic English skills. Emphasis is placed on usage, spelling, punctuation, vocabulary, sentence structure, and paragraph development. This course prepares the student for English

1311, and it will not apply toward any degree at Odessa College. Prerequisite: None.

#### Engl 1311 Composition and Rhetoric (3-0) . . . . . 3 hours

This course consists of a study of the essentials of correctness and effectiveness in

the mechanics of writing. Special emphasis is placed on reading and writing expository prose. Critical reviews, expository essays, and collateral readings are required. Prerequisite: None.

**Engl 1312 Composition and Literature**

(3-0) ..... 3 hours  
Research techniques and selected types of literature — drama, fiction, and poetry — are studied. Critical reviews and supplemental readings are required. Prerequisite: Engl 1311.

**Engl 2310 Masterpieces of the Western**

**World (3-0)** ..... 3 hours  
Significant works of western literature from the Classical period through the Renaissance are studied. A research paper or several short critiques are required. Prerequisite: Engl 1312.

**Engl 2320 Masterpieces of the Western**

**World (3-0)** ..... 3 hours  
Significant works from the beginning of the Neoclassical period to the present time are studied. A research paper or several short critiques are required. Prerequisite: Engl 1312.

**Engl 2330 Technical Writing (3-0)** .. 3 hours

This course, to prepare the student for technical report writing, offers practical experience in the organization of the report

and in the proper use of technical terms.  
Prerequisite: Engl 1312.

**Engl 2350 English Literature: From the Beginning through Neoclassic Period**

(3-0) ..... 3 hours  
This course consists of a chronological study of authors, works, and trends in English Literature and is required of all English majors. Prerequisite: Engl 1312.

**Engl 2360 English Literature: From the Romantic Period to the Present**

(3-0) ..... 3 hours  
This course consists of a chronological study of authors, works, and trends in English Literature and is required of all English majors. Prerequisite: Engl 1312.

**Engl 2380 American Literature from the**

**Beginning to 1860 (3-0)** ..... 3 hours  
This course treats briefly of colonial writers and writings in order to center attention on major literary figures of the first half of the nineteenth century. Both narrative and expository prose are studied, along with poetry and drama. Prerequisite: English 1312.

**Engl 2390 American Literature from 1860 to the Present (3-0)** ..... 3 hours

This course surveys great literary movements from the Civil War to the present. Collateral readings supplement selections in the anthology. Prerequisite: English 1312.

**Option**

On the sophomore level, an alternative to the two three-hour English 2380 and English 2390 is offered. These two courses are scheduled in a two-hour time block. During the first half of the semester, the student will complete English 2380. At this point, he may or may not choose to continue with English 2390, which will be completed in the second half of the se-

mester during the same two-hour time block. In this manner, the student can complete six semester hours of sophomore English in one semester. At mid-semester, students who did not take English 2380 may enroll in English 2390 and receive three semester hours credit for 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 includes a foreign language. Students should consult carefully the catalog of the senior college they plan to attend.

In the classroom, concentration is on the immediate and practical. The courses consist of the 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 the language and teach it. Others use it 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****First Year**

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

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Engl (Sophomore)		.3	Engl (Sophomore)		.3
Govt 2301		.3	Govt 2302		.3
*Lang		.3-5	*Lang		.3-5
**Math 1341 or 2311		.3	**Math 1343 or 2313		.3
PE		.1	PE		.1
Elective		.3	Elective		.3

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

Students who have some knowledge of a 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 twelve 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 the student's first semester.

**Foreign Languages****Fr 1411 First Year French I (3-2) . .4 hours**

This is a basic course, conducted in French, for those with no previous experience in French. It emphasizes simple conversation: pronunciation, fluency, and vocabulary. Basic grammar and composition are also presented, and tapes are used in the lab for individual practice. Individual help is available as needed. Prerequisite: None.

**Fr 1412 First Year French II (3-2) . .4 hours**

This course is a continuation of Fr 1411. Purposes and techniques are the same. Prerequisite: 1411.

**Fr 2311 Second Year French I**

(3-0) . . . . .3 hours  
Conducted in French, this sequence is a continuation of French 1411 and 1412. It emphasizes conversation based on reading assignments and includes grammar and composition. Individual help is available as needed. Prerequisite: Fr 1412 or equivalent.

**Fr 2312 Second Year French II (3-0) 3 hours**

This course is a continuation of Fr 2311.

Purposes and techniques are the same.  
Prerequisite: Fr 2311 or equivalent.

**Germ 1411 First Year German I**

(3-2) . . . . .4 hours  
This is a basic course, conducted in German, for those students who have no previous experience in the German language. It emphasizes simple conversation: pronunciation, fluency, and vocabulary. Basic grammar and composition are also presented. Tapes are used in the lab for individual practice, and individual help is available as needed. Prerequisite: None.

**Germ 1412 First Year German II**

(3-2) . . . . .4 hours  
This course is a continuation of Germ 1411. Purposes and techniques are the same. Prerequisite: Germ 1411 or equivalent.

**Germ 2311 Second Year German I**

(3-0) . . . . .3 hours  
Conducted in German, this sequence is a continuation of Germ 1411 and 1412. It emphasizes conversation based on reading assignments; it includes grammar and composition. Many elements of the course

are self-paced. Individual help is available as needed. Prerequisite: Germ 1412 or equivalent.

**Germ 2312 Second Year German II**  
(3-0) ..... 3 hours  
This course is a continuation of Germ 2311. Purposes and techniques are the same. Prerequisite: Germ 2311 or equivalent.

**Span 1311 Conversational Spanish I**  
(3-0) ..... 3 hours  
The primary purpose of this course is to give the student an opportunity to develop an accurate oral use of the language, based on a sound understanding of structure. Idiomatic expressions, such as are used in daily speech, and conversation in the language will be stressed. Reading will be incidental to the oral objective. Prerequisite: None.

**Span 1312 Conversational Spanish II**  
(3-0) ..... 3 hours  
This course is a continuation of Span 1311. Prerequisite: Span 1311 or equivalent.

**Span 1411 First Year Spanish I**  
(3-2) ..... 4 hours  
Conducted in Spanish, this is a basic course for those who have no previous experience in Spanish. It emphasizes simple conversation: pronunciation, fluency, and vocabulary. Basic grammar and composition are also presented. Tapes are used in the lab for individual practice, and individual help is available as needed. Many elements of the course are self-paced. Prerequisite: None.

**Span 1412 First Year Spanish II**  
(3-2) ..... 4 hours  
This course is a continuation of Span 1411. Prerequisite: Span 1411 or equivalent.

**Span 2211 Intensive Practice in Spoken Spanish I (2-0) ..... 2 hours**  
This is a second-year course designed to

build fluency and to expand vocabulary. It is recommended especially for Spanish majors and others who have a practical need for spoken Spanish. The first semester treats vocabulary and structures needed in traveling. Prerequisite: Span 1412 or equivalent or permission of the instructor.

**Span 2212 Intensive Practice in Spoken Spanish II (2-0) ..... 2 hours**  
This course is a continuation of Span 2211. The second semester provides vocabulary necessary for social and business conversation. Prerequisite: Span 2211 or equivalent or permission of the instructor.

**Span 2311 Second Year Spanish I**  
(3-0) ..... 3 hours  
Conducted in Spanish, this sequence is a continuation of Span 1411 and 1412. It emphasizes conversation based on reading assignments, and it includes grammar and composition. Many elements of the course are self-paced. Prerequisite: Span 1412 or equivalent.

**Span 2312 Second Year Spanish II**  
(3-0) ..... 3 hours  
This course is a continuation of Span 2311. Prerequisite: Span 2311 or equivalent.

**Span 2341 Spanish Literature I**  
(3-0) ..... 3 hours  
This course is a study of modern Latin American society as seen through contemporary anthropological studies and through fiction. Conducted in Spanish, it consists of conversation based on the reading and includes a grammar review of the first two years. Prerequisite: Span 2312 or equivalent or permission of the instructor.

**Span 2342 Spanish Literature II**  
(3-0) ..... 3 hours  
This course is a continuation of Span 2341. Prerequisite: Span 2341 or equivalent or permission of the instructor.

## **Machine Shop**

*Faculty*

**Norman Robinson, chairman; Bobby Butler, Joe McCulloch.**

The Machine Technology program is designed to give the student 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 the student 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	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
DT 1401 or Engr 1301	4 or 3	Math 1313 or 1321	3
MT 1601	.6	MT 1603	.6
MT 1602	.6	MT 1604	.6
*PE	.1	*PE	.1

Second Year			
Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Engl 1311	.3	Engl 1312 or Spch 2340	.3
Mgt 1301	.3	Govt 2301 or 2302	.3
MT 2601	.6	MT 2603	.6
MT 2602	.6	MT 2604	.6

\*H.Ed 1301 may be substituted for the two 1-hour physical education courses.

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight hours in MT courses.

Students enrolling in Machine Shop may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

**MT 1601 Basic Machine Shop**

**Fundamentals (2-8) . . . . . 6 hours**  
 This is an introductory course in machine shop practices, trade terminology, mathematics, shop safety, shop operations, semiprecision and precision measuring tools, hand tools, and an introduction to high speed tooling. Simple projects will be required. Prerequisite: None.

course is classroom and laboratory demonstration by individual students and the demonstration of maximum machine tool performance. Prerequisite or Corerequisite: MT 1602.

**MT 1604 Machines and Their Operations — Part II (2-8) . . . . . 6 hours**

Students will continue to set up and operate all machine tools and to produce projects from the simple to the more complex. Milling machines will be emphasized. They practice blueprint reading, precision measuring and shop sketching in order to become industrially oriented. Prerequisite or Corequisite: MT 1603.

**MT 2601 Advanced Machine Tool**

**Operations — Part I (2-8) . . . . . 6 hours**  
 Students continue to do basic layout practices, bench metal work and advanced machine tool operations related to the major machine tools such as lathes and milling machines. Shapers and grinders will be emphasized. More complex projects and demonstrations are required. Prerequisite or Corequisite: MT 1604.

**MT 2602 Advanced Machine Tool**

**Operations — Part II (2-8) . . . . . 6 hours**  
 Quality of finished products continues to be stressed. Production turning with automatic machinery and various machinability fac-

**MT 1602 Precision Tools and Instruments for Machinists (2-8) . . . . . 6 hours**

Measuring projects, simple and complex, are performed in order to practice the units of measure and measuring instruments. Students are introduced to job planning, shop sketching, and blueprint reading. Mathematics for planning and estimating shop work along with shop safety continues to be stressed. Students learn to grind and sharpen single point cutting tools. Corequisite or prerequisite: MT 1601.

**MT 1603 Machines and Their Operations — Part I (2-8) . . . . . 6 hours**

Students continue to practice blueprint reading, shop sketching, shop math, units of measure and precision measuring by continuous use of precision measuring instruments. Machines used are the power hacksaw, bandsaws, and pedestal grinders. Advanced lathe operation and set up are required. An integral part of this

tors are emphasized. Prerequisite or Co-requisite: MT 2601.

**MT 2603 Metallurgy for Machinists**

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

This course includes instruction in properties and uses of ferrous metals and alloys, as well as uses of nonferrous metals and alloys. It also includes forging and heat treating steels, specification numbers of steel, and application of industrial tests to

determine alloying elements. Shop organization and management, as well as shop safety continue to be stressed. Prerequisite or corequisite: MT 2602.

**MT 2604 Special Problems (2-8) . . . 6 hours**

Students will be assigned special problems to meet specific needs. Modern machining techniques will be emphasized. All assignments will be made on an individual basis. Prerequisite: MT 2603.

**Machine Shop  
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 pro-

gram 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 Counseling Center.

Course No.	Course Name	Clock Hours	Sem. Hours	Weeks
MT 1441	Basic Machine Shop Fundamentals	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	5
MT 1449	Blueprint Reading & Drawing . . . . .	100	4	5

Estimated cost of books and safety equipment — \$55.

**MT 1441 Basic Machine Shop Fundamentals [(4-16) for 5 Weeks] . . . . . 4 hours**

This is an introductory course to machine shop. Types, uses, terminology, adjustments, calibrations, and care and maintenance of measuring instruments, hand tools, power saws and machines will be stressed. A study of the relative ease (or difficulty) by which different materials can be machined and the contributing factors will be taught. Prerequisite: None.

sitive drill press will be taught. Drill bit grinding and safety will be emphasized. Prerequisite: MT 1441 or industrial experience.

**MT 1448 Shop Math [(20-0) for 5 Weeks] . . . . . 4 hours**

This course is a study of the fundamentals of mathematics as they relate to the machine shop industry. Technical problems involving the setup and operations of all machine tools will be stressed. Prerequisite: None.

**MT 1445 Grinding Machines [(2-18) for 5 Weeks] . . . . . 4 hours**

Surface grinders and cylindrical grinders, both internal and external will be studied. Grinding wheel selection, setup and operation will be emphasized. Prerequisite: MT 1441 or industrial experience.

**MT 1449 Blueprint Reading and Drawing [(4-16) for 5 Weeks] . . . . . 4 hours**

This course is a study of the fundamental drafting techniques used in the machine shop industry. Emphasis is placed on threaded fasteners, fabrication prints, dimensioning, sectional views, and visualization of objects in a pictorial form. Some shop print drawing will be required. Prerequisite: None.

**MT 1446 Drilling Equipment [(2-18) for 5 Weeks] . . . . . 4 hours**

Students continue to study feeds and speeds. The radial arm drill press and sen-

## 78 Machine Shop

**MT 1843 Metal Turning Lathes [(2-18) for 13 Weeks] . . . . . 8 hours**  
The lathe and its many facets will be stressed; single point cutting tools, feeds and speeds, drilling, reaming, and boring will be taught. Prerequisite: MT 1441 or industrial experience.

**MT 1844 Milling Machines [(2-18) for 13 Weeks] . . . . . 8 hours**  
Students continue to study feeds and speeds. Milling cutter selection, work holding devices, and machine setup will be emphasized. Prerequisite: MT 1441 or industrial experience.

## Maintenance Technology

A program to train maintenance technicians is currently under development at Odessa College and tentatively scheduled to begin during the 1981-82 school year. The program will include instruction for

persons interested in various types of maintenance careers. Further information is available from Dr. Dick Tarter, associate dean of occupational programs.

## Mathematics

*Faculty*

Charles Sweat, chairman; Mina Bane, George Brewer, James Fields, 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 to which they plan to transfer to determine which of these courses are compatible with the senior college degree plan.

### Course of Study for Associate in Science Degree

#### First Year

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Engl 1311	. . . . .	3	Engl 1312	. . . . .	3
Hist 2301	. . . . .	3	Hist 2302	. . . . .	3
Lang 1411	. . . . .	4	Lang 1412	. . . . .	4
Math 1345	. . . . .	3	Math 2333	. . . . .	3
Math 2331	. . . . .	3	PE	. . . . .	1
PE	. . . . .	1	Phys 1403	. . . . .	4

#### Second Year

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Engl (Sophomore Level)	. . . . .	3	Engl (Sophomore Level)	. . . . .	3
Govt 2301	. . . . .	3	Govt 2302	. . . . .	3
EDP 2406	. . . . .	4	Math 2351	. . . . .	3
Math 2335	. . . . .	3	Math 2371	. . . . .	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 2371 (Linear Algebra).

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Math 1311 Basic Mathematics**

**(3-0) . . . . . 3 hours**  
 This course is a study of the four fundamental operations of addition, subtraction, multiplication, and division of whole numbers, common fractions, decimal fractions, and signed numbers. Additional topics will include percentages, the metric system, and geometric measurements. This course is to prepare the students for Math 1313 and should be taken only as a preparatory course or when it is required by a specific degree plan. Prerequisite: None.

**Math 1313 Introductory Algebra**

**(3-0) . . . . . 3 hours**  
 This course is a study of elementary algebra with some arithmetic review. The topics studied are to include sets and set operations, signed numbers, polynomial multiplication and division, factoring, linear and quadratics functions, and word problems. Prerequisite: Math 1311 or equivalent.

**Math 1321 Technical Mathematics I**

**(3-0) . . . . . 3 hours**  
 This course is a study of fundamentals from arithmetic measurement, approximate numbers, plane geometry, elementary algebra, linear equations, graphs, and right angle trigonometry. Emphasis will be placed upon technical problems. Prerequisite: None.

**Math 1323 Technical Mathematics II**

**(3-0) . . . . . 3 hours**  
 This course is a study of intermediate algebra, logarithms and applied trigonometry. Emphasis will be placed upon technical problems. Prerequisite: Math 1321 or Math 1313.

**Math 1341 College Algebra**

**(3-0) . . . . . 3 hours**  
 This course is a study of introduction to sets, functions, and number relations; inequalities; linear and quadratic functions; determinants; polynomial functions; permutations, combinations, and binomial theorem; mathematical induction, exponential and logarithmic functions; and algebra of ordered pairs. Prerequisite: Two years High School Algebra, or Math 1313 or equivalent.

**Math 1342 College Algebra — Scientific**

**(3-0) . . . . . 3 hours**  
 This course is a study of quadratic equations, systems of equations involving quadratics, ratios, variations, progressions, the binomial theorem, inequalities, theory of equations, determinants, and set operations. It is designed for the student who has an excellent background in the fundamentals of algebra and who is planning to take

advanced mathematics courses. Prerequisite: Top level students with two years of high school algebra, or Math 1341, or equivalent.

**Math 1343 Plane Trigonometry**

**(3-0) . . . . . 3 hours**  
 This course is a study of 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 1342 or equivalent competency.

**Math 1345 Analytic Geometry**

**(3-0) . . . . . 3 hours**  
 This course is a study of 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 1342 and Math 1343 or equivalent.

**Math 1361 Mathematical Statistics**

**(3-0) . . . . . 3 hours**  
 Introduction to the basic elements of statistics. Includes frequency distributions, measures of central tendency, elementary probability, binomial distribution, measures of variation, normal distribution, random sampling, tests of significance, "t" test, chi-square test. For students in education, social science, and physical science, as well as in mathematics. Prerequisite: Math 1341 or equivalent.

**Math 2311 Fundamentals of Mathematics I**

**(3-0) . . . . . 3 hours**  
 This course presents topics from modern algebra, basic concepts of sets, number systems, relations and applications. Basic concepts of elementary mathematics are studied. Math 2311 and 2313 are recommended for nonscience and nonmath majors. Prerequisite: None.

**Math 2313 Fundamentals of Mathematics II**

**(3-0) . . . . . 3 hours**  
 This course presents topics from geometry, equivalence and congruence, position and shape, measurement, the nature of proof, mathematical systems, probability and statistics. Basic concepts of elementary mathematics are studied. Prerequisite: Math 2311.

**Math 2331 Calculus I (3-0) . . . . . 3 hours**

This course is a study of the rate of change of a function (limits), derivatives of algebraic and trigonometric functions, integration, and applications. Prerequisite or corequisite: Math 1345 or 1383.

**Math 2333 Calculus II (3-0) . . . . . 3 hours**

In this course the topics of Mathematics 2331 are extended to include the differentiation and integration of a wider class of functions including the transcendental functions. Also included are the application of these processes to the solution of a wider range of problems including moments of mass. Prerequisite: Math 2331.

**Math 2335 Calculus III (3-0) . . . . . 3 hours**

This course is a study of sets, functions, vector fields, partial derivatives, power series, and integration theory. Included will be a study of line, surface, and multiple integrals. Prerequisite: Math 2333.

**Math 2351 Differential Equations****(3-0) . . . . . 3 hours**

This course is a study of equations of order one, linear differential equations, non-homogeneous equations, differential operators, the Laplace transform, inverse transforms, applications, equations of order one and higher degree, and inverse differential operators. Prerequisite: Math 2333.

**Math 2371 Linear Algebra (3-0) . . . . . 3 hours**

A study of vector spaces, linear transformations, matrix algebra, eigenvalues, eigenvectors, and applications. Prerequisite: Math 2333.

## **Medical Laboratory Technology**

**Faculty**

**Joel Smith, chairman; Annette McMinn. Dr. Kris Challapalli and J. Michael Woods, lecturers.**

Medical Laboratory Technology is a special program of combined academic and clinical training which, during a 22-month period, prepares the student for entry skills in medical laboratory techniques; completes the prerequisites for writing the ASCP certification examination in the category, 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 Pathologists.

Because practicum space is limited, students will be admitted on a selected basis. To be admitted to the program, the student must be a high school graduate or

equivalent; achieve a satisfactory score on selected college entrance examinations; show evidence of good physical and mental health; and have the approval of the Medical Laboratory Admissions Committee. Applicants are encouraged to submit their applications by June 15 for review by the Admissions Committee.

The student must maintain a "C" average 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 course.

Students wishing to apply for admission or seeking additional information should contact the Chairman, Medical Laboratory Technology Department, Odessa College, P.O. Box 3752, Odessa, Texas 79760.

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

#### **First Year**

<b>First Semester</b>	<b>Sem. Hrs.</b>	<b>Second Semester</b>	<b>Sem. Hrs.</b>
Course		Course	
MLT 1601 . . . . .	.6	MLT 1602 . . . . .	.6
MLT 1211 . . . . .	.2	MLT 1212 . . . . .	.2
MLT 1221 . . . . .	.2	MLT 1222 . . . . .	.2
Chem 1301 and 1101 . . . . .	.4	Chem 2303 and 2103 . . . . .	.4
Engl 1311 . . . . .	.3	Engl 1312 . . . . .	.3
*PE . . . . . 1			

#### **Summer Session (First Term)**

MLT 1123 . . . . .	1
Govt/Hist . . . . .	3

Second Year					
Course	Third Semester	Sem. Hrs.	Fourth Semester		
MLT 2601		.6	MLT 2602		.6
MLT 2211		.2	MLT 2212		.2
MLT 2221		.2	MLT 2222		.2
Biol 1401		.4	Biol 1402		.4
*PE		.1			

**Summer Session (First Term)**

MLT 2123	.1
Math 1313 or More Advanced	.3

\*H.Ed 1301 may be substituted for the two 1-hour PE courses.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**MLT 1123 Clinical Practicum**

(0-20) ..... 1 hour

The twenty hours of clinical practicum will be spent at an affiliated clinical laboratory working in an assigned department under the supervision of a Medical Technologist and a Pathologist. Prerequisite: MLT 1602.

**MLT 1211 Urinalysis and Hematology**

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

This course will illustrate and reinforce the content of MLT 1601. The theory, principle, procedure and performance of selected techniques employed in urinalysis, hematology and coagulation for diagnosing and/or monitoring disease processes will be emphasized. Laboratory safety will be stressed. Corequisite: MLT 1601.

**MLT 1212 Immunology and****Immunohematology Lab (0-8) . 2 hours**

This course will illustrate and reinforce the content of MLT 1602. The theory, principle, procedure and performance of selected techniques employed in immunodiagnosis will be emphasized. Procedures used for donor screening, antibody identification and the crossmatching of blood for transfusion will be studied. Laboratory safety will be stressed. Corequisite: MLT 1602.

**MLT 1221 Clinical Practicum**

(0-12) ..... 2 hours

The twelve hours of clinical practicum will be spent at an affiliated clinical laboratory working in an assigned department under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 1601.

**MLT 1222 Clinical Practicum**

(0-12) ..... 2 hours

The twelve hours of clinical practicum will be spent at an affiliated clinical laboratory

working in an assigned department under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 1602.

**MLT 1601 Urinalysis and Hematology**

(6-0) ..... 8 hours

This course introduces the student to the fundamentals of Medical Laboratory Technology. The student will study professional ethics and nursing arts that are essential to the medical laboratory. Particular emphasis will be placed upon the study of theory and practical application of urinalysis, hematology and coagulation procedures and their interpretation. Prerequisite: Admission to the Medical Laboratory Technology Program or by special permission. Corequisites: MLT 1211 and MLT 1221.

**MLT 1602 Immunology and****Immunohematology**

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

This course will consist of the study of immunology and immunohematology. Emphasis will be placed upon the study of the antigen-antibody reactions and their use in serological testing and blood banking procedures. Prerequisite: MLT 1601 or special permission from the instructor. Corequisites: MLT 1212 and MLT 1222.

**MLT 2123 Clinical Practicum**

(0-20) ..... 1 hour

The twenty hours of clinical practicum will be spent at an affiliated clinical laboratory working in an assigned department under the supervision of a Medical Technologist and a Pathologist. Prerequisite: MLT 2602.

**MLT 2211 Clinical Microbiology Lab**

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

This course will illustrate and reinforce the content of MLT 2601. The theory, principle,

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procedure, and performance of selected techniques employed in clinical microbiology for the isolation and identification of microorganisms pathogenic to man will be emphasized. Laboratory safety will be stressed. Corequisite: MLT 2601.

### **MLT 2212 Clinical Chemistry Lab**

**(0-8) . . . . . 2 hours**  
This course will illustrate and reinforce the content of MLT 2602. The theory, principle, procedure, and performance of selected techniques employed in clinical chemistry for diagnosing and/or monitoring disease processes of a metabolic nature will be emphasized. Laboratory safety will be stressed. Corequisite: MLT 2602.

### **MLT 2221 Clinical Practicum (0-12) .2 hours**

The twelve hours of clinical practicum will be spent at an affiliated clinical laboratory working in an assigned department under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 2601.

### **MLT 2222 Clinical Practicum**

**(0-12) . . . . . 2 hours**  
This twelve hours of clinical practicum will be spent at an affiliated clinical laboratory working in an assigned department under the supervision of a Medical Technologist and a Pathologist. Corequisite: MLT 2602.

### **MLT 2601 Clinical Microbiology**

**(6-0) . . . . . 6 hours**  
This course will consist of the study of microorganisms that are of medical importance to man. Included will be the study of bacteriology, mycology, and parasitology. Emphasis will be placed upon specimen requirements, isolation, and culture techniques, staining characteristics, and biochemical tests used in the identification of pathological microorganisms. Safety measures to prevent the spread of infection will be stressed. Prerequisite: MLT 1602. Corequisites: MLT 2211 and MLT 2221.

### **MLT 2602 Clinical Chemistry**

**(6-0) . . . . . 6 hours**  
This course will consist of the study of clinical chemistry. A brief review of general chemistry, chemical calculations and reagent preparation will be given. Emphasis will be placed upon the theory and practical application of clinical chemistry procedures and their interpretation in relation to disease conditions. Manual and automated chemistry procedures will be studied. Prerequisite: MLT 2601. Corequisites: MLT 2212 and MLT 2222.

## **Mid-Management**

### *Faculty*

Sid Streicher, chairman; Clinton Forbes; Carole McCarter, fashion merchandising; Paul Tittle.

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

The primary objective of the Mid-Management program is to prepare each student for full-time employment in supervision or management. The program in the classroom is combined with actual on-the-job experience in the student's chosen career field. The student will work as a regular, part-time paid employee in an approved business firm.

Mid-Management students may choose one of four "option" programs 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, are actively seeking graduates of Associate Degree programs. The shortage of promotable people in the 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 of the Mid-Management options leads to the Associate of Applied Science degree.

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Engl 1311	.....	.3	BA 1301	.....	.3
Govt 2301 or 2302	.....	.3	Engl 1312	.....	.3
Mgt 1116	.....	.1	Mgt 1117	.....	.1
Mgt 1301	.....	.3	Mgt 2322	.....	.3
Mgt 1321	.....	.3	*Math	.....	.3
PE	.....	.1	PE	.....	.1
Approved Elective	.....	.3	Approved Elective	.....	.3

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Approved Elective	.....	.3	BA 2311	.....	.3
Mgt 1303	.....	.3	Mgt 2117	.....	.1
Mgt 2116	.....	.1	Mgt 2301	.....	.3
Mgt 2302	.....	.3	Mgt 2303	.....	.3
Mgt 2304	.....	.3	Spch 2340	.....	.3
Approved Elective	.....	.3	Approved Elective	.....	.3

Approved Electives: Any other Mgt course; Any EDP course; OE 1404; BA 2312; BA 1305; Eco 1301; Eco 2301; Eco 2302; Psy 1301; Psy 2301; Soc 1301; Soc 2301; Soc 2303.

\*Math 1311; Math 1313; Math 1321; Math 1301; Math 1303; Math 2301. The student may choose any one of these which will further his career and fit his existing skill level in mathematics.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
BA 1301	.....	.3	Engl 1312	.....	.3
Engl 1311	.....	.3	Mgt 1117	.....	.1
Mgt 1321	.....	.3	Mgt 2332	.....	.3
Mgt 1116	.....	.1	Govt 2301 or 2302	.....	.3
Mgt 1301	.....	.3	PE	.....	.1
Mgt 1331	.....	.3	Mgt 2322	.....	.3
PE	.....	.1	*Math	.....	.3

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Approved Elective	.....	.3	BA 2311	.....	.3
Mgt 2116	.....	.1	Mgt 2117	.....	.1
Mgt 1303	.....	.3	Mgt 2301	.....	.3
Mgt 2302	.....	.3	Mgt 2303	.....	.3
Mgt 2304	.....	.3	Spch 2340	.....	.3
Approved Elective	.....	.3	Approved Elective	.....	.3

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Approved Electives: Any other Mgt course; any other EDP course; OE 1404; BA 2312; BA 1305; Eco 1301; Eco 2301; Eco 2302; Psy 1301; Psy 2301; Soc 1301; Soc 2301; Soc 2303.

\*Math 1313; Math 1321; Math 1301; Math 1303; Math 2301. The student may choose any one of these which will further his career and fit his existing skill level in mathematics. First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

#### **First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
BA 1301	.....	.3	Engl 1312	.....	.3
Engl 1311	.....	.3	Govt 2301 or 2302	.....	.3
Mgt 1116	.....	.1	Mgt 1117	.....	.1
Mgt 1301	.....	.3	Mgt 1342	.....	.3
Mgt 1331	.....	.3	Mgt 2332	.....	.3
Mgt 1341	.....	.3	*Math	.....	.3
PE	.....	.1	PE	.....	.1

#### **Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Approved Elective	.....	.3	BA 2311	.....	.3
Mgt 2116	.....	.1	Mgt 2301	.....	.3
Mgt 2343	.....	.3	Mgt 2303	.....	.3
Mgt 2304	.....	.3	Mgt 2344	.....	.3
Mgt 1303	.....	.3	Mgt 2117	.....	.1
Approved Elective	.....	.3	Spch 2340	.....	.3

Approved Electives: Any other Mgt course; OE 1404; BA 2312; BA 1305; Eco 1301; Eco 2301; Eco 2302; Psy 1301; Psy 2301; Soc 1301; Soc 2301; Soc 2303.

\*Math 1313; Math 1321; Math 1301; Math 1303; Math 2301. The student may choose any one of these which will further his career and fit his existing skill level in mathematics. First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

#### **First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
BA 1301	.....	.3	Engl 1312	.....	.3
Engl 1311	.....	.3	*Math	.....	.3
Govt 2301 or 2302	.....	.3	Mgt 1117	.....	.1
Mgt 1116	.....	.1	Mgt 1302	.....	.3
Mgt 1301	.....	.3	Mgt 1362	.....	.3
Mgt 1361	.....	.3	Approved Elective	.....	.3
PE	.....	.1	PE	.....	.1

Second Year					
	Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.	
Course			Course		
Eco 1301	.....	.3	Approved Elective	.....	.3
Mgt 2116	.....	.1	Mgt 2117	.....	.1
Mgt 2304	.....	.3	Mgt 2364	.....	.3
Mgt 2363	.....	.3	Mgt 2302	.....	.3
Mgt 1303	.....	.3	Approved Elective	.....	.3
Approved Elective	.....	.3	Approved Elective	.....	.3

Approved Electives: Any other Mgt course; Read 1310; Any other Math course; Any Accounting course; Any other Eco course; Psy 1301; Soc 1301; Soc 2303. Any Occupationally oriented course which has a direct bearing on the student's career plan.

\*Math 1313; Math 1321; Math 1301; Math 1303; Math 2301. The student may choose any one of these which will further his career and fit his existing skill level in mathematics. First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

#### **Mgt 1116, 1117, 2116, 2117**

##### **Mid-Management Internships**

**(1-20) ..... .1 hour each**

All Mid-Management students will enroll in the Mid-Management program's supervised internship each semester. Attention is given to specific on-the-job problems, modern business practices, human relations, and job finding techniques. Instruction will include a one-hour seminar and twenty internship hours each week. Prerequisite: None.

#### **Mgt 1301 Introduction to**

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

The essentials of management are studied, including the functions of management and the application of management principles as they relate to the first line supervisor. The course is organized to include two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.

#### **Mgt 1302 Introduction to Transportation**

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

This course presents an overview of domestic transportation and traffic management. The course's aim is to describe the transportation system and make the student aware of how it can be used. Attention is given to government regulation and the economics of transportation. Topics such as bills of lading and checking freight rates are presented with a view to practical application. Prerequisite: None.

#### **Mgt 1303 Communication**

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

This is a creative communication course designed to provide the mid-management student with effective methods of creating

understanding with his fellow employees and with his community within the management environment. Emphasis is placed on perfecting business communication techniques in the various channels of communication. Verbal, nonverbal, and written communication media will be covered as they pertain to the needs of the student. Prerequisite: None.

#### **Mgt 1321 Principles of Marketing**

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

The course introduces the field of marketing and describes and analyzes important marketing activities and institutions. A brief analysis of some of the economic, psychological, and sociological factors which influence marketing activities is included. Case studies are used to relate marketing principles to marketing management situations. The course is organized to include two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.

#### **Mgt 1331 Principles of Retailing**

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

This course studies the modern retailing industry. The major course divisions concern the structure and environment of retailing, the requirements of retailing management, retail merchandising, and sales promotion. Case studies are used to examine the application of retailing principles to actual operating situations. The course is organized to include 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**

The course takes an overview of the gen-

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eral field of fashion merchandising. Attention is given to the functions of the fashion merchandiser as they relate to the retail industry in general. Emphasis is placed on the organization and operation of the fashion merchandising segment of a department store or specialty shop. The course is organized to include two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: None.

**Mgt 1342 Fashion Sales Management**  
**(3-0) . . . . . 3 hours**  
This course views the role of selling as related to the field of fashion merchandising. Emphasis is placed on effective techniques of selling, on the training of sales people, and on the management of sales people and sales functions. Role playing and case studies will focus on realistic situations. Prerequisite: None.

**Mgt 1361 Principles of Production**  
**Supervision (3-0) . . . . . 3 hours**  
This is an introductory course in production management, presenting the fundamental concepts of this field. Attention is given to the formulation of objectives and the use of a systems approach to production. An integrated managerial perspective is maintained throughout the course. Prerequisite: None.

**Mgt 1362 Industrial Safety**  
**(3-0) . . . . . 3 hours**  
This course develops the principles and practices of safety management. An overview is given of the legal requirements of the Occupational Safety and Health Act as well as of the basic concepts and methods of administering an industrial safety program. Prerequisite: Mgt 1361.

**Mgt 2301 Management Development**  
**(3-0) . . . . . 3 hours**  
The relationships between management principles and actual management situations are examined in this course. Case studies and projects are based on students' jobs and are taken from various fields, including personnel management, sales management, and merchandise management. The course is organized to include 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**  
Manager-employee relationships, oriented toward the personnel responsibilities of all managers, form the basis of this course. The course is designed to provide techniques in developing and supervising people. Attention is directed toward organization principles, labor relations, un-

derstanding people, communicating, and the techniques of building an effective working team. The course is organized to include 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**  
The course introduces the techniques of public relations applied to supervisory and management positions. Customer relations are emphasized. Attention is given to programming a total public relations effort and selecting the strategy, media and persuasive devices which will accomplish given objectives. The course is organized to include 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**  
This course examines the field of human relations as it applies to modern business management. Emphasis is placed on the productive management of the human resources available to a business or industrial firm. Innovative techniques of the behavioral science fields are introduced for discussion. Case studies are used to apply behavioral theories to actual situations. The course is organized to include two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: Mgt 1301.

**Mgt 2322 Marketing Management**  
**(3-0) . . . . . 3 hours**  
This course is a continuation of Mgt 1321, Principles of Marketing. Emphasis is placed on the management of the activities associated with marketing and distribution processes and institutions. Case studies are used to apply the principles of marketing management to actual situations. A portion of the course is a marketing management simulation. The course is organized to include 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**  
This is a self-paced course designed to acquaint the student with the unique marketing activities involved in the marketing of petroleum products on the wholesale and retail levels. A portion of the assignments will necessitate a period of time working in or observing petroleum marketing in action. The details of these assignments will be worked out by the instructor and each student in individual conference. Enrollment is by permission of the instructor. The course

will be scheduled as requested by students. Prerequisite: Mgt 1321 and permission of the instructor.

**Mgt 2324 Principles of Supermarket**

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

This is a self-paced course designed to acquaint the student with the principal methods used in the operation of supermarkets. The material includes organization, planning, and control for each department in the major supermarket. Students will be expected to complete a number of required assignments. Enrollment is by permission of the instructor. The course will be scheduled as requested by students. Prerequisite: Mgt 1321 and permission of the instructor.

**Mgt 2332 Retail Business**

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

This course is a continuation of Mgt 1331, Principles of Retailing. Emphasis is placed on the management of personnel, merchandise, and other resources of the retail store. Case studies are used to apply the principles of retail management to actual conditions. The course is organized to include two hours of lecture-discussion and one hour of seminar-discussion each week. Prerequisite: Mgt 1331.

**Mgt 2343 Fashion Buying (3-0) . . . . . 3 hours**

This course covers the fundamentals of effective buying as it relates to fashion re-

tailing. Attention is given to the planning of correct purchases, the estimation of demand, the selection of sources of supply, and product merchandising. Prerequisite: Mgt 1341.

**Mgt 2344 Fashion Promotion**

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

This course emphasizes the relationship which must exist between personal selling, visual merchandising, advertising, and fashion shows so that successful merchandising of fashion products may be accomplished by the fashion retailer. Prerequisite: None.

**Mgt 2363 Production Planning and**

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

This course is a continuation of Mgt 1361, Principles of Production Supervision. Attention is given to procurement and inventory control. Logistics, methods analysis, and work measurement are included as major sections of the course. Prerequisite: Mgt 1361.

**Mgt 2364 Materials Management**

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

This course presents the management-oriented skills needed in the materials management function. Attention is given to purchasing, inventory control, and traffic. Cost control and cost reduction are integrated sections of the course. Prerequisite: Mgt 1361.

**Music**

*Faculty*

Dr. Jack Hendrix, chairman; Dr. Maurice Alfred, Kathryn Hoppe, 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 the teachers in the area by means of special course offerings; it also offers the required music courses for majors in other fields. Odessa College is a Community/Junior College Member of the National Association of Schools of Music and a member of the Texas Association of Music Schools.

The several music organizations, including the band, orchestra, choir, 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 a part of their musical and cultural growth. These include student recitals, programs by Midland-Odessa Symphony and Chorale, Civic Concert Association, Odessa College Fine Arts Series, and other designated recitals.

**Course of Study for Certificate of Completion in Music****First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Mu 1335		.3	Mu 1336		.3
Mu 1429		.4	Mu 1430		.4
*Mu 1101		.1	*Mu 1102		.1
*Mu 1115, 1116, 1117, or 1118		.1	*Mu 1115, 1116, 1117, or 1118		.1
+Mu 1211		.2	+Mu 1212		.2
+Mu 1121		.1	+Mu 1122		.1
+Mu 1125, 1126, or 1127		.1	+Mu 1125, 1126, or 1127		.1
#Mu 1123		.1	#Mu 1124		.1
##Appl Mu 1137		.1	##Appl Mu 1138		.1
Appl Mu: Principal Instrument or Voice		.2-3	Appl Mu: Principal Instrument or Voice		.2-3
Engl 1311		.3	Engl 1312		.3
PE		.1	PE		.1

**Second Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Mu 2231		.2	Mu 2232		.2
Mu 2333		.3	Mu 2334		.3
*Mu 2101		.1	*Mu 2102		.1
*Mu 1115, 1116, 1117, or 1118		.1	*Mu 1115, 1116, 1117, or 1118		.1
+Mu 2211		.2	+Mu 2212		.2
+Mu 2121		.1	+Mu 2121		.1
+Mu 1125, 1126, or 1127		.1	+Mu 1125, 1126, or 1127		.1
#Mu 2123		.1	#Mu 2124		.1
##Appl Mu 2137		.1	##Appl Mu 2138		.1
Appl Mu: Principal Instrument or Voice		.2-3	Appl Mu: Principal Instrument or Voice		.2-3
Engl (Sophomore Level)		.3	Engl (Sophomore Level)		.3
Phys 1301		.3	Hist 2302 or Govt 2302		.3
Hist 2301 or Govt 2301		.3			

\*Required for Instrumental majors

+Required for Vocal majors

#Required for Keyboard majors

##Piano required for non-keyboard majors

To receive the Associate in Arts Degree, the student must complete 1 year of math or science, and complete 12 hours of social sciences, including Hist 2301 and 2302 and Govt 2301 and 2302, in addition to the above courses.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Mu 1101, 1102, 2101, 2102 Concert Band  
(0-3) .....1 hour each**

The activities of the band include concert music, pep rallies, and selected college functions. The personnel of the concert band includes many non-music majors, and band personnel are expected to participate in daily rehearsals and all major performances.

The band serves as a required laboratory for instrumental music majors. Prerequisite: None.

**Mu 1103, 1104, 2103, 2104 Jazz Ensemble  
(0-3) .....1 hour each**

Jazz ensemble is open to musicians having jazz experience or to those with instrumental skills and a desire for learning jazz

techniques. The course consists of a minimum of three hours of rehearsal per week and playing at special college functions. Prerequisite: Students are admitted by audition with acceptance based on musical ability.

**Mu 1105, 1106, 2105, 2106**

**Orchestra (0-4) . . . . . 1 hour each**  
The orchestra is 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**

The course is an elective designed to acquaint the student with chamber music for the small voice ensemble of all periods of music, and to provide the advanced student with an opportunity to study the style and performance of a large amount of choral literature. Prerequisite: Students are selected from the A Cappella Choir by audition and are expected to participate in all major performances.

**Mu 1109, 1110, 2109, 2110 Chamber Music (0-3) . . . . . 1 hour each**

This course is designed to examine and perform instrumental ensemble literature in which there is only one player to each part. The emphasis lies on the ensemble, not on the individual player, and each instrument is as important as any other in the performance of the music. Prerequisite: Adequate facility on an instrument.

**Mu 1111, 1112, 2111, 2112 A Cappella Choir (0-3) . . . . . 1 hour each**

The A Cappella Choir serves as a laboratory for the music major whose primary instrument is voice; it also serves as an elective for the non-music major. The choir studies choral literature representing many styles and composers from all periods of music; it also studies fundamental voice techniques. Choir personnel are expected to participate in all major performances. Prerequisite: Students are admitted by audition with acceptance based on musical ability and voice quality.

**Mu 1211, 1212, 2211, 2212 A Cappella Choir (0-5) . . . . . 2 hours each**

The A Cappella Choir serves as a laboratory for the music major whose primary instrument is voice, or as an elective for the non-music major. The choir studies choral literature representing many styles and composers from all periods of music, and fundamental voice techniques. Choir personnel are expected to participate in all major performances. Prerequisite: Students are admitted by audition with accep-

tance based on musical ability and voice quality.

**Applied Music (Class Lessons)**

**Mu 1113, 1114, 2113, 2114 Secondary Instrumental (0-½) . . . . . 1 hour each**

Secondary instrumental lessons are designed for the non-instrumentalist who is a music major, the instrumental major on a secondary instrument or for elective credit. Rudimentary principles of the instrument and appropriate exercises are studied. Representative repertoire will be chosen from the solo listings of the University Interscholastic League. Prerequisite for Mu 1113: None.

**Mu 1115 Brass (0-3) . . . . . 1 hour**

This is a course for music education majors, designed to meet the minimum proficiency requirements on the brass instruments through the study of the basic techniques, a limited repertoire, and the methods of teaching them, culminating in the ability to play the scales on these instruments. Prerequisite: None.

**Mu 1116 Percussion (0-3) . . . . . 1 hour**

This is a course designed to meet the minimum requirements in percussion instruments for the music education major through the study of the snare drum rudiments, the tuning and other techniques of playing the tympani and limited performance ability on the other instruments of the battery. Prerequisite: None.

**Mu 1117 Strings (0-7) . . . . . 1 hour**

This is a course for music education majors, designed to meet the minimum proficiency requirements on the stringed instruments through the study of the basic techniques, a limited repertoire, and the methods of teaching them, culminating in the ability to play all the scales on these instruments. Prerequisite: None.

**Mu 1118 Woodwinds (0-3) . . . . . 1 hour**

This is a course for music education majors designed to meet the minimum proficiency requirements on the woodwind instruments through the study of the basic techniques, a limited repertoire, and the methods of teaching them, culminating in the ability to play the scales on these instruments. Prerequisite: None.

**Mu 1121, 1122, 2121, 2122 Opera Workshop (0-3) . . . . . 1 hour each**

Opera workshop serves as a laboratory for the student interested in dramatic music and its presentation. Outside preparation of various assignments for class and public presentation, including night rehearsals, will be required when necessary. The course is open to all students. Prerequisite: None.

- Mu 1123, 1124, 2123, 2124 Piano Ensemble and Accompanying**  
**(0-3) . . . . . 1 hour each**  
 Piano sight reading, ensemble and accompanying is designed to improve ensemble playing and to provide training in the techniques of vocal and instrumental accompanying. Four semester hours are required of all keyboard majors and concentrations. Consent of instructor is required for enrollment by others.
- Mu 1125 French Diction (2-0) . . . . . 1 hour**  
 This course is a study of the French language with an emphasis on diction and designed to promote the ability to sing in French. Vocabulary will be derived from words commonly used in song and opera. The student's own appropriate literature will be studied with other selections added to it at the discretion of the instructor. Prerequisite: None.
- Mu 1126 German Diction (2-0) . . . . . 1 hour**  
 This course is a study of the German language with an emphasis on diction and designed to promote the ability to sing in German. Vocabulary will be derived from words commonly used in song and opera. The student's own appropriate literature will be studied with other selections added to it at the discretion of the instructor. Prerequisite: None.
- Mu 1127 Italian Diction (2-0) . . . . . 1 hour**  
 This course is a study of the Italian language with an emphasis on diction and designed to promote the ability to sing in Italian. Vocabulary will be derived from words commonly used in song and opera. The student's own appropriate literature will be studied with other selections added to it at the discretion of the instructor. Prerequisite: None.
- Mu 1173, 1174 Foundations in Music**  
**(0-1½) . . . . . 1 hour each**  
 This course is offered on an elective basis to meet special student needs where musical ability is not sufficiently high to warrant credit at the college level in a specific field of study. It is designed with emphasis on participation and the necessary skills for satisfactory performance in singing, playing an instrument, listening, creating rhythmic responses, and development of increasing ability to manage notation (music reading). Prerequisite: None.
- Mu 1203, 1204, 2203, 2204 Jazz Ensemble**  
**(0-5) . . . . . 2 hours each**  
 Jazz ensemble is open to musicians having jazz experience or to those with instrumental skills and a desire for learning jazz techniques. The course consists of a minimum of five hours of rehearsal per week and playing at special college functions. Prerequisite: Students are admitted by audition with acceptance based on musical ability.
- Mu 1329 Music Fundamentals (3-0) .3 hours**  
 This course is an introduction to the elements of music, including study of the staff, clefs, key signatures, scales, time signatures, notation, meter and rhythm, sight-singing, major and minor chords, application of theory at the keyboard, and rhythmic, melodic, and harmonic ear training.
- Mu 1429, 1430 Freshman Music**  
**Theory (3-3) . . . . . 4 hours each**  
 This course includes rhythmic reading, sight-singing, partwriting, keyboard harmony, and ear training. Rhythm proceeds through simple and compound time, sixteenth notes, syncopations, and triplets; sightsinging completes *Oxford Book 3*; partwriting includes triadic chord connection, with cadence formulas at the keyboard. Ear training is correlated to each problem. The second semester includes the divided beat, changing meters, cross rhythms, and melodies which encompass all of the diatonic triads. In partwriting, and in keyboard harmony, modulation to closely related keys and harmonization of melodies are the problems. Ear training is correlated to each problem. Prerequisite for Mu 1430: Mu 1429.
- Mu 2231, 2232 Advanced Sightsinging and Ear Training (2-1) . . . . . 2 hours each**  
 Students analyze and sing melodies which encompass seventh chords, modes, and chromaticism. Partsinging is included. The ear training is correlated to the sightsinging material and to the related material in Mu 2333, 2334. Prerequisite: Mu 1430.
- Mu 2333, 2334 Advanced Study of Harmony**  
**(2-1) . . . . . 3 hours each**  
 Secondary seventh chords, altered chords, and chromatic harmony are studied, as are nonharmonic tones. Students harmonize basses and melodies, and analyze music of standard composers. Keyboard harmony is correlated to each problem. Prerequisite: Mu 1430.
- Music History and Literature**
- Mu 1328 Music Appreciation**  
**(3-0) . . . . . 3 hours**  
 This is a course for all students, except music majors, who wish to acquire the basic information and techniques necessary for the intelligent appreciation of the art of music, as related to the major style periods in music history. Guided listening experiences, through use of the extensive

record collection in the listening laboratory, are an important part of the course. Prerequisite: None.

- Mu 1335, 1336 Introduction to Music Literature (3-0) . . . . . 3 hours each**  
 This is a survey course, taught chronologically, whose prime objective is to introduce the student to the various periods of musical composition from ancient to present time. It seeks to acquaint the student with both the historical aspect and the music itself. Extensive use is made of the large collection of phonograph records in the listening laboratory. This course is required of all music majors. Prerequisite to Mu 1336: Mu 1335.

#### 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 1337, 1338 Freshman Piano (0-1) . . . . . 3 hours each**  
 This course is designed for a performance major in piano, and the minimum representative requirements are these: BACH: four three-part Inventions or two Preludes and Fugues, or the equivalent; SONATAS: two from Haydn, Mozart, or Beethoven (Op. 2, No. 1, or Op. 14, Nos. 1 and 2); TECHNIC: all scales and arpeggios, four octaves at MM. 120, four notes to the beat; standard Etudes: standard literature from Romantic and Contemporary periods; everything from memory; sight reading; ensemble. Prerequisite for Mu 1338: Mu 1337.

- Mu 1237, 1238 Freshman Piano (0-1) . . . . . 2 hours each**  
 This course is designed for the music education major whose primary instrument is piano or for elective credit. The minimum representative requirements are these: 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 MM. 120; Czerny, Op. 299, or equivalent; standard Etudes; standard literature from Romantic and Contemporary periods; sight reading; ensemble. Prerequisite for Mu 1238: Mu 1237.

- Mu 1339, 1340 Freshman Organ (0-1) . . . . . 3 hours each**  
 This course is designed for a performance major in organ, and the minimum repre-

sentative requirements are these: 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 for Mu 1339: Must be able to perform Bach Two-part and Three-part Inventions or equivalent on the piano. Prerequisite for Mu 1340: Mu 1339.

- Mu 1239, 1240 Freshman Organ (0-1) . . . . . 2 hours each**  
 This course is designed for the music education major whose primary instrument is organ or for elective credit. The minimum representative requirements are these: 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. Prerequisite for Mu 1240: Mu 1239.

- Mu 2337, 2338 Sophomore Piano (0-1) . . . . . 3 hours each**  
 This course is a continuation of Mu 1338, and the minimum representative requirements are these: Bach: Preludes and Fugues, Suites, Partitas, transcriptions; SONATAS: More difficult ones by Mozart or Beethoven, or concerto; TECHNIC: scales and arpeggios in 10ths, 6ths, two against three or others of similar difficulty; Etudes of the difficulty of Chopin, Kramer, etc.; Czerny, Op. 740 or equivalent; standard literature from Romantic and Contemporary periods; everything from memory; sight reading; ensemble. Prerequisite: Mu 1338.

- Mu 2237, 2238 Sophomore Piano (0-1) . . . . . 2 hours each**  
 This course is a continuation of Mu 1238, and the minimum representative requirements are these: 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. Prerequisite: Mu 1238.

## 92 Music

### Mu 1119, 1120 Applied Music

(0-½)

**1 hour each**  
This course is offered in any field of applied music on an elective basis to meet special student needs. It is designed to provide elective credit in the applied study of music, as well as in cases where performance ability is not sufficiently high to warrant credit at the college level in a specific field of performance. Prerequisite: None.

### Mu 2119, 2120 Applied Music

(0-1)

**1 hour each**  
This course is a continuation of Mu 1119 and 1120, offered in any field of applied music on an elective basis to meet special student needs. It is designed to provide elective credit in the applied study of music, as well as in cases where performance ability is not sufficiently high to warrant credit at the college level in a specific field of performance. Prerequisite: Mu 1120.

### Mu 1137, 1138, 2137, 2138 Secondary

Piano (0-½)

**1 hour each**  
This course is designed to complete the piano proficiency requirements for all music students except pianists, and the minimum representative requirements for the piano proficiency requirements are these: 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 3rd grade difficulty; all scales and arpeggios, four octaves, four notes to the beat, at least MM. 72; Czerny, Op. 299 or equivalent. Prerequisite for Mu 1137: None.

### Mu 2339, 2340 Sophomore Organ

(0-1)

**3 hours each**  
This course is a continuation of Mu 1340, and the minimum representative requirements are these: 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. Prerequisite for Mu 2339: Mu 1340. Prerequisite for Mu 2340: Mu 2339.

### Mu 2239, 2240 Sophomore Organ

(0-1)

**2 hours each**  
This course is a continuation of Mu 1240, and the minimum representative requirements are these: 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. Prerequisite for Mu 2239: Mu 1240.

### Mu 1139, 1140, 2139, 2140 Secondary

Organ (0-½)

**1 hour each**  
This course is designed for the music major whose primary instrument is other than organ or for elective credit. Representative literature includes these: 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 arrangements and transcriptions upward, by Handel, Mendelssohn, Franck, Langlais, Peeters, etc. Additional technic is added as needed. Prerequisite for Mu 1139: None, but previous organ or piano study is desirable.

### Mu 1141, 1142 Secondary Voice

(0-½)

**1 hour each**  
Secondary voice is designed for the non-vocal concentration or non-vocal major who is a music major or for elective credit. Rudimentary principles of vocal production and appropriate exercises are studied. A minimum of 6 memorized songs from the standard repertoire are to be prepared for presentation at faculty jury for grade. Prerequisite for Mu 1142: Mu 1141.

### Mu 2141, 2142 Secondary Voice

(0-½)

**1 hour each**  
This course is a continuation of Mu 1142. Exercises and studies of increased difficulty and length are studied plus Italian songs. A minimum of 6 memorized songs from the standard repertoire are to be prepared for presentation at faculty jury for grade. Prerequisite: Mu 1142.

### Mu 1241, 1242 Freshman Voice

(0-1)

**2 hours each**  
This course is designed for the music education major who will study voice as his primary instrument or for elective credit. Exercises to facilitate proper breath and tone production are studied to promote vocal technique. Songs from the early Italian literature are studied, plus appropriate English songs at the discretion of the instructor. A minimum of 7 memorized songs are to be prepared for presentation at faculty jury for grade. Prerequisite for Mu 1242: Mu 1241.

### Mu 2241, 2242 Sophomore Voice

(0-1)

**2 hours each**  
This course is designed as a continuation of Mu 1242. Scales, arpeggios, and studies

- of increased variety, length, speed, and numbers of vowels are studied. German and French songs are introduced. Oratorio and/or opera arias may be given at the discretion of the instructor. A minimum of 7 memorized songs and/or arias are to be prepared for presentation at faculty jury for grades. Prerequisite for Mu 2241: Mu 1242.
- Mu 1243, 1244 Freshman Violin (0-1) . . . . . 2 hours each**  
 This course is designed for the music education major or minor whose primary instrument is violin or for elective credit. The minimum representative requirements for this course are these: Kreutzer *Etudes*; Sevcik 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. Prerequisite for Mu 1244: Mu 1243.
- Mu 2243, 2244 Sophomore Violin (0-1) . . . . . 2 hours each**  
 This is a continuation of Mu 1244, and the minimum representative requirements include these: *Etudes*, Kreutzer, Fiorillo, Sevcik; scales and arpeggios; two Sonatas by a standard composer (Handel, Bach, Mozart, Beethoven, Gade, Grieg, etc.); one concerto by a standard composer (Bach, Kreutzer, Viotti, Rode, Vivaldi, Mozart, etc.); Orchestra; ensemble. Prerequisite: Mu 1244.
- Mu 1245, 1246 Freshman Viola (0-1) . . . . . 2 hours each**  
 This course is designed for the music education major or minor whose primary instrument is viola or for elective credit, and the minimum representative requirements are these: scales and arpeggios; studies and exercises; sonatas and concertos; smaller pieces from the standard repertoire; Wolhfahrt-Issaac-Lewis, *Thirty Studies for the Viola, Book I*; Wolhfahrt, *Book II*; "Lyric Suite" by Grieg-Sitt. Prerequisite for Mu 1246: Mu 1245.
- Mu 2245, 2246 Sophomore Viola (0-1) . . . . . 2 hours each**  
 This is a continuation of Mu 1246, and the minimum representative requirements include these: scales and arpeggios; scales in double stops; studies and exercises selected according to individual needs of the pupil, such as C. Danel's *L'école du mechanisme, Books I and II*, Dont's *20 Progressive Etudes*, and R. Kreutzer-Consonini's *42 Etudes*; sonatas of Leclair, Marcello, Corelli, G. Faure; concertos and short solo pieces. Prerequisite: Mu 1246.
- Mu 1247, 1248 Freshman Violoncello (0-1) . . . . . 2 hours each**  
 This course is designed for the music education major or minor whose primary interest is in violoncello or for elective credit, and the minimum requirements for the course are these: Klengel studies; Dotzaur *113 Selected Studies, Book II*; Lee, *40 Melodic Studies, Book II*; Sonatas by Eccles, Breval; thumb position; scales of 3 octaves; studies equivalent in difficulty to Dotzaur, Volume II; shorter compositions equivalent in difficulty to Beethoven G Minor Sonata. Prerequisite for Mu 1248: Mu 1247.
- Mu 2247, 2248 Sophomore Violoncello (0-1) . . . . . 2 hours each**  
 This is a continuation of Mu 1248, and the minimum representative requirements include these: 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 Sonatas. At the end of the second year the student must be able to play at sight moderately difficult ensemble music. Prerequisite: Mu 1248.
- Mu 1249, 1250 Freshman Double Bass (0-1) . . . . . 2 hours each**  
 This course is designed for the music education major or minor whose primary instrument is double bass or for elective credit, and the minimum course requirements include these: scales and arpeggios; smaller pieces from the standard repertoire; orchestra studies; Franz Simandl, *Book I* and *Book II*. Prerequisite for Mu 1250: Mu 1249.
- Mu 2249, 2250 Sophomore Double Bass (0-1) . . . . . 2 hours each**  
 This is a continuation of Mu 1250, and the minimum requirements include these: 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. Prerequisite: Mu 1250.
- Mu 1251, 1252 Freshman Classical Guitar (0-1) . . . . . 2 hours each**  
 This is a course designed for the music education major whose primary instrument is classical guitar or for elective credit. Representative instructional materials include standard classical guitar literature from all periods of music, including transcriptions. Representative materials include: *Classical Guitar Method*, Mateo Carcassi (Carl Fischer edition); *Guitar School, Vol. 1*, E. Pujol; *Diatonic Major and*

*Minor Scales* (A. Segovia); the selection for any one semester is based on the student's need in relation to his previous study and current ability as determined by the teacher. Prerequisite: demonstrate knowledge of fingerboard; know diatonic major and minor scales. Terrega method is preferred. Prerequisite for Mu 1252: Mu 1251.

**Mu 2251, 2252 Sophomore Classical Guitar  
(0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1252. Representative instructional materials continue with standard literature from all periods of music, including these: 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, Pence, Mudarra, Frescobaldi, Rameau, Torroba, Turina, etc. Prerequisite for Mu 2252: Mu 2251.

**Mu 1253, 1254 Freshman Bassoon**

**(0-1) . . . . . 2 hours each**  
This course is designed for the music education major or minor whose primary instrument is bassoon or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 80, in various articulations. Representative repertoire will be chosen from the complete works of Weissenborn *Op. 8*, the Jancourt *Studies*, and solos selected from Group I listing of the University Interscholastic League. Prerequisite for Mu 1254: Mu 1253.

**Mu 2253, 2254 Sophomore Bassoon**

**(0-1) . . . . . 2 hours each**  
This course is a continuation of Mu 1254, and the minimum representative requirements are these: all scales to be played from memory in eighth notes at M.M. 160, in various articulations, all major scales in broken thirds to be played from memory in eighth notes at M.M. 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. Prerequisite: Mu 1254.

**Mu 1255, 1256 Freshman Flute**

**(0-1) . . . . . 2 hours each**  
This course is designed for the music education major or minor whose primary interest is flute or for elective credit. The minimum technical requirements are these: all

scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 80, in various articulations. Representative repertoire to be 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*. Prerequisite for Mu 1256: Mu 1255.

**Mu 2255, 2256 Sophomore Flute**

**(0-1) . . . . . 2 hours each**  
This course is a continuation of Mu 1256, and the minimum representative requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 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. Prerequisite for Mu 2255: Mu 1256.

**Mu 1257, 1258 Freshman Clarinet**

**(0-1) . . . . . 2 hours each**  
This course is designed for the music education major or minor whose primary instrument is clarinet or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations. Representative repertoire will be 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. Prerequisite for Mu 1258: Mu 1257.

**Mu 2257, 2258 Sophomore Clarinet**

**(0-1) . . . . . 2 hours each**  
The requirements are these: all scales to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 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. Prerequisite for Mu 2257: Mu 1258.

**Mu 1259, 1260 Freshman Oboe**

**(0-1) . . . . . 2 hours each**  
This course is designed for the music major

or minor whose primary instrument is oboe or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations; all major scales in broken thirds played from memory in eighth notes at M.M. 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. Prerequisite for Mu 1260: Mu 1259.

**Mu 2259, 2260 Sophomore Oboe  
(0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1260, and the minimum representative requirements are these: all scales to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 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. Prerequisite for Mu 2259: Mu 1260.

**Mu 1261, 1262 Freshman**

**Saxophone (0-1) . . . . . 2 hours each**  
This course is designed for the music education major or minor whose primary instrument is saxophone or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 80, in various articulations. Additional technique will be taken from *Selected Studies* by Rubank, Pares *Scale Studies* and others. Solo literature will be selected from the Group I listing of the University Interscholastic League. Prerequisite for Mu 1262: Mu 1261.

**Mu 2261, 2262 Sophomore**

**Saxophone (0-1) . . . . . 2 hours each**  
This course is a continuation of Mu 1262, and the minimum representative requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds are to be played from memory in eighth notes at M.M. 100, 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. Prerequisite for Mu 2261: Mu 1262.

**Mu 1263, 1264 Freshman French  
Horn (0-1) . . . . . 2 hours each**

This course is designed for the music education major or minor whose primary instrument is French horn or for elective credit. The minimum technical requirements are these: all scales to be played from memory in eighth notes at M.M. 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 80, in various articulations. Additional technical studies will be taken from Alphonse, *Book I*; Pottag, *Preparatory Melodies*; and the Kopprasch, *Book I*. Representative solo literature will be selected from the Group I listing of the University Interscholastic League. Prerequisite for Mu 1264: Mu 1263.

**Mu 2263, 2264 Sophomore French  
Horn (0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1264, and the minimum representative requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 100, in various articulations. Continuation of technical studies will be taken from the Alphonse, Pottag, and studies from band and orchestra literature. Representative solos to be selected from the works of Gootwald, Painter, Mozart, Scarmolin, Wessel, Whitteman, and various transcriptions for the horn. Prerequisite for Mu 2263: Mu 1264.

**Mu 1265, 1266 Freshman Trombone or  
Baritone (0-1) . . . . . 2 hours each**

This course is designed for the music education major or minor whose primary instrument is trombone or baritone or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 80, in various articulations. Representative repertoire is to be chosen from the studies of Mueller, Kopprasch, Manila, Rochut, and Arban. The solo literature will be selected from the Group I listing of the University Interscholastic League. Prerequisite for Mu 1266: Mu 1265.

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### **Mu 2265, 2266 Sophomore Trombone or Baritone (0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1266, and the minimum representative requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 100, in various articulations; continuation of the technical studies taken from Kopprasch, *Etudes*; Harvey, *Advanced Studies*; Rochut, *Etudes*, and Mueller, *Technical Studies*. Representative solos will be taken from the works of Guilmant, Zimmerman, Pryor, Simmons, and transcriptions for the trombone or baritone. Prerequisite for Mu 2265: Mu 1266.

### **Mu 1267, 1268 Freshman Cornet or Trumpet**

#### **(0-1) . . . . . 2 hours each**

This course is designed for the music education major or minor whose primary instrument is cornet or trumpet or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in various articulations. Representative repertoire will include etudes and technical studies from Arban, and St. Jacome, the Hering *Thirty-two Etudes*, and the Clark *Technical Studies*, and solos selected from the Group I listing of the University Interscholastic League. Prerequisite for Mu 1268: Mu 1267.

### **Mu 2267, 2268 Sophomore Cornet or Trumpet (0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1268, and the minimum representative requirements are these: all scales to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 100, in various articulations. Additional etudes and technical studies should include St. Jacome, *Book II*; Sachse, 100 *Etudes*; Voxman, *Selected Studies*; and Williams, *Transposition Studies*; and representative solos such as those of Balay, Fitzgerald, Hindemith, and Busser. Prerequisite for Mu 2267: Mu 1268.

### **Mu 1269, 1270 Freshman Tuba**

#### **(0-1) . . . . . 2 hours each**

This course is designed for the music education major or minor whose primary instrument is tuba or for elective credit. The minimum technical requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 120, in

various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 80, in various articulations. Additional technical studies will be taken from the Eby *Method for Tuba* and the Hering *Thirty-two Etudes*. Representative solo literature will be selected from the Group I listing of the University Interscholastic League. Prerequisite for Mu 1270: Mu 1269.

### **Mu 2269, 2270 Sophomore Tuba**

#### **(0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1270, and the minimum representative requirements are these: all scales and arpeggios to be played from memory in eighth notes at M.M. 160, in various articulations; all major scales in broken thirds to be played from memory in eighth notes at M.M. 100, in various articulations. Additional technical studies will be taken from the Eby *Method for Tuba*, and the Rochut *Etudes, Volume I*; and special transposition studies will be undertaken. Representative solo literature will be selected from the original works for tuba and available transcriptions. Prerequisite for Mu 2269: Mu 1270.

### **Mu 1271, 1272 Freshman**

#### **Percussion (0-1) . . . . . 2 hours each**

This course is designed for the music education major or minor whose primary instrument is percussion or for elective credit. The minimum technical requirements are these: completion of the twenty-six 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 timpani using the Goodman *Modern Method for Timpani* for two timpani; and instruction in the correct method of playing the accessory instruments. Prerequisite for Mu 1272: Mu 1271.

### **Mu 2271, 2272 Sophomore**

#### **Percussion (0-1) . . . . . 2 hours each**

This course is a continuation of Mu 1272, and the minimum representative requirements are these: continued instruction on the timpani to include three and four kettles; additional technical studies to be taken from the Seitz *Modern School of Timpani Playing*, and the orchestral literature; advanced rudimental solos for the snare drum and multiple percussion solos including the playing of the trap set; beginning instructions of the mallet instruments to be taken from the Xylophone with appropriate solos to be chosen from the literature. Prerequisite for Mu 2271: Mu 1272.

## Nursing

### Faculty

Ann Winn, chairman, Odessa Career Ladder Nursing Program; Dorothy Cook, Celia Harris, Betty Jackson, Marilyn Kelly, Rebecca Marcus, Eva Mauldin, Maxine Parks, Karen Paterno, Janet Phillips, Eileen Piwetz, Robbie Rogers, Clara Usrey.

Norma Drennon, chairman, Kermit Vocational Nursing Program.  
Glenda Locker, chairman, Pecos Vocational Nursing Program.

Odessa College offers a comprehensive nursing program in both Licensed Vocational Nursing and in Associate Degree Nursing through its career ladder program. In addition, there are two non-credit vocational nursing programs located in Pecos and Kermit.

The vocational nursing programs in Pecos and Kermit are twelve-month programs 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 for admission well in advance.

The career ladder program on the Odessa College campus is designed to allow the student maximum flexibility in education. A student has 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. Level II prepares the Associate Degree Nurse, who qualifies, to write the licensing examination for Registered Nurse. Successful completion of Level II also qualifies the student to receive the Associate in Applied Science Degree. Classes are admitted in the Fall and Spring semesters to Level I and the Fall semester for Level II.

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. English language proficiency is essential. Because of limited enrollment, students are urged to apply as early as possible before the date of proposed admission.

For admission, applicants should apply to the college and to the chairman of the respective Nursing Program. There is no discrimination due to sex, race, cultural background or ethnic origin.

The nursing programs focus on the nursing care of patients/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. The student must satisfy the objectives for the respective level with a minimum grade of 70 or "C" in each required course. A student may be required to withdraw from a course(s) if unsafe practice(s) is identified in the care of patients. Consideration is given to persons of all age groups and socio-cultural backgrounds. Hospital experiences are scheduled during day and evening hours.

Each student must be covered by health and accident insurance. Students are responsible for their own transportation to the clinical facilities. The Department of Nursing assumes no responsibility for students employed in an agency. A student is personally responsible and liable for any activity participated in while employed. Professional liability insurance purchased by a student may be valid in the student role and not in the employment role.

The vocational programs are accredited by the Board of Vocational Nurse Examiners, while 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 Texas Education Agency.

**Vocational Nursing**  
**(Pecos and Kermit Extension Centers Only)**

**Course of Study**

Personal and Vocational Adjustments	Mental Health — Mental Illness
Microbiology	Pharmacology
Anatomy and Physiology	Medical and Surgical Nursing
Nutrition	Geriatrics
Nursing Skills	Obstetrics and Pediatrics

**Career Ladder Nursing**

**Course of Study for Nursing (All Levels)**

**Level I\***

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Biol 1301	.....	.3	Biol 1302	.....	.3
Nu 1201	.....	.2	Nu 1002	.....	.10
Nu 1801	.....	.8	Nu 1302	.....	.3
Nu 1301	.....	.3			<i>16 S.H.</i>

*16 S.H.*  
**Third Semester**

(If summer session, lasts 12 weeks)

Course	Sem. Hrs.
Nu 1703	.7
Nu 1303	.3

**Level II\*\***

**Level II\*\***

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Biol 2403	.....	.4	Psy 2302	.....	.3
Engl 1311	.....	.3	Soc 1301	.....	.3
Psy 1301	.....	.3	Govt/Hist	.....	.3
PE	.....	.1	PE	.....	.1
Nu 2701	.....	.7	Nu 2702	.....	.7

**Midwinter Session**

Course	Sem. Hrs.
Engl 1312	.3

(H.Ed. 1301 may be substituted for the two 1-hour PE courses)

\*Students successfully completing Level I are eligible to write the State Board Examination for licensure as a Vocational Nurse.

\*\*Students successfully completing Level II are eligible to write the State Board Examination for licensure as a Registered Nurse.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

- Nu 1002 Care of Patients with Unstable Health Conditions I (10-0) . . . .10 hours**  
This course provides learning opportunities to develop practical abilities required for assessing, identifying, and meeting the nursing requirements of hospitalized patients with medical/surgical conditions. Also special skills required for meeting the basic needs of maternity patients during pregnancy, labor and delivery, and care of the newborn are presented. Theory includes content relevant to caring for patients in all age groups and varied cultural backgrounds. Prerequisites: Nu 1801, Nu 1301, Nu 1201, Biol 1301. Corequisites: Nu 1302 and Biol 1302.
- Nu 1201 Pharmacology (2-0) . . . . .2 hours**  
This course prepares the student to recognize selected drug classifications and their action, to identify common drugs within each classification, and some important implications for their administration. Co-requisites: Biol 1301, Nu 1801, and Nu 1301.
- Nu 1301 Basic Nursing Practicum (0-19) . . . . .3 hours**  
The clinical component of Nu 1801. Experiences in the hospitals, geriatric facilities and day care centers are correlated with classroom instruction and provide an opportunity for the student to practice basic skills under the supervision of an instructor. The student will assist, support, and teach patients/clients of all ages and varied cultural backgrounds to meet individual needs. Corequisites: Biol 1301, Nu 1201, Nu 1801.
- Nu 1302 Clinical Practicum (0-21) . .3 hours**  
The clinical component of Nu 1002. This course provides clinical experiences in acute care settings to develop intermediate and advanced nursing skills in caring for patients of varied ages and cultural backgrounds with unstable health conditions; i.e., medical-surgical, pediatric, and obstetrical nursing. Prerequisites: Biol 1301, Nu 1201, Nu 1801, and Nu 1301. Corequisites: Biol 1302 and Nu 1002.
- Nu 1303 Clinical Practicum (0-22.5 in Spring, 0-30 in Summer) . . . . .3 hours**  
The clinical component of Nu 1503. This course provides clinical experiences in the hospital setting and opportunities for the student to use course theory in care of hospitalized medical-surgical patients of varied age and cultural backgrounds. Prerequisites: Biol 1302, Nu 1002, and Nu 1302. Corequisites: Nu 1703.
- Nu 1703 Care of Patients with Unstable Health Conditions II (7-0) . . . . .7 hours**  
Theory includes applications of scientific principles and practice using the nursing process for total nursing care of patients with unstable medical, surgical and obstetrical problems. This course assists the student in preparing for the role of the vocational nurse. Prerequisites: Biol 1302, Nu 1002, and Nu 1302. Corequisite: Nu 1303.
- Nu 1801 Basic Nursing (7-3) . . . . .8 hours**  
This theory course prepares the student to perform selected basic nursing procedures for patients with self-care limitations and stable health deviations. Communication skills and medical terminology are an integral part of this course, as are legal and ethical responsibilities. There will be an introduction to observing, recording, and reporting; the process of beginning problem-solving; medical asepsis; nutrition and fluids; administration of medications; growth and development; and maternal health. Corequisites: Biol 1301, Nu 1301, and Nu 1201.
- Nu 2701 Nursing Care of Patients with Critical Health Deviations (4-12) 7 hours**  
The student's goal is to apply, review, and bring together previous knowledge in caring for more acutely ill patients in the hospital environment. The student will be expected to recognize all aspects of a patient's problem (i.e., human needs in the face of crisis, regulatory and body systems problems). Operating room nursing is included. Care is planned and given in critical care units. Prerequisites: Nu 1703 and Nu 1303. Corequisite: Biol 2403.
- Nu 2702 Complex Health and Nursing Problems (3-16) . . . . .7 hours**  
The theory component of this course introduces the student to patients of various age groups and cultural backgrounds having overt psychiatric illnesses and to agencies concerned with community health care. The student also has the 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. The clinical aspect of this course implements the theoretical content. Prerequisites: Nu 2701 and Biol 2403.

## **Office Education**

### *Faculty*

**Kay Rutherford, chairman; Billie Duncan, Rita Hurst,  
Carol Lemen, Nancy Sturges.**

The Office Education program is a personalized instructional system designed to offer the student intensified individualized study.

A student may begin the program at the start of regular semesters or on any quarter date. (Quarter dates for Office Education are listed in the current class schedule.)

Students have the option of completing intensified Core Course programs in Office Careers or in Secretarial Careers. These intensified programs can be completed in nine months if started in a fall semester. A Certificate of Technology program may be completed in 16 weeks. Students will attend class for five consecutive hours between 8 a.m. and 3 p.m., Mondays through

Fridays during the fall and spring semesters.

Students wishing to take a less intensified program and/or individual courses, may take any course offered. These classes are offered between 8 a.m. and 3 p.m. Mondays through Fridays; and 6 p.m. until 9 p.m. Mondays through Thursdays during fall and spring terms.

The summer instructional schedule is Mondays through Thursdays.

All students will be advised on their individual program course sequence based on their present skills level and desired goals. Individual advisement will be in Room 227 of the Instructional Building and registration will be through the regular college procedure.

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

#### **Office Career Core Course**

Semester Length Courses:	Sem. Hrs.	Semester Length Courses:	Sem. Hrs.
OE 1401 or 1402 .....	.4	OE 1402 or 1403 .....	.4
OE 1404 .....	.4		
Eight-Week Courses:	Sem. Hrs.	Eight-Week Courses:	Sem. Hrs.
OE 1201 .....	.2	OE 1206 .....	.2
OE 1202 .....	.2	OE 1207 .....	.2
OE 1203 .....	.2	OE 1208 .....	.2
OE 1204 .....	.2	OE 1301 .....	.3
OE 1205 .....	.2	OE 1302 .....	.3
		*Approved electives .....	.4

\*Approved Electives: OE 1303, 2401, 2403, or 2404

(After completion of the core program the following general courses will be required to complete the Applied Science Degree:)

#### **General Course Requirements**

Course	Semester Hours	Course	Semester Hours
Engl 1311 and Spch 2340 .....	.6	BA 1301 .....	.3
Govt 2302 .....	.3	Eco 1301 .....	.3
PE .....	.2	EDP 1301 .....	.3
Math 1301 .....	.3	*Approved Elective .....	.3-4

\*Approved Electives: Biol 1401; Engl 1101, 1102, or 1312; Geol 1401 or 1402; Spch 2340.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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

**Secretarial Careers Core Courses**

Semester Length Courses:	Sem. Hrs.	Semester Length Courses:	Sem. Hrs.
OE 1401 or 1402	.4	OE 1402 or 1403	.4
OE 2401 or 2402	.4	OE 2402 or 2403	.4
OE 1404	.4		

Eight Week Course:	Sem. Hrs.	Eight Week Course:	Sem. Hrs.
OE 1201	.2	OE 1206	.2
OE 1202	.2	OE 1208	.2
OE 1203	.2	OE 1301	.3
OE 1204	.2	OE 1302	.3
OE 1205	.2		

(After completion of the core program, the following courses will be required to complete the Applied Science Degree:)

**General Course Requirements**

Course	Sem. Hrs.	Course	Sem. Hrs.
Engl 1311 and Spch 2340	.6	EDP 1301	.3
Govt 2302	.3	BA 1301	.3
PE	.2	BA 2311	.3
Math 1301	.3	Eco 1301	.3
*Approved Elective	.3-4		

\*Approved Electives: Biol 1401; Engl 1101, 1102 or 1312; Geol 1401 or 1402; Spch 2340.

Students will be placed in typewriting based on the proficiency level attained in high school courses and/or demonstrated by placement tests.

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of 18 semester hours of office education courses prescribed by the department chairman.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**OE 1201 Business Math I (3-2)**  
**(8 Weeks) . . . . . 2 hours**  
 This course develops skill and accuracy in fundamental problems of business mathematics. It also applies basic skills to actual business situations. Prerequisite: None.

**OE 1202 Business Math II (3-2)**  
**(8 Weeks) . . . . . 3 hours**  
 This course provides an intensive review of fundamental mathematical operations: addition, subtraction, multiplication, division, fractions, decimals, and percentage. Computational skills relating to interest, discount, payroll, depreciation, expense accounts, retail selling, etc., are stressed. Shortcut methods and the ability to work with speed and accuracy are developed. Prerequisite: OE 1201.

**OE 1203 Filing (1-4)**  
**(8 Weeks) . . . . . 2 hours**  
 This course aids the student to develop an understanding of the necessity for orderly record keeping. Students will acquire a working knowledge of rules and principles of alpha-numeric and geographic systems.

**OE 1204 Office Practice (1-4)**  
**(8 Weeks) . . . . . 2 hours**  
 This course introduces the student to the study of modern office practices which affect office workers. It gives an overview of procedures necessary in office work, the importance of good human relations, management of financial records, necessity for proofreading, and acquaintance with secretarial reference materials. Prerequisite: OE 1401.

- OE 1205 Business Correspondence (1-4)**  
**(8 Weeks) . . . . . 2 hours**  
This course develops skill in writing letters of request, response, sales, and collection. Further skills are developed in writing follow-up letters, brief reports, and in filling out applications. Prerequisite: OE 1206 and OE 1401.
- OE 1206 Business English (3-2)**  
**(8 Weeks) . . . . . 2 hours**  
This course gives the student basic skills in English grammar, punctuation and style. Prerequisite: None.
- OE 1207 Office Machines I (1-4)**  
**(8 Weeks) . . . . . 2 hours**  
This course teaches the touch method of operating ten-key machines and electronic display calculators. The course also provides practice in the use of machines for mathematical problem solving. Prerequisite: None.
- OE 1208 Office Machines II (1-4)**  
**(8 Weeks) . . . . . 2 hours**  
This course teaches the touch method of operating the electronic printing calculator. Mathematical problem application and practice are stressed. Prerequisite: None.
- OE 1210 Typewriting Skills for Non-Majors (1-4) (16 Weeks) . . . . . 2 hours**  
This course is offered for the students in non-business programs. The purpose of the course is to teach touch method of typewriting to accommodate the student in both personal and vocational typing. It does not stress production speed. Prerequisite: None.
- OE 1301 Machine Transcription (2-4)**  
**(8 Weeks) . . . . . 3 hours**  
This course is designed to help the student use transcription equipment efficiently. The student also will learn techniques and procedures for using correct punctuation and correct letter and report forms. The main purpose of this course is to develop the transcribing art. Prerequisite: OE 1401.
- OE 1302 Office Simulation (2-4)**  
**(8 Weeks) . . . . . 3 hours**  
This course focuses on the application of business and human relations skills in a simulated office environment. Skills are developed, applied and integrated in actual job training. Emphasis is on initiative, interaction, follow-through, and flow of work. Prerequisites: OE 1204, OE 1401.
- OE 1303 Introduction to Word Processing (1-5) (16 Weeks) . . . . . 3 hours**  
This course introduces the student to the principles and purposes of word processing, including the effect of automated office equipment, the efficiency of automated office equipment, the role of the secretary in an automated office, and career opportuni-

ties for people with word processing skills. The student will process business communications using a memory typewriter and a transcribing machine. Prerequisites: OE 1402 (may be taken concurrently) or type 45 WAM.

- E 1309 Clerical Record Keeping (1-5)**  
**(16 Weeks) . . . . . 3 hours**  
This course provides individual, office job-training sequences for selected entry-level jobs in record keeping. Students select individual training programs and must complete a required number of them in order to gain a wide range of clerical skills. Prerequisite: None.
- OE 1401 Beginning Typewriting (1-5)**  
**(16 Weeks) . . . . . 4 hours**  
This course develops touch-method skills in the alphabetical keyboard, which also includes numbers, symbols, and service mechanisms. Also included is an introduction to the 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**  
This course is designed for those students who have had typewriting in high school or who have had beginning typewriting. Practice includes composing business letters, typing business letters, tabulating materials, and typing manuscripts. Prerequisite: OE 1401.
- OE 1403 Advanced Typewriting (1-5)**  
**(16 Weeks) . . . . . 4 hours**  
This course is designed for students who wish to increase their typewriting speed and their knowledge of business forms. It 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**  
This course prepares the 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 2401 Beginning Shorthand (1-5)**  
**(16 Weeks) . . . . . 4 hours**  
This is a complete course in ABC or Gregg shorthand. Theory, dictation, and transcription are presented. Special attention is given to correct formation of shorthand symbols and brief forms. Correct phrasing, reading, writing, and transcribing of shorthand characters are practiced extensively. Prerequisite: None.

- OE 2402 Intermediate Shorthand (1-5)**  
**(16 Weeks) . . . . . 4 hours**  
 A complete course in ABC or Gregg shorthand theory, dictation, and transcription is offered. Emphasis is placed on speed building and transcribing accurately written shorthand notes. Prerequisite: OE 2401, OE 1401.
- OE 2403 Office Style Dictation & Skill Building (1-5) (16 Weeks) . . . . . 4 hours**  
 The purpose of this course is to increase speed and accuracy in taking dictation, in transcribing, and in typewriting. Prerequisite: OE 2401 or 2402.
- OE 2404 Elementary Machine Shorthand (1-5) (16 Weeks) . . . . . 4 hours**  
 This course includes mastery of the steno-

graphic keyboard by the touch system. Training on the keyboard will include 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**  
 This course includes a review of basic theory of shorthand; development of automatic recall of brief forms, derivatives, and phrasing principles; development of speed and accuracy through drills and rests; and drill on intermediate phonetic patterns, reading practice, and simple reversal forms. Prerequisite: OE 2404, OE 1401.

## Operating Room (Surgical) Technology

Faculty  
 Val Jumper,  
 chairman.

This program prepares graduates to function in the operating room as surgical technicians under the direction of an operating room registered nurse. The 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. During the second semester, anatomy and physiology is introduced and the practicum is greatly expanded to give the student skills in general surgery.

The six week summer session allows the student to perfect skills under supervi-

sion and provides for rotation through the common specialities. Upon graduation a certificate of completion is awarded.

Admission requirements to the program include high school graduation or G.E.D. certificate, good mental and physical health, manual dexterity, satisfactory score on 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 and spring semesters must be made in advance. The number of students is limited, and those who apply early will be considered first.

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

#### First Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Biol 1100 . . . . .	.1	Biol 1403 . . . . .	.4
ORT 1401 . . . . .	.4	ORT 1302 . . . . .	.3
ORT 1411 . . . . .	.4	ORT 1602 . . . . .	.6
HD 2301 . . . . .	.3	H.Ed. . . . .	.3
Biol 1400 . . . . .	.4		

#### Summer Session First Term

Course	Sem. Hrs.
ORT 1503 . . . . .	.5

## 104 Operating Room (Surgical) Technology

Second Year			
First Semester		Second Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Biol 2403	.4	Engl 1312	.3
Engl 1311	.3	Psy 1301	.3
Govt 2301	.3	Govt or Hist 2301	.3
Math 1313	.3	Mgt 2302	.3
Spch 1310	.3	PE	.1
PE	.1		

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

### Course of Study for Certificate

First Semester		Second Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Biol 1100	.1	Biol 1403	.4
ORT 1401	.4	ORT 1302	.3
ORT 1411	.4	ORT 1602	.6
Psy 1201	.2	H.Ed. 1301	.3
Biol 1400	.4		

### Summer Session (First Six Weeks)

Course	Sem. Hrs.
ORT 1503	.5

#### 1302 Principles of Operating Room

**Technology (3-0) .3 hours**  
In-depth study of operating room techniques, surgical procedures, record keeping, and the responsibilities of the operating room technician.

#### 1401 Introduction to Operating Room

**Techniques (4-0) .4 hours**  
An introduction to the career of operating room technician, including terminology, weights and measures, medical-legal aspects, ethics, and hospital and operating room environment.

#### 1411 Operating Room Technology

**Practicum (0-12) .4 hours**  
Beginning skills in maintaining safe environment, patient safety, transportation of patients, care of instruments, aseptic technique, and related nursing procedures.

#### 1602 Operating Room Technology

**Practicum II (0-18) .6 hours**  
Assignments in surgery for experience in all the commonly done procedures, with opportunity to develop confidence as knowledge progresses.

#### 1503 Operating Room Technology

**Practicum III (0-40) .5 hours**  
Extended clinical experience with rotation through the surgical specialties.

## Physical Education

### Faculty

L. E. McColloch, chairman; Virginia Brown, Susie Girard, Ken Hefner, Pat Hodges, Betty Hudson, Bill Lawrence, John Pellikan, Barry Rodenhaver, James Segrest, Ed Sunderland, James Yeakel.

Physical education is the sum of all those changes that take place in individuals as a result of movement experience.

The principle objectives of this department are: (1) to develop the student's

neuromuscular skill and organic system through movement experiences, (2) to increase the student's knowledge, insight, understanding and interest in movement experiences, and finally, (3) to improve the

student's recreational and leisure time skills as well as his standards of behavior in these selected movement areas.

Since movement is the medium through which this department achieves its objectives, the student has several opportunities

to select those movement experiences (from 25 different areas in the physical education curriculum) which will best contribute to his well-being, his leisure time skills, and to his total educational development.

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	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 1313 or 1341		.3
*PE (Activity)		.1	*PE (Activity)		.1
PE 1301		.3	**Elective		.3

**Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Biol 1403		.4	Engl (Sophomore Level)		.3
Engl (Sophomore Level)		.3	Govt 2302		.3
Govt 2301		.3	Elective		.3
*PE (Activity)		.1	*PE (Activity)		.1
H.Ed. 1301		.3	**Elective		.3
**Elective		.3	**Elective		.3

\*Students majoring in Physical Education in preparation for a teaching career are required to take four semesters of activity classes in the following areas:

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 1 class of gymnastics or tumbling | 1 class of individual activity |
| 1 class of team activity          | 1 class of dance activity      |

Athletics are not to be counted as part of the 4 activity classes for PE majors.

\*\*Electives are to be selected from the following 3-hour classes based on senior institution requirements:

- PE 1302, PE 2301, PE 2302, PE 2303, PE 2304,  
Psy 1301, Soc 1301, Spch 1310, H.Ed. 1301, H.Ed. 2301.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's 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. Major students should also consider the requirements of the senior college to which

they intend to transfer and plan their junior college scholastic schedule accordingly.

Physical Education activity classes  
meet 3 hours weekly for 1 semester  
hour credit. An activity class may be  
repeated once for credit.

## 106 Physical Education

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 1117 Camping (0-3) . . . . .	1 hour	
PE 1119 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 (0-3) . . . . .	1 hour	
PE 2148 Modern Dance: Theatre Dance Form (0-3) . . . . .	1 hour	
PE 1149 Physical Conditioning (0-3) . . . . .	1 hour	
PE 1153 Racquetball (0-3) . . . . .	1 hour	
PE 1156 Recreational Sports (0-3) . . . . .	1 hour	
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 1166 Swimming and Diving (0-3) . . . . .	1 hour	
PE 1169 Tap Dancing (0-3) . . . . .	1 hour	
PE 1171 Tennis, beginning (0-3) . . . . .	1 hour	
PE 1172 Tennis, advanced (0-3) . . . . .	1 hour	
PE 1174 Trampoline (0-3) . . . . .	1 hour	
PE 1176 Volleyball (0-3) . . . . .	1 hour	
PE 1178 Skiing (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 1301 Orientation in Health, Physical Education and Recreation (3-0) . . . . .	3 hours	
This course is a study of the aims, objectives, curriculum and the philosophical and historical orientation of physical education, health education, and recreation. The acquisition of motor skills, the relationship of education principles of practice, and the		
psychological, sociological, and biological aspects are also studied. Prerequisite: None.		
PE 1302 Camping and Outdoor Education (2-2) . . . . .	3 hours	
This course will cover the general aspects of camping and survival in the wilderness. Topics will include camp crafts, ecology, campsite preparation, back-packing, edible plants, compass orientation, and map reading. The course will include a special project and outdoor laboratory experience. Camping fee charged. Prerequisite: None.		
PE 1303 Movement and Recreation (2-1) . . . . .	3 hours	
This course consists of recreational activity training in basic movement skills, movement exploration, apparatus work, manipulative activities, rhythmic activities, basic stunts and tumbling, perceptualmotor experiences and simple games applied to children on the lab site. Prerequisite: None.		
PE 2301 The Techniques of Officiating Sports, Part I (2-2) . . . . .	3 hours	
This course is a study of the effective officiating methods and techniques for basketball, volleyball, and track. The areas of study include the following: protest, forfeits, injuries, mechanics, rules, postponements, tournaments, and officials associations. Prerequisite: Consent of the instructor.		
PE 2302 The Techniques of Officiating Sports, Part II (2-2) . . . . .	3 hours	
This course is a study of the effective officiating methods and techniques for gymnastics, tennis, and golf. The areas of study include the following: protest, forfeits, injuries, rainy day scheduling, postponements, rules, mechanics, tournaments, and officials associations. Prerequisite: consent of instructor.		
PE 2303 The Techniques of Coaching Sports, Part I (2-2) . . . . .	3 hours	
This class is a study of the fundamental skills, individual and team play, organization of practices, and handling of teams during the competitive season of basketball, volleyball, and track. Prerequisite: consent of instructor.		
PE 2304 The Techniques of Coaching Sports, Part II (2-2) . . . . .	3 hours	
This class is a study of the fundamental skill, individual and team play, organization of practices, and handling of teams during the competitive season for gymnastics, golf, and tennis. Prerequisite: consent of instructor.		
<b>Health Education</b>		
H.Ed. 1301 First Aid (3-0) . . . . .	3 hours	
This course consists of Multi-Media, CPR,		

and Standard American Red Cross First Aid. It covers such areas as transportation of the injured, bandaging, and prevention of injuries. Prerequisite: None.

**H.Ed. 2301 Personal and Community Health (3-0) ..... 3 hours**

This is a course for Physical Education majors which presents a study of body organs and systems, individual health problems, health concepts, public health organizations, and social problem and services. Prerequisite: None.

**Physics** *Faculty*  
**Rayford Ball, chairman; Dr. Ashok Khosla.**

The Department of Physics has as its principal objective the training of physicists at the junior college level. In addition, it seeks to provide for certain other majors

the foundation in the fundamental physical principles which are necessary for effective work in engineering, medicine, dentistry, chemistry, and technology.

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

**First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
EDP 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**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	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 twelve 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 the student's first semester.

**Phys 1301 Music**

**Acoustics (3-0) ..... 3 hours**  
This course is a study of sound as related to speaking, singing, and to playing musical instruments. It 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**  
This course is a study of classical mechanics, molecular physics and heat with application. It is for students of medicine, dentistry, veterinary medicine, optometry, biology, and architecture. A knowledge of elementary algebra and trigonometry is needed. Prerequisite: None.

## **108 Physics**

<b>Phys 1402 College Physics II</b>	
(3-3) .....	.4 hours
This course is a study of classical electricity, magnetism, mechanical wave motion, optics, and practical aspects of modern physics. Prerequisite: Phys 1401.	
<b>Phys 1403 Engineering Physics I</b>	
(3-3) .....	.4 hours
This course is a study of classical mechanics and thermo-dynamics for the student who aspires to professional academic degrees in the fields of physical science, the various engineering specialties, and mathematics. Prerequisite or corequisite: Math 2331.	

<b>Phys 2401 Engineering Physics II</b>	
(3-3) .....	.4 hours
This course is a study of classical electricity and magnetism from a theoretical and engineering application viewpoint. Prerequisite: Physics 1403. Prerequisite or corequisite: Math 2333.	
<b>Phys 2402 Engineering Physics III</b>	
(3-3) .....	.4 hours
This course is a study of mechanical and electromagnetic wave motion from the classical viewpoint and a semi-quantitative study of modern physics. Engineering applications of these subjects are stressed. Prerequisite: Phys 2401.	

## **Psychology, Sociology and Education**

*Faculty*  
Gordon Gillette,  
chairman; Mary  
Barker, Georgann  
Wemple.

This department furnishes the foundation courses for those students preparing for elementary and secondary school teaching 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 most 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.

The State of Texas sets the 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 work at Odessa College so as to take those courses which the senior college requires at the freshman and sophomore levels.

### **Course of Study for Associate in Arts Degree in Psychology**

		<b>First Year</b>	
<b>First Semester</b>	<b>Sem. Hrs.</b>	<b>Second Semester</b>	<b>Sem. Hrs.</b>
Course		Course	
Engl 1311 .....	.3	Engl 1312 .....	.3
Hist 2301 .....	.3	Hist 2302 .....	.3
Math 1341 .....	.3	PE .....	.1
PE .....	.1	Soc 1301 .....	.3
Psy 1301 .....	.3	Elective .....	.3
		Math 1343 or 1361 .....	.3

**Second Year**

Third Semester		Fourth Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Biol 1401, Chem 1301 and 1101 or Phys 1401 . . . . .	.4	Phys 1402 . . . . .	.4
Engl (Sophomore Level) . . . . .	.3	Engl (Sophomore Level) . . . . .	.3
Govt 2301 . . . . .	.3	Govt 2302 . . . . .	.3
Phil 2301 . . . . .	.3	PE . . . . .	.1
PE . . . . .	.1	*Elective . . . . .	.3
Psy 2303 . . . . .	.3	Psy 2302 . . . . .	.3

\*Approved electives: Soc 2301; Eco 2301; Math 1343; Psy 2301; Soc 2302; or Soc 2304.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Course of Study for Associate in Arts Degree  
in Sociology**

**First Year**

First Semester		Second Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Engl 1311 . . . . .	.3	Engl 1312 . . . . .	.3
Hist 2301 . . . . .	.3	Hist 2302 . . . . .	.3
Math 1341 . . . . .	.3	PE . . . . .	.1
PE . . . . .	.1	Psy 1301 . . . . .	.3
Soc 1301 . . . . .	.3	Elective . . . . .	.3
*Approved Elective . . . . .	.3	Math 1343 or 1361 . . . . .	.3

**Second Year**

Third Semester		Fourth Semester	
Course	Sem. Hrs.	Course	Sem. Hrs.
Biol 1401, Chem 1301 and 1101, or Phys 1401 . . . . .	.4	Biol 1402, Chem 1302 and 1102, or Phys 1402 . . . . .	.4
Engl (Sophomore Level) . . . . .	.3	Engl (Sophomore Level) . . . . .	.3
Govt 2301 . . . . .	.3	Govt 2302 . . . . .	.3
*Approved Elective . . . . .	.3	PE . . . . .	.1
PE . . . . .	.1	*Approved Elective . . . . .	.3
Soc 2303 . . . . .	.3		

\*Approved Electives: Phil 2301; Soc 2301; Soc 1302; Soc 2302; Soc 2304; Eco 2301; Psy 2302.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**110 Psychology, Sociology and Education****Course of Study for Associate in Arts Degree  
in Elementary Education**

First Semester		Second Year	
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 1341 or 2311	.3	Math 1343 or 2313	.3
PE	.1	PE	.1
Spch 1310	.3	Psy 1301	.3

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 or Th 2350	.3
Physical Science (Chem 1301 & 1101, Ea Sc 1401 or Geol 1401)	.4	PE	.1
		Psy 2302	.3

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Course of Study for Associate in Arts Degree  
in Secondary Education**

First Semester		Second Year	
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 1341 or 2311	.3	Math 1343 or 2313	.3
Psy 1201	.2	PE	.1
PE	.1	Psy 1301	.3
Spch 1310	.3		

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, Ea Sc 1401, Geol 1401 or Phys 1401)	.4	Soc 1301	.3

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Psy 1301 Introduction to Psychology**  
(3-0) ..... 3 hours  
Basic problems and principles of experience and behavior are studied. Included topics are heredity and environment, growth and development, learning and conditioning, remembering and forgetting, 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  
This course emphasizes a study of the psychological principles and methods which are most important in the practical control of human behavior. Applications of psychology for increasing human efficiency, improving personalities, and harnessing the emotions are studied. Prerequisite: Psy 1301.

**Psy 2302 Child Psychology (3-3) . . . 3 hours**  
Emphasis is placed upon the development processes, including biological and environmental factors which shape the personality and affect the achievement of the child from pre-natal through pre-adolescence. Laboratory requirements consist of observation and study of children. Prerequisite: None.

**Psy 2303 Social Psychology (3-0) . . . 3 hours**  
A survey of the research and theories dealing with a study of human behavior in social situations. Topics include attitudes, prejudices, interpersonal attraction, group behavior, conformity, motivation, and conflict. The student may elect the subject area heading appropriate to his major. The student 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  
This course provides the student with the basic concepts of sociology and emphasizes the relationship of culture and social interaction to group behavior. It includes an analysis of social organization, deviant behavior, urbanization, and social change. Prerequisite: None.

**Soc 1302 Sociology of the Family**  
(3-0) ..... 3 hours  
Sociological analyses are made of human relationships pertaining to the varied aspects of courtship, mate selection, and marital adjustment with a study of the problems of adjustment in each stage of the life cycle. Prerequisite: None.

**Soc 2301 Social Problems (3-0) . . . 3 hours**  
This course applies sociological concepts to the analysis of current social problems, including 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**  
A study of the principal minority groups in American Society and their sociological significance; problems of inter-group relations, social movements, and related social

changes and the theories explaining such changes. Prerequisite: Soc 1301, or consent of the instructor.

**Soc 2303 Social Psychology**  
(3-0) ..... 3 hours  
A survey of the research and theories dealing with a study of human behavior in social situations. Topics include attitudes, prejudice, interpersonal attraction, group behavior, conformity, motivation, and conflict. The student may elect the subject area heading appropriate to his major. The student 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  
This course provides the student with an introduction to basic research designs utilized by those in the social and behavioral sciences. Topics will include the basic steps of the scientific methods, description and analytical studies, methods of data collection, use of available data collection, use of available data, and analysis and interpretation. Prerequisite: Math 1361 or Math 1343, and Psy 1301 or Soc 1301. Offered only in Spring Semester of even numbered years.

## Radiologic (X-Ray) Technology

The college offers a cooperative program with the local hospitals designed to provide understanding, proficiency, and skill in Radiologic Technology.

The program is approved by the American Medical Association, Council on Medical Education and the Joint Review Committee on Education in Radiologic Technology. Upon completion of the program the student is granted an Associate in Applied Science Degree and is eligible to apply for the certification examination given by the American Registry of Radiologic Technologists in diagnostic X-ray technology.

The program curriculum is a balance of general educational and technical courses as well as supervised practicum work at local hospitals. These provide the student an opportunity for educational development as well as occupational competence during the 24-month program.

**Faculty**  
**Kay Flood, chairman; Sue Leach, Rick Fleetwood, and Dr. William Melton, lecturers.**

Because practicum space is limited, students are admitted on a selective basis. To be considered for selection for the beginning second summer session, the student must be a high school graduate or equivalent; achieve a satisfactory score on selected college entrance examinations; show evidence of good physical and mental health; have character references and approval by admissions committee for the program. The student must maintain a "C" average in all Radiologic Technology courses and an average of "C" in all courses or be dropped from the program.

Applicants or those seeking additional information should contact the Radiologic Technology Program Director at the college. Applicants are encouraged to submit their applications by May 30 for review by the Admissions Committee.

### Course of Study for Associate in Applied Science

#### Summer Session

##### Second Term

Course	Sem. Hrs.
XT 1304 . . . . .	.3
XT 1214 . . . . .	.2
Math 1313 . . . . .	.3

##### First Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
XT 1401 . . . . .	.4	XT 1402 . . . . .	.4
XT 1321 . . . . .	.3	XT 1422 . . . . .	.4
XT 1111 . . . . .	.1	XT 1112 . . . . .	.1
Biol 1403 . . . . .	.4	Engl 1311 . . . . .	.3
*PE . . . . .	.1		

#### Summer Session

##### First Term

Course	Sem. Hrs.	Course	Sem. Hrs.
XT 1223 . . . . .	.2	XT 1224 . . . . .	.2
Govt/Hist 2301 . . . . .	.3	Engl 1312 or Spch 2340 . . . . .	.3

##### Second Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
XT 2401 . . . . .	.4	XT 2402 . . . . .	.4
XT 2421 . . . . .	.4	XT 2522 . . . . .	.5
XT 2111 . . . . .	.1	XT 2112 . . . . .	.1
*PE . . . . .	.1	Mgt 1301 . . . . .	.3

## Summer Session

## First Term

Course	Sem. Hrs.
XT 2223 . . . . .	2
XT 2203 . . . . .	2

\*H.Ed. 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 twelve 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 the student's first semester.

**XT 1111 Procedures & Positioning**

**Laboratory (0-2) . . . . . 1 hour**

Students will participate in an integrated study of medical terminology, topographic anatomy, patient care, osteology; and the positioning of the skull, thoracic cage, vertebral spine, and contrast media procedures. Prerequisite: XT 1214. Corequisites: XT 1401 and XT 1321.

for certain X-ray examinations. Prerequisite: XT 1223.

**XT 1112 Exposure Techniques &**

**Positioning Laboratory (0-2) . . . . . 1 hour**

Students will participate in an integrated study of medical terminology, patient care, and positioning of the trauma patient. Special techniques such as stereoradiography and body-section radiography, are discussed, demonstrated, and practiced. Laboratory experiments to involve factors influencing film quality will be presented. Prerequisite: XT 1111. Corequisites: XT 1402 and XT 1422.

**XT 1304 Introduction to Radiologic Technology (3-0) . . . . . 3 hours**

An introduction to the field of radiologic technology, basic radiation protection, professional ethics, darkroom procedures, medical terminology, prime exposure factors, and the technical factors of film quality as well as an introduction to the basic physics of X-ray equipment and auxiliary devices will be presented. Corequisite: XT 1214.

**XT 1214 Introduction to Positioning**

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

Fundamentals of radiographic positioning and the terminology used to describe radiographic projections will be presented. Standard radiographic projections of the thorax and extremities are discussed and demonstrated. Students produce standard radiographs on radiographic phantoms. Corequisite: XT 1304.

**XT 1321 Clinical Practicum (0-16) . . . . . 3 hours**

This is an introduction to the clinical environment at the major facility. Students will rotate through different work areas to observe the operation of the X-ray department. Anatomy and physiology as they relate to radiography will be discussed as well as physics, professional ethics, and the critique of X-ray films. The student will take radiographs of the chest, abdomen, and extremities under close supervision of a qualified technologist. A clinical introduction to fluoroscopic examinations also is offered. Prerequisite: XT 1214. Corequisites: XT 1401 and XT 1111.

**XT 1223 Clinical Practicum (0-32) . . . . . 2 hours**

This practicum will place emphasis on the practice of basic radiographic procedures in positioning, on darkroom techniques, and on becoming more professional in the use of anatomical terms. Students will take all standard radiographs under limited supervision. They assist qualified technologists in obtaining radiographs on trauma patients. Prerequisite: XT 1422.

**XT 1401 Radiographic Physics (4-0) 4 hours**

An analysis of physical principles related to matter, energy, basic electricity, magnetism, induction principles and transformers, basic X-ray circuits, methods of rectification, and the construction of X-ray accessories. The physical principles of X-ray production, interaction of X-rays in matter, and methods of X-ray detection and measurement will also be presented. Prerequisite: XT 1304. Corequisites: XT 1321 and XT 1111.

**XT 1224 Clinical Practicum (0-32) . . . . . 2 hours**

This practicum will further emphasize the practice of specific positioning of the area to be X-rayed, recognition of the structure and organs visualized, and understanding of the normal functions of organs as a basis

**XT 1402 Principles of Radiographic Exposure (4-0) . . . . . 4 hours**

Discussion of the characteristics of radiographic film construction, design of radiographic darkrooms, and manual and automatic processing techniques. A study of advanced radiographic principles including

## 114 Radiologic (X-Ray) Technology

- a review of prime exposure factors, technic formation, and conditions influencing exposure factors with emphasis on radiation protection. Image quality and quality assurance will be stressed. Prerequisite: XT 1401. Corequisites: XT 1422 and XT 1112.
- XT 1422 Clinical Practicum (0-24) . .4 hours**  
Students take standard radiographs of the chest and extremities under limited supervision, and standard radiographs of the spine, skull, and sinuses under close supervision by a qualified radiologic technologist. Students will assist the radiologist with fluoroscopic examinations. Prerequisite: XT 1321. Corequisites: XT 1402 and XT 1112.
- XT 2111 Advanced Positioning Laboratory (0-2) . .1 hour**  
This is an introduction to equipment, anatomy, and basic procedures for invasive special procedures. Study of the relationship of organs to one another is included. Other topics presented will be Thermography and Xeroradiography. Prerequisite: XT 1112. Corequisites: XT 2401 and XT 2421.
- XT 2112 Special Procedures Laboratory (0-2) . .1 hour**  
Students will participate in an integrated study of the various imaging modalities utilized in radiography and related fields. A complete review of radiographic anatomy and film critique will be presented. Prerequisite: XT 2111. Corequisites: XT 2402 and XT 2522.
- XT 2203 Registry Review (2-0) . .2 hours**  
This course will be a comprehensive review of major subject areas in preparation for the national examination. Prerequisite: XT 2402. Corequisite: XT 2223.
- XT 2223 Clinical Practicum (0-32) . .2 hours**  
This practicum will further emphasize the practice of specific positioning of the area to be X-rayed, recognition of the structure and organs visualized, and basic understanding of the normal functions of organs
- as a basis for certain X-ray examinations. Prerequisite: XT 2522. Corequisite: XT 2203.
- XT 2401 Advanced & Special Radiographic Procedures (4-0) . .4 hours**  
Special radiographic procedures acquaint the student technologist with the specialized and highly technical procedures in radiology. Conversion factors are stressed so the student can compensate for varied working situations. Reactions and contraindications of contrast media and nursing procedures pertinent to radiology will also be presented. Topics of study include radiation therapy and nuclear medicine. Prerequisite: XT 1402. Corequisites: XT 2421 and XT 2111.
- XT 2402 Radiation Biology & Pathology (4-0) . .4 hours**  
This course is designed to further train the student technologist in common procedures in radiography with stress on radiation biology and pathology. General administrative duties of departmental work and department design will also be included. Topics of study include computerized tomography and ultrasound. Prerequisite: XT 2401. Corequisites: XT 2522 and XT 2112.
- XT 2421 Clinical Practicum (0-24) . .4 hours**  
Students will assist qualified technologists with special procedures, and special radiographic techniques. Equipment maintenance will be stressed. Radiotherapy and nuclear medicine rotations will occur with orientation and practice sessions for students familiarization. Prerequisite: XT 1224. Corequisites: XT 2401 and XT 2111.
- XT 2522 Clinical Practicum (0-32) . .5 hours**  
This practicum will further emphasize the practice of specific positioning of the area to be X-rayed. Special training will be given in the use of the CT scanner, ultrasound, and other special and emergency procedures. Prerequisite: XT 2421. Corequisites: XT 2402 and XT 2112.

### Reading

*Faculty*

Dr. Imogene Freer, chairman; Jean McColloch, Dawn Mulholland.

An effective citizen must read well, and reading courses develop efficient tools to use in today's world of words. These courses are an implementation of 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 department is an investment in self; anyone, no matter what kind of grades he makes, can improve his reading skills.

All professional fields need 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  
 College reading enables all readers to improve their rate of speed and comprehension on various types of materials. Diagnosis of reading strengths and weaknesses, timed reading practices, short lectures, study skills, and vocabulary study will improve work in other courses. Prerequisite: None.

**Read 1302 Advanced College Reading**

(3-0) ..... 3 hours  
 Independent work continues and maintains improvement in rate of speed and comprehension skills. There is further individualization as each student follows a program designed to meet his specific needs. Prerequisite: Read 1301.

**College Reading Techniques**

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 ascertain the reading performance level and to determine specific areas for improvement. After diagnosis, a self-paced plan of action is developed through student-instructor conferences to set immediate and long-range goals.

**Read 1101 Improving Reading Skills**

(0-24) ..... 1 hour  
 The function of Improving Reading Skills is to improve the student's ability to understand his relationship with the academic demands of the College. Following diagnosis, the student will be taught study skills, vocabulary skills, reading skills, listening skills, and spelling skills in an individualized setting. Prerequisite: None.

importance of vocabulary and the degree of comprehension he may expect when reading in a variety of materials at a variety of speeds. Prerequisite: Consent of the instructor.

**Read 1102 Improving Reading Flexibility**

(0-12) ..... 1 hour  
 The function of Improving Reading Flexibility is to make the student aware of the

**Read 1103 Improving Reading Rate and Comprehension (0-12)** ..... 1 hour  
 The function of this course is to provide the student an opportunity to become a trained, successful reader, one who can handle large amounts of written material by emphasizing purpose, concentration, recall, good vocabulary, and rapid reading. Prerequisite: Consent of the instructor.

**Real Estate***Faculty***Sid Streicher, chairman; Ernestine Browning.**

The primary objective of the Real Estate program is to prepare students for full-time employment in the Real Estate field. The completion of this program will lead to an Associate in Applied Science Degree in

Real Estate. All courses in Real Estate are designed to provide basic employment skills for individuals seeking employment in real estate as well as to upgrade those presently employed in the industry.

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

Course	First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Engl 1311	.....	.3	Engl 1312	..... .3
Math 1311 or More Advanced	.....	.3	Govt 2301	..... .3
Mgt 1301	.....	.3	Mgt 2303	..... .3
PE	.....	.1	PE	..... .1
RE 1301	.....	.3	RE 1303	..... .3
RE 1302	.....	.3	RE 1304	..... .3
			RE 1305	..... .3

<b>Second Year</b>			
<b>Third Semester</b>		<b>Fourth Semester</b>	
Course	Sem. Hrs.	Course	Sem. Hrs.
Eco 1301	.3	BA 2311	.3
Mgt 1303	.3	RE 2117	.1
RE 2301	.3	RE 2303	.3
RE 2302	.3	RE 2304	.3
Govt 2301	.3	RE 2305	.3
		Approved Elective	.3

**Approved Electives:** Any other Real Estate Course; any other Mid-Management Course; any other Business Administration course; any other Economics course.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**RE 1301 Principles of Real Estate**

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

This course is a general introduction to real estate as a profession. It includes the study of land and real estate, concepts of home ownership, the functions of the real estate broker and the legal aspects of titles and contracts. The Texas Real Estate License Act is covered in detail. The course includes three hours of instruction on the 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

This course is designed to provide the student with the basic knowledge and skills necessary to demonstrate an application of cost, income, and market data approaches to real property value. It includes an examination of the nature of real property value, the functions and purposes of appraisal, and the methods of estimating residential market value. Prerequisite: None.

**RE 1303 Real Estate Finance**

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

This course is designed to provide the student with the basic knowledge involved in real estate financing and investment. It includes a study of the institutions involved in real estate financing, the risks involved in financing real estate transactions, the instruments of financing, the terminology of financing, and real property taxation. Prerequisite: None.

**RE 1304 Real Estate Law**

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

This course is a study of the principles of the laws which govern interests in real estate. It includes the concepts of acquisition,

encumbrance, transfer, rights and obligations, and the state and federal statutes which apply to those concepts. The course will help the student analyze the 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

This course completes the general introduction to real estate begun in RE 1301. It includes the study of title transfer, records, real estate financing, leases, property appraisal and development, and residential construction. Prerequisite: RE 1301.

**RE 2117 Real Estate Internship**

(1-20) ..... .1 hour

The student is required to work at least 20 hours per week in a paid, part-time job in an approved firm. Real estate broker's offices, title companies, real estate mortgage companies, and building construction companies are examples of firms which normally will be approved as internship training stations. Students must be employed in occupational situations in which they receive practical training and experience compatible with their real estate career objectives. Enrollment in this course is limited to those students who have not had prior real estate work experience. Instruction will include a one-hour seminar and 20 internship hours each week. Prerequisite: No less than 15 semester hours of course work in Real Estate courses.

**RE 2301 Real Estate Sales and Marketing**

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

This course is designed to provide the student with the knowledge and skills needed in the effective selling of real estate. The

course covers the opportunities in real estate, the basic elements of listing property, the basic elements of the offer between buyer and seller, and the basic elements of financing property. Each student will be required to establish a workable prospect system and to design a sales presentation book for listing and selling property. Prerequisite: RE 1301.

**RE 2302 Real Estate Investment**

(3-0) ..... 3 hours  
This course is designed to develop in each student an understanding of the characteristics and benefits of real estate investment. It covers 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  
This course is designed to provide the student with the knowledge and skills needed in managing income producing property. It includes the utilization of sound accounting and reporting principles; the securing, qualifying, and contracting of tenants and lessees; the legal aspects of property

management; and the maintenance, rehabilitation, renovation, and remodeling of income-producing properties. Prerequisites: RE 1301 and RE 1304.

**RE 2304 Real Estate Brokerage**

(3-0) ..... 3 hours  
This course is a study of the factors necessary in the establishment and operation of a real estate sales and brokerage office, including required terminology and the salesperson-broker relationships. The course will prepare the student 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  
This course is designed to provide the student with an opportunity to solve practical problems encountered in the real estate profession. The students will work in small groups with each student filling a different real estate position in the group. Each group will participate in problems which are assigned by the instructor and which will cover various facets of real estate practice. Prerequisite: Individual approval of the instructor.

## Refrigeration and Air Conditioning

*Faculty*  
Norman Witcher,  
chairman; James Bates.

The heating and air conditioning industry is one of the fastest growing 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	Sem. Hrs.	Second Semester	Sem. Hrs.
Course		Course	
Math 1313, 1321, or More Advanced	.3	DT 1401 or Engr 1301	.4 or 3
R/AC 1401	.4	R/AC 1303	.3
R/AC 1302	.3	R/AC 1405	.4
R/AC 1304	.3	R/AC 1306	.3
R/AC 1312	.3	R/AC 2301	.3
*PE	.1	*PE	.1

**Second Year**

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course		Course	
Govt 2301 or 2302	.3	Engl 1312 or Spch 2340	.3
Engl 1311	.3	R/AC 2304	.3
R/AC 2302	.3	R/AC 2408	.4
R/AC 2303	.3	R/AC 2409	.4
R/AC 2405	.4	**Approved Elective	.3

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\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses.

\*\*Approved electives may be any R/AC courses not already required; AT 2602; Mgt 2303; BA 1301, WT 1601; Math 1323 or higher; Read 1301; any II; ET 1401, 1403, 1404, 2403, 2406, 2407, 2408, 2410.

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight semester hours in R/AC courses.

Students enrolling in Refrigeration/Air Conditioning may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

### **Refrigeration and Air Conditioning**

#### **Solar Energy Option**

The field of solar energy is one of the newest, and yet oldest, fields under the sun. This course of study covers the systems of the ancient Aztecs to the modern tracking heating and cooling systems used today. This course is designed to prepare the technician to work in the solar field.

The student at the end of this course of study should be able to design, size, build, install, and maintain solar systems. All types of solar systems will be covered active, passive, air, liquid, and greenhouse.

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

##### **First Year**

Course	First Semester	Sem. Hrs.	Course	Second Semester	Sem. Hrs.
Math 1313, 1321 or More Advanced . . .	3		R/AC 1405 . . . . .	4	
R/AC 1401 . . . . .	4		R/AC 1306 . . . . .	3	
R/AC 1302 . . . . .	3		R/AC 2400 . . . . .	4	
R/AC 1304 . . . . .	3		R/AC 2301 . . . . .	3	
DT 1401 or Engr 1301 . . . . .	4 or 3		*PE . . . . .	1	
*PE . . . . .	1				

##### **Second Year**

Course	Third Semester	Sem. Hrs.	Course	Fourth Semester	Sem. Hrs.
Govt 2301 or 2302 . . . . .	3		Engl 1312 or Spch 2340 . . . . .	3	
Engl 1311 . . . . .	3		R/AC 1406 . . . . .	4	
R/AC 2302 . . . . .	3		R/AC 2407 . . . . .	4	
R/AC 2303 . . . . .	3		R/AC 2408 . . . . .	4	
R/AC 2405 . . . . .	4		R/AC 2409 . . . . .	4	

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses.

\*\*Approved electives may be any R/AC courses not already required or: AT 2602.

Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight semester hours in R/AC courses.

Students enrolling in Solar Energy may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

**R/AC 1302 Basic Control Theory**

(3-1) ..... 3 hours

This course begins with basic electricity. It progresses to electric motors, design and function of starters, contactors, relays, capacitors, overloads, and control circuits as applied to the refrigeration and air conditioning industry. Prerequisite: None.

**R/AC 1303 Refrigeration and Air Conditioning Component Analysis**

(3-1) ..... 3 hours

This course deals with refrigeration and air conditioning components. It is designed to give the student an understanding in the theory and application of metering devices, evaporators, compressors, condensers, driers, sight glasses, and system accessories. Prerequisite: R/AC 1401.

**R/AC 1304 Air Conditioning Fundamentals**

(3-1) ..... 3 hours

This course deals with gas controls, properties of gas and gas piping, gas combustion, gas burners, gas trouble shooting, and venting for heating and absorption (gas) refrigeration systems. This is an indepth study in procedure of servicing and correcting difficulties with gas-fired equipment. Prerequisite: None.

**R/AC 1306 Heat Pump Theory**

(3-1) ..... 3 hours

This is an applied course which will give the student an understanding of heat pumps, sizing, installation, servicing, and troubleshooting. Duct sizing problems, advantages, and special applications of the heat pump will also be studied. Prerequisite: R/AC 1401.

**R/AC 1401 Refrigeration Theory**

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

This is a course in theory and is designed to give students a sound, basic understanding of heat transfer, behavior gases, the refrigeration cycle, component parts of the compression refrigeration machine and its accessories. Prerequisite: None.

**R/AC 1405 Fundamentals of Sheet Metal Pattern Drafting and Layout**

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

This course covers the principles of basic sheet metal. The use of sheet metal tools, basic sheet metal layout, and the building of basic sheet metal components will be studied. Prerequisite: None.

**R/AC 2301 Advanced Control**

**Theory** (3-1) ..... 3 hours

This course offers the students theory and application in design of both primary and secondary electrical systems used in the refrigeration and air conditioning industry. Prerequisite: R/AC 1302.

**R/AC 2302 Refrigeration and Air Conditioning Analysis**

(3-1) ..... 3 hours

This course is designed to prepare students to rate and select refrigeration and air conditioning equipment, design air distribution systems using psychometrics, and estimate loads of both residential and commercial applications. Prerequisite: None.

**R/AC 2303 Electronic Control**

**Theory** (3-1) ..... 3 hours

This is an applied course which will give the student an understanding of semi-conductors, diodes, resistors, thermistors, thermocouples, rectifiers, and amplifiers used in the refrigeration and air conditioning industry. Prerequisite: R/AC 1302.

**R/AC 2304 Refrigeration and Air Conditioning Trouble Shooting**

(3-1) ..... 3 hours

This course of study will include trouble shooting the complete refrigeration and air conditioning system. It will cover both the electrical system and refrigeration cycle. Prerequisite: R/AC 1401.

**R/AC 2400 Solar Power (3-3) ..... 4 hours**

This is an applied course in the use of solar power for heating and cooling. This course will give the student an understanding of solar history, application of solar power today, and the possible future use of solar power. This is a practical course in sizing collectors, in sizing storage units, and in sizing exchange units. Both active and passive units will be studied. Prerequisite: None.

**R/AC 2405 National Electric Code**

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

This is an applied course which will cover the National Electrical Code as applied to the refrigeration and air conditioning industry. Prerequisite: None.

**R/AC 2406 Advanced Solar Power**

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

This course in solar will deal with complex solar systems. The student will learn to build, install, maintain, and evaluate the operation and 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**

This course covers the advanced principles of sheet metal. The use of sheet metal tools, sheet metal layout, and the building of complete sheet metal systems will be studied. Prerequisite: R/AC 1405.

**R/AC 2408 Special Problems (3-3) .4 hours**

Students will be assigned special problems to meet specific needs. Modern techniques

## **120 Refrigeration and Air Conditioning**

will be emphasized. All assignments will be made on an individual basis. Prerequisite: R/AC 1401 and R/AC 1302.

### **R/AC 2409 Building Energy Audit**

**Training (3-3) . . . . . 4 hours**  
This course will cover methods of perform-

ing a building energy audit, identification and evaluation of the energy conservation options available, and stating the savings opportunities in an understandable fashion. Prerequisite: None.

## **Respiratory Therapy**

### **Faculty**

**Bob Hertenstein, chairman; Daniel Andrade, Stan Cohn, Dr. Teresita Dujon, Willie Longoria, and Dr. Jayaram Naidu, lecturers.**

Odessa College offers an intensive program in Respiratory Therapy in affiliation with area hospitals. The program is designed to provide a thorough understanding and proficiency in all facets of pulmonary care. This relatively new profession in paramedical fields of medicine includes working with life-support systems and respiratory rehabilitation of the pulmonary cripple.

The program curriculum balances general educational and technical courses with supervised clinical work in local hospitals under the direction of registered therapists. Medical direction is provided by an M.D. proficient in the field of pulmonary medicine. This setting provides the student an excellent opportunity for educational development, as well as occupational competence during the full two-year course of study.

Students are admitted prior to each fall 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 en-

trance examination, evidence of good health, personal interview, character references, and approval of the admissions committee for the program.

The student may not receive a grade lower than "C" in any respiratory therapy 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.

The Respiratory Therapy Program is accredited by the Council of Education of the American Medical Association through the recommendations of the Joint Review Committee for Respiratory Therapy Education. After successful completion of the course of study the student is eligible to sit for the registry exam given by the National Registry for Respiratory Therapy.

Students wishing to apply for admission or seeking additional information should contact the Chairman of the Respiratory Therapy program. Applicants are requested to submit their application before June 15 for review by the Admissions Committee.

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

#### **First Year**

Course	First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Biol 1100		.1	Biol 1403	.4
Biol 1400		.4	RT 1402	.4
RT 1301		.3	RT 1322	.3
RT 1304		.3	RT 1302	.3
RT 1211		.2	Math 1313 or More Advanced	.3

#### **Summer Session**

Course	First Term	Sem. Hrs.	Course	Second Term	Sem. Hrs.
Engl 1311		.3	Engl 1312		.3
Govt/Hist		.3	Psy 1301		.3

**Second Year**

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course RT 2401 . . . . .	.4	Course RT 2402 . . . . .	.4
RT 2221 . . . . .	.2	RT 2222 . . . . .	.2
Chem 1301 . . . . .	.3	Biol 2403 . . . . .	.4
Chem 1101 . . . . .	.1	**EMT 1301 . . . . .	.3
PhSc 1301 . . . . .	.3	Mgt 1301 . . . . .	.3
PhSc 1101 . . . . .	.1		

**Summer Session****First Term**

Course	Sem. Hrs.
RT 2223 . . . . .	.2
RT 2103 . . . . .	.1

\*\*EMT 1301 is substituted for the two required hours of physical education. First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**RT 1211 Fundamentals of Respiratory****Therapy Lab I (0-6) . . . . . 2 hours**

This laboratory will illustrate and reinforce principles and concepts of RT 1302 by allowing students to perform specific experiments using respiratory therapy equipment in simulated clinical situations. The laboratory will aid the student in developing a degree of proficiency of skill prior to performing respiratory therapy modalities on patients. Part of the laboratory will be in the hospital with an instructor. Prerequisite: None. Corequisite: RT 1304.

**RT 1301 Introduction to****Pharmacology (3-0) . . . . . 3 hours**

This course is designed to orient the students to pharmacological principles and their applications in medicine. The course includes general principles of sedatives and hypnotics, analgesics, central nervous system stimulants, drugs affecting the autonomic nervous system and the cardiovascular system and water and salt balance. Prerequisite: None.

**RT 1302 Cardiopulmonary Pathophysiology****(3-0) . . . . . 3 hours**

This course is designed to present to the student the abnormal conditions of the cardiopulmonary system and the effects these conditions produce. It will include: pathophysiology; definition of the various disease processes affecting the cardiopulmonary system; a description of the effects these processes have on the cardiopulmonary system; and a description of the general nature of treatment. Physicians and other recognized professionals will be invited as

guest lecturers in this course. Prerequisites: RT 1301 and RT 1304. Corequisites: Biol 1403.

**RT 1304 Fundamentals of Respiratory****Therapy I (3-0) . . . . . 3 hours**

This course is designed to review the cardiopulmonary anatomy and physiology. The theory and importance of the proper administration and humidification of gases will be stressed. Included will be the theory of gas therapy, oxygen therapy, and environmental devices.

**RT 1322 Clinical Practicum I****(0-25) . . . . . 3 hours**

Under close supervision the student will gain experience in clinical application of respiratory therapy techniques. Prerequisite: RT 1304. Corequisite: RT 1402.

**RT 1402 Fundamentals of Respiratory****Therapy II (3-3) . . . . . 4 hours**

This course is a survey of ventilators and respirators, including basic classification, and principles of operation and maintenance. Included is an introduction to usage in clinical environment, and acid base balance, and airway management. Prerequisite: RT 1304.

**RT 2103 Case Study Seminar****(1-0) . . . . . 1 hour**

This course will consist of case study and journal report presentations. The staff, faculty and students will have the opportunity to discuss and evaluate each presentation.

**RT 2221 Clinical Practicum II****(0-10) . . . . . 2 hours**

Students, under close supervision, will

## **122 Respiratory Therapy**

begin to develop proficiency in administering respiratory therapy procedures and individual skills and techniques. Prerequisite: RT 1322.

### **RT 2222 Clinical Practicum III**

**(0-16) . . . . . 2 hours**

This is a continuation of practicum II. The student will be allowed to perform independently in intensive care, coronary care and throughout the hospital. Specific patients will be assigned to the student to care for through an entire practicum day. The student will give a report about each patient cared for at the end of the practicum day to the clinical instructor. Prerequisite: RT 2221.

### **RT 2223 Clinical Practicum IV**

**(0-40) . . . . . 2 hours**

This clinical practice involves direction of hospital techniques, organization of work schedules, and challenging the department

organization. The student will be required to develop and write behavior objectives and give an in-service education session. A one-hour seminar each week will be held to discuss budgeting, ordering and justifying equipment needs, and other topics related to practicum. Prerequisite: RT 2222.

### **RT 2401 Advanced Respiratory**

**Therapy (3-3) . . . . . 4 hours**

This is a continuation of RT 1402. Included is airway management related to intubation and usage in the clinical environment, as well as pulmonary function and acid-base theory. Prerequisite: RT 1402.

### **RT 2402 Cardiopulmonary Dynamics**

**(3-2) . . . . . 3 hours**

This course is a study of advanced concepts related to electrocardiography, cardiac catheterization, respiratory rehabilitation, and hyperbaric oxygenation. Prerequisite: None.

## **Social Sciences**

### *Faculty*

**Dr. Dick Kennedy, chairman; Brian Dille, Dr. Tom Heiting, Truett Hilliard, Jack Kitzmiller, Robert Porter, Dr. Helen Reinhart, Dr. Bob Sturges, Dr. Kenneth Yelding.**

The Social Sciences deal with the three basic relationships which mankind has dealt with since the dawn of time. Those relationships involve man with his fellow man (History, Economics, and Government); man with himself (Philosophy); and, man with God (Religion). No one could challenge the effect that philosophers, historical events, political theories, economic ideas, or religious concepts have had on the lives of men.

The four-semester curriculum outlined below leads to an Associate in Arts Degree. The Social Sciences provide the

students with the analytical tools needed to become an effective participant in our democratic society, as well as opening the door to various career opportunities. A background in the Social Sciences is particularly suitable to government employment, such as 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**

<b>First Semester</b>		<b>Second Semester</b>	
<b>Course</b>	<b>Sem. Hrs.</b>	<b>Course</b>	<b>Sem. Hrs.</b>
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
PE . . . . .	.1	PE . . . . .	.1
**Approved Elective . . . . .	.3	**Approved Elective . . . . .	.3

\*Hist 2303 may be substituted for either Hist 2301 or 2302.

\*\*Approved electives are Hist 2303, 2304, and Soc 2302.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

**Economics****Eco 1301 Introduction to Economics**

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

This is a broad survey course to permit the average citizen to increase his economic literacy. The course includes a discussion of economic resources, basic economic decisions, the price system, the role of money and banking, the problems of inflation and employment, and other personal and public economic issues. Recommended for Mid-Management majors and students who want a general knowledge of economics. May not be taken as a replacement for Economics 2301 and/or 2302. Prerequisite: None.

**Eco 2301 Principles of Economics**

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

This course is designed to provide the student with the fundamental analytic concepts of economic theory and practice. Emphasis is placed on microeconomic theory. Topics include 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

This course attempts to provide the student with the basic analytic concepts relevant to the aggregate economy. Emphasis is placed on macroeconomic theory and practice. Topics included in this course are money and banking, national income and employment, economic growth, public spending, and the international economy. Prerequisite: None.

**Government****Govt 2301 State and Federal Government**

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

This course considers the development of political thought, the origin and develop-

ment of the Constitutions of the United States and Texas, federalism, state and local governments, public opinion, interest groups, political parties, and elections. Prerequisite: None.

**Govt 2302 State and Federal Government**

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

This course deals with the legislative, executive and judicial functions of the federal and state governments, the federal bureaucracy, civil rights, foreign policy, and government financing. Prerequisite: None.

**Govt 2303 Introduction to International Relations**

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

The theory and practice of international relations with particular attention to the forces and processes contributing to conflict and cooperation among nations. Prerequisite: None.

**Govt 2304 Introduction to Public Administration**

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

A study of the processes involved in the management of men and materials in the accomplishment of the purposes of government. Analysis of the structure and procedure of the administrative or executive branch of government, with particular reference to national, state, and local governments in the United States. Prerequisite: None.

**History****Hist 1301 History of Modern Europe to 1815**

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

This course surveys the social, economic, and political developments in Medieval and Modern Europe. Special emphasis is placed on the Renaissance, Protestant Reformation, overseas expansion during the sixteenth and seventeenth centuries, the struggle for parliamentary government in England, the French Revolution, and the Napoleonic period. Prerequisite: None.

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### Hist 1302 History of Modern Europe Since 1815 (3-0) ..... 3 hours

This course includes a study of the results of the Napoleonic era, the rise of liberalism and nationalism, the 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

This course deals with such topics as the European background, the establishment of colonial foundations, the rise of American nationality, the growth and sectional crisis, the Civil War, and Reconstruction. Prerequisite: None.

### Hist 2302 United States History from 1877 (3-0) ..... 3 hours

This course deals with the growth of big businesses and the accompanying problems. American imperialism, causes and results of World War I, causes of World War II, and the post-war adjustments and prospective solutions. Prerequisite: None.

### Hist 2303 History of Texas (3-0) ..... 3 hours

This is a survey course of the history of Texas. Topics stressed include European approach to Texas, Spanish and French rivalry, exploration and control, Anglo-American colonization, relations with Mexico, the 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

A brief survey of the role and contributions of Afro-Americans to the development and culture of the United States. Prerequisite: None.

#### Philosophy

### Phil 2301 Introduction to Philosophy (3-0) ..... 3 hours

The introductory course in Philosophy is an adventure in ideas. Ultimate questions about the significance of our lives will be asked anew, and with the insights gleaned from the world's greatest philosophers, each student will seek to clarify their own ideas and beliefs concerning themselves, their world, and their ultimate destiny. Prerequisite: None.

### Phil 2302 Philosophies to Live By (Ethics) (3-0) ..... 3 hours

An introduction to ethical theories based on answers given by the world's great philosophers to the questions, "What makes acts right?" and "what is the good life?" The nature of goodness, duty, and freedom will be discussed and selected ethical problems will be considered in the light of each

of these basic ethical systems. Prerequisite: None.

#### Religion

### Bib 1101 Acts of the Apostles (1-0) ..... 1 hour

This course is a study of the expansion of Christian beliefs, practices, and fellowships from Palestine to outlying parts of the Roman Empire. It includes a personality study of Peter, John, Paul, and other apostles. Prerequisite: None.

### Bib 1301 Old Testament History (3-0) ..... 3 hours

This is an introductory survey of the Old Testament. Emphasis is placed on the historical setting, the types of religious literature, and the religious element underlying the whole. Prerequisite: None.

### Bib 1302 New Testament History (3-0) ..... 3 hours

This introductory survey of the New Testament places emphasis upon the life and teachings of Jesus as found in the Gospels, upon the expansion of early Christianity, with 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

This course is 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

This course consists of a study of the life and ministry of the apostle Paul, and an examination of his writings and central ideas. Prerequisite: None.

### Relg 1301 Philosophy of Religion (3-0) ..... 3 hours

An examination of the nature and meaning of religion and religious expression. Emphasis will be upon the development of religious thinking in western civilization. Typical topics will be faith and reason, religions authority, science and religion, the problems and implications of freedom, evil and conscience. Prerequisite: None.

### Relg 1302 History of Religion (3-0) ..... 3 hours

Historical investigation of the development of the world from prehistory to modern history. Emphasis will be placed upon role of religions in world history. Prerequisite: None.

### Relg 1303 Comparative Religions (3-0) ..... 3 hours

A survey of the religions of the world. Included are status of Hinduism, Buddhism, Confucianism, Taoism, Shinto, Judaism, Christianity and Islam. Prerequisite: None.

**Welding***Faculty*

Duane Nobles, chairman; Jo McMurry, Melton Paysinger.

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 occupa-

tions. 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 a minimum of orientation.

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

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Course DT 1401 or Engr 1301	.4 or 3	Course Math 1313 or 1321	.3
*PE	.1	*PE	.1
WT 1601	.6	WT 1603	.6
WT 1602	.6	WT 1604	.6

**Second Year**

Third Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
Course Engl 1311	.3	Course Engl 1312 or Spch 2340	.3
Mgt 1301	.3	Govt 2301 or 2302	.3
WT 2601	.6	WT 2603	.6
WT 2602	.6	WT 2604	.6

\*H.Ed. 1301 may be substituted for the two 1-hour physical education courses. Students not desiring the AAS degree may receive a Certificate of Technology by completing a minimum of forty-eight hours in WT courses.

Students enrolling in Welding may enroll in HD 1101, Orientation, during their first semester of attendance, complete an orientation seminar at the time of registration, or attend an orientation seminar at a specified time during the student's first semester to meet the orientation requirement.

**WT 1601 Basic Arc Welding**

(2-8) .6 hours

This course is a study of the basic principles and practices involving electric arc welding and acetylene cutting. It includes related theory in the field of metallurgy as it applies to welding on some of the common metals. Orientation, safety, operation and machine maintenance are stressed. Prerequisite: None.

emphasis placed on the proper execution of all-position V-groove carbon steel plate and pipe welding with "open stringer." ASME testing standards will be used. Prerequisite or Corequisite: WT 1601.

**WT 1604 Welding Layout and Fabrication**

(2-8) .6 hours

This course places emphasis on constructing various types of layouts according to specifications. Related theory and practice involved in the fabrication and design of welded fittings and structures will be studied. Prerequisite or Corequisite: WT 1603.

**WT 2601 Advanced Arc Welding**

(2-8) .6 hours

Advanced arc welding includes the execution of all types of welds on various types alloys and the study of electrodes used. A continuation of fabrication and layout techniques with attention devoted to piping, job planning, and cost factors. Major emphasis is placed on the welding of carbon steel

**WT 1602 Basic Acetylene Welding**

(2-8) .6 hours

This course deals with basic oxy-acetylene welding and cutting. It will also include metal preparation for welding. Emphasis will be placed on torches and regulators, flame adjustment for cutting and welding, and safe procedures for handling oxy-acetylene equipment. Prerequisite: None.

**WT 1603 Intermediate Arc Welding**

(2-8) .6 hours

This course includes welding with major

## 126 Welding

plate and pipe with the use of LH 7018 electrodes. Prerequisite: WT 1603.

### WT 2602 Advanced Acetylene

**Welding (2-8) . . . . . 6 hours**  
Advanced acetylene welding deals with the application of hard surfacing, solder, silver solder, brazing, and the advanced usage of a cutting torch. Prerequisite: WT 1602.

### WT 2603 Metallic Inert Gas (MIG) Welding

**(2-8) . . . . . 6 hours**  
This course provides instruction and usage of metallic inert gas welding (MIG) machines on mild steel, aluminum, and stainless steel. The different shield gases will be

studied. The mixture of these gases and their effect upon the arc and welds will be emphasized. Prerequisite or Corequisite: WT 2601.

### WT 2604 Tungsten Inert Gas (TIG) Welding

**(2-8) . . . . . 6 hours**  
This course places emphasis on proper procedures to be used in tungsten inert gas (TIG) welding and carbon arc cutting of various types of metals. Advantages and disadvantages of different shield and purge gases will be studied. Prerequisite or Corequisite: WT 2602.

## 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 pro-

gram 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 Counseling Center.

Course No.	Course Name	Clock Hours	Sem. Hours	Weeks
WT 1841	Basic Arc Welding . . . . .	200	8	10
WT 1842	Intermediate Arc Welding . . . . .	200	8	10
WT 1843	Advanced Arc Welding . . . . .	200	8	10
WT 1544	Basic Acetylene Welding . . . . .	140	5	7
WT 1445	Advanced Acetylene Welding . . . . .	100	4	5
WT 1846	Welding Layout & Fabrication . . . . .	200	8	10
WT 1547	Metallic Inert Gas (MIG) Welding . . . . .	160	5	8
WT 1548	Tungsten Inert Gas (TIG) Welding . . . . .	160	5	8
WT 1449	Blueprint Reading and Drawing . . . . .	100	4	5

Estimated cost of books and safety equipment — \$50-\$100.

### WT 1445 Advanced Acetylene Welding

**[(4-16) for 5 Weeks] . . . . . 4 hours**  
Advanced acetylene welding deals with application of hard surfacing, solder, silver solder, brazing, and the advanced usage of a cutting torch. Prerequisite: WT 1544 or consent of instructor.

### WT 1449 Blueprint Reading and Drawing

**[(4-16) for 5 Weeks] . . . . . 4 hours**  
This course is a study of the fundamental drafting techniques used in the welding industry. Emphasis is placed on fabrication prints, dimensioning, sectional views, symbols, and visualization of objects in a pictorial form. Some shop print drawing will be required. Prerequisite: Consent of instructor.

### WT 1544 Basic Acetylene Welding

**[(4-16) for 7 Weeks] . . . . . 5 hours**  
This course deals with basic oxy-acetylene welding and cutting. It will also include metal preparation for welding. Emphasis will be placed on torches and regulators, flame adjustment for cutting and welding, and safe procedures for handling oxy-acetylene equipment. Prerequisite: Consent of instructor.

### WT 1547 Metallic Inert Gas (M.I.G.) Welding

**[(4-16) for 8 weeks] . . . . . 5 hours**  
This course provides instruction and usage of metallic inert gas welding (M.I.G.) machines on mild steel, aluminum, and stainless steel. The different shield gases will be studied. The mixture of these gases and

their effect upon the arc and welds will be emphasized. Prerequisite: WT 1843 or consent of instructor.

**WT 1548 Tungsten Inert Gas (T.I.G.)**

**Welding [(4-16) for 8 Weeks]** .5 hours  
This course places emphasis on proper procedures to be used in tungsten inert gas (TIG) welding and carbon arc cutting of various types of metals. Advantages and disadvantages of different shield and purge gases will be studied. Prerequisite: WT 1445 or consent of instructor.

**WT 1841 Basic Arc Welding [(4-16) for 10 Weeks]** .....8 hours

This course is a study of the basic principles and practices involving electric arc welding and acetylene cutting. It includes related theory in the field of metallurgy as it applies to welding on some of the common metals. Orientation, safety, operation and machine maintenance are stressed. Prerequisite: Consent of instructor.

**WT 1842 Intermediate Arc Welding [(4-16) for 10 Weeks]** .....8 hours

This course includes welding with major emphasis placed on proper execution of all

position V-groove carbon steel plate and pipe welding with "open stringer." ASME testing standards will be used. Prerequisite: WT 1841 or consent of instructor.

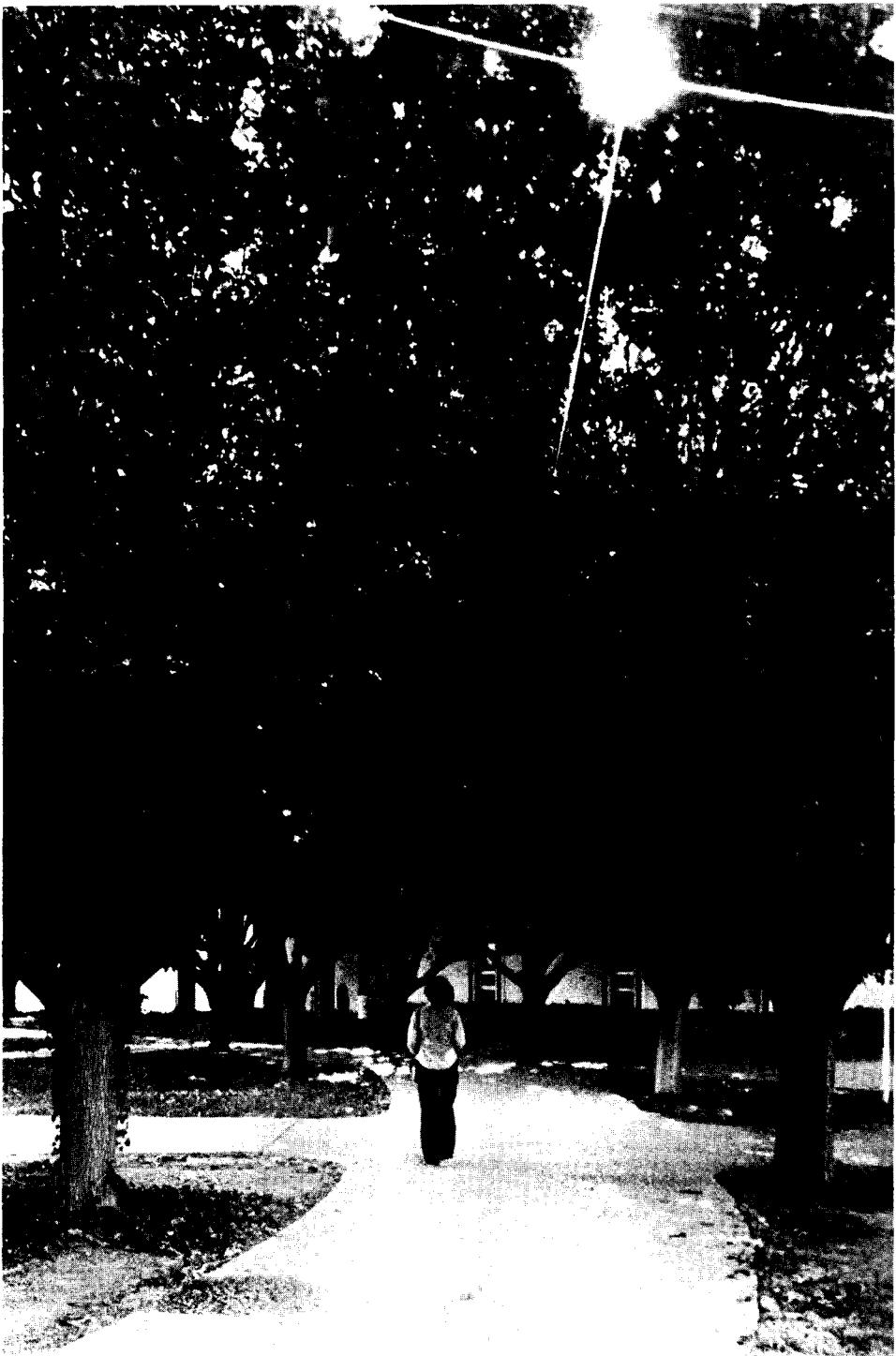
**WT 1843 Advanced Arc Welding [(4-16) for 10 Weeks]** .....8 hours

Advanced arc welding includes the execution of all types of welds on various types of alloys and the study of electrodes used. A continuation of fabrication and layout techniques with attention devoted to piping, job planning, and cost factors. Major emphasis is placed upon the welding of carbon steel plate and pipe with the use of LH 7018 electrodes. Prerequisite: WT 1842 or consent of instructor.

**WT 1846 Welding Layout & Fabrication**

**[(4-16) for 10 Weeks]** .....8 hours  
This course places emphasis on constructing various types of layouts according to specifications. Related theory and practice involved in the fabrication and design of welded fittings and structures will also be studied. Prerequisite: WT 1842 or consent of instructor.

# Admissions



## Admissions Policies

Odessa College has an open-door admissions policy, welcoming all adults who want to learn. Any adult, whether a high school graduate or not, who is 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 a study plan can be drawn for each individual. The Counseling and Testing Center also makes available various types of tests to help students determine their aptitudes, interests, scholastic strengths and weaknesses, and other information that is helpful to a student making a career decision.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the student's first semester.

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 Dean of Admissions at Odessa College as early as possible. They should complete an application for admission and a health form. 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.

Every student seeking admission must furnish the college with proof that he has complied with the Texas Immunization Laws concerning immunization against certain diseases. This includes a tetanus/diphtheria shot taken within the last ten years for every student and polio (oral

vaccine) immunization for all under the age of 19 with the last of the four doses taken after age four.

Students may be admitted to Odessa College by any of the following methods:

- By High School Graduation — Graduates of accredited high schools satisfy the minimum requirements for admission. These students must submit official high school transcripts showing the date of graduation.
- Through Early Admission Program — A high school senior may enroll in a maximum of two courses per semester during the senior year the student is within four units or twelve quarter credits of graduation from high school and has submitted the prescribed documentation signed by the parent or guardian, the high school counselor, and the high school principal.
- By Individual Approval — Any person who is at least 18 years of age and whose class has graduated from high school may be admitted if it is determined that the individual can benefit from a course of study.
- By Written Examination — Persons who have not graduated from high school may be admitted if they have passed the General Educational Development Test (GED), are 18 years of age, have terminated attendance in high school for one or more semesters, and do not plan to return to high school. Proof the GED has been passed must be submitted.
- Re-Entry — Former students in good standing who have not attended another college since enrollment in Odessa College are eligible for readmission.
- By Transfer From Another College — Applicants transferring from another institution are ordinarily eligible for admission if they are eligible for readmission to the institution which they were attending. An official transcript of their college or university record should be submitted prior to registration. Scholastic deficiencies of transfer students will be reviewed by the Dean of Admissions and decision made as to the eligibility of the students for admission on the basis of academic records at the last college in which they were enrolled. Admission of a student who has attended another college or university will be based on the

same procedure as that of any transfer student.

Additional criteria are required for alien or foreign students. Alien students should have achieved the 50th percentile on the Test of English as a Foreign Language (TOEFL). Alien students should also have on deposit in the U.S. the minimum sum of \$2,000 to cover the cost of tuition, books, fees and other expenses for each semester. Each must also present a current visa, passport, and transcripts of academic records from other schools, colleges, or universities which he has attended. These documents must be official and translated into English. Copies will not be accepted.

### **Entrance Examinations**

The college will accept both ACT or SAT for guidance and counseling purposes. Both of these tests are administered on the college campus, and the dates for these tests are announced periodically. Since the results of these examinations are used to help students select correct course levels and for general guidance purposes, all students are advised to take exams at least six weeks prior to their enrollment even though it is not required for admission.

### **Early Registration**

Early registration for a semester means that the student, with the help of college counselors and faculty members, will select the proper courses and complete all registration except for payment of fees.

Students who register early have the option to pay fees during early registration or by a specified date. If a student does not pay and have the early registration bill validated by the deadline date, the student will automatically lose those classes chosen during registration. The student must then register again during the regular registration period.

Early registration begins approximately one to two months prior to the time of regular registration. Exact information may be secured from the Counseling Center. Participation in early registration at the earliest possible time is advantageous by helping students secure the courses they want.

### **Auditing**

Permission to audit a course may be granted by the Dean of Admissions to students who are eligible for admission to the college and who already have received credit for the course. Auditing students are not required to meet course prerequisites listed in the catalog.

Students auditing a course may not under any circumstances claim credit for the course. A student who is registered for a course may not change from audit to credit or credit to audit status in the course after the twelfth class day during long terms or fourth day during a summer term. 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 the established procedure for registering and paying tuition and fees. No person is an official student 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**

Odessa College courses are approved for the training of veterans under public law which makes veterans eligible for educational assistance from the Veterans Administration. A veterans' counselor at the college assists in any matter pertaining to the relationship of students with the United States Veterans Administration and Odessa College. Each veteran, upon enrollment, should contact the Dean of Admissions at Odessa College to obtain certification of enrollment to the Veterans Administration.

### **Change of Address**

When students change residence after registration, they must notify the Registrar's Office immediately. The students are held responsible for any communications mailed to them from the college to the last address which they have supplied the college. Having moved from a previous address does not relieve the student of the

responsibility of requests made through correspondence.

### **Residence Status for Tuition Purposes**

It's the student's responsibility when registering to use the proper residence classification. If there is any question as to right of classification as a resident of Texas or the Odessa College District, it is the student's obligation, prior to or at the time of registration, to raise the question with the administrative officials of the institution in which the student is registering.

Every student who is classified as a resident student but who becomes a non-resident at any time by virtue of a change of legal residence by the student's own action or by the person controlling the student's residence is required to notify immediately the proper Odessa College administrative officials.

Questions concerning residence status should be referred to the Dean of Admissions.

### **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, administration, and the faculty to defend this right and vigorously seek to promote its implementation in all areas of the college.

Odessa College will admit as students any persons, in accordance with college admissions standards, who can benefit from the instructional program offered. In addition, it will strive to meet the post-secondary educational needs of its students by the restructuring of new programs, where such programs will be of benefit to students.

### **Directory Information**

Odessa College classifies 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 education institution attended as directory information. Such information is normally released to individuals upon request. If a student does not want this directory information released, the student must file a written statement to that effect with the Registrar's Office. The statement must be filed each semester.

# Costs



## Financial Information

### Tuition and Fees:

Semester Hours	District Resident	Out of District	In District Nursing	Out of District Nursing	Out of State	Foreign Student
1	32.00	42.00	27.00	36.00	42.00	47.00
2	39.00	50.00	33.00	44.00	64.00	94.00
3	46.00	58.00	39.00	52.00	86.00	141.00
4	53.00	66.00	45.00	60.00	108.00	188.00
5	60.00	74.00	51.00	68.00	130.00	235.00
6	67.00	82.00	57.00	76.00	152.00	282.00
7	74.00	90.00	63.00	84.00	174.00	329.00
8	81.00	98.00	69.00	92.00	196.00	376.00
9	88.00	106.00	75.00	100.00	218.00	423.00
10	95.00	114.00	81.00	108.00	240.00	470.00
11	102.00	122.00	87.00	116.00	262.00	517.00
12	109.00	130.00	93.00	124.00	284.00	564.00
13	116.00	138.00	99.00	132.00	291.00	611.00
14	123.00	146.00	105.00	140.00	298.00	658.00
15	130.00	154.00	111.00	148.00	305.00	705.00
16	137.00	162.00	117.00	156.00	312.00	752.00
17	144.00	170.00	123.00	164.00	319.00	799.00
18	151.00	178.00	129.00	172.00	326.00	846.00
19	158.00	186.00	135.00	180.00	333.00	893.00
20	165.00	194.00	141.00	188.00	340.00	940.00
21	172.00	202.00	147.00	196.00	347.00	987.00

### Tuition Only:

Semester Hours	Texas Resident	Nursing Student	Out of State	Foreign Student
1	25.00	20.00	25.00	40.00
2	25.00	22.00	42.00	80.00
3	25.00	24.00	59.00	120.00
4	25.00	26.00	76.00	160.00
5	25.00	28.00	93.00	200.00
6	25.00	30.00	110.00	240.00
7	29.00	32.00	127.00	280.00
8	33.00	34.00	144.00	320.00
9	37.00	36.00	161.00	360.00
10	41.00	38.00	178.00	400.00
11	45.00	40.00	195.00	440.00
12	49.00	42.00	200.00	480.00
13	53.00	44.00	200.00	520.00
14	57.00	46.00	200.00	560.00
15	61.00	48.00	200.00	600.00
16	65.00	50.00	200.00	640.00
17	69.00	50.00	200.00	680.00
18	73.00	50.00	200.00	720.00
19	77.00	50.00	200.00	760.00
20	81.00	50.00	200.00	800.00
21	85.00	50.00	200.00	840.00

\*Tuition, General Use Fees, Activity Fee, and other fees.

All tuition and fees are due in full at the time of registration. No student may be enrolled in classes until all obligations are paid in full. All tuition and fees are subject to change without notice.

The student is responsible for registering under the correct residency classification. If there is any question regarding status and classification concerning Texas or college district residency, clarification must be received prior to the time of the student's enrollment in Odessa College.

**Deposits and Special Fees**

Applied Music (½ hr.)	20.00
Applied Music (1 hr.)	35.00
Art Metals and Jewelry	10.00
Auto Body	15.00
Auto Mechanics	15.00
Biology	10.00
Building Trades	15.00
Business Machines	10.00
Ceramics	25.00
Chemistry	10.00
Child Development	10.00
Diesel Mechanics	15.00
Earth Science	5.00
Electricity/Electronics	15.00
Electronic Data Processing & Equipment Rental	15.00
Emergency Medical Technology (1402, 2801, 2802)	10.00
Foreign Language (1411 and 1412)	5.00
Geology	5.00
Industrial Instrumentation	15.00
Machine Shop & Equipment Rental	30.00
Medical Lab Technology (1211, 1212, 2211, 2212)	15.00
Nursing (1301, 1302, 1303)	10.00
Photography	10.00
Physical Education (Per Activity Course)	5.00
Physical Education (Camping)	30.00
Physics	5.00
Radio Broadcasting	10.00
Reading (Per Semester Hour)	2.00
Refrigeration and Air Conditioning	15.00
Sculpture	15.00
Shorthand	10.00
Television	10.00
Typewriting	10.00
Welding and Equipment Rental	65.00

**Miscellaneous Fees**

Examination, Advanced Standing	20.00
General Deposit (Refundable)	10.00
Late Registration	5.00
*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

\*Student liability insurance or proof of comparable coverage is required for students enrolled in Child Development, Radiologic Technology, Respiratory Therapy, Medical Technology, Nursing, and Emergency Medical Technology.

**Refund Policy**

**Cancelled Classes.** If a class is cancelled by the college, all tuition and fees for that course will be refunded.

**Dropped Courses.** No refunds will be given when a student drops courses unless the dropped course(s) constitute a complete withdrawal from the college. A student may, however, drop and add comparable courses without charge, as long as the changes are processed at the same time.

**Withdrawal from the College.** When a student drops all courses, that process is termed

withdrawal. If a withdrawal occurs prior to the first day of classes, the college will refund all tuition and fees, less a \$15.00 processing charge. After classes have started, tuition charges and laboratory fees only will be refunded on the following basis:

**Fall and Spring Semester Length Courses**

- During the first week of classes ..... 80 percent
- During the second week of classes ..... 70 percent
- During the third week of classes ..... 50 percent
- During the fourth week of classes ..... 25 percent
- After the fourth week of classes ..... None

Summer, Midwinter, Flexible Entry and other credit courses less than semester length

- During the first class day ..... 90 percent
- During the second class day ..... 70 percent
- During the third class day ..... 50 percent
- After the third class day ..... None

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.

**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 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 7 days of the date notification is mailed to the student. Payment must be made in cash, cashier check, or money order, plus the service charge on the check. The returned check fee is \$10 per check.

**Financial Aid**

Odessa College provides financial assistance to students who have money problems. Scholarships and grants, campus work, and short-term loans are available to meet students' needs. More

than one-half million dollars are disbursed annually through financial aid programs. Students who have special skills and abilities also are awarded scholarships and employment in work programs.

The ACT Family Financial Statement and the accompanying Texas Student Data Form serve as the application for financial aid at Odessa College. They must be submitted for each academic year for which the student requests financial aid. The application forms are available in high school counselors' offices and in the Odessa College Financial Aid Office, Student Union Building, 201 W. University, Odessa, Texas 79762. Additional detailed information regarding financial aid programs will be provided upon request. Please ask for the Financial Aid Bulletin and other publications.

Most programs require a minimum enrollment of six semester hours to be eligible, and students must make satisfactory academic progress to continue receiving financial assistance. Failure to meet standards for two successive semesters will result in termination of financial aid eligibility.

Frequently students receive awards from more than one of the aid programs described below in order to meet the college budget.

**The Basic Educational Opportunity Grant (BEOG)** has been renamed the Pell Grant. Basic Grant applications are made when the ACT Family Financial Statement is submitted or may be filed as a separate application. Awards at Odessa College range from approximately \$200 to over \$1,000 for an academic year. All students who have not received a bachelor's degree are eligible to apply and are encouraged to do so. Many middle-income students qualify for an award. Student enrollment determines the amounts awarded: 6-8 semester hours, one-half the grant; 9-11 hours; three-fourths the grant; and 12 or more hours, full grant.

**The Supplementary Educational Opportunity Grant (SEOG)** is awarded to students whose need is large. The SEOG supplements other aid received by the student and is granted after application and personal consultation. Supplementary Educational Grants vary from \$200 to \$2,000 depending on the student's need.

**The College Work-Study Program** provides on-campus employment for students who can establish eligibility. Wages meet and sometime exceed the minimum wage requirements. Applications are accepted throughout the year for work-study positions.

**The Nursing Student Scholarship and Loan Programs** are administered at Odessa College for nursing students who must have financial support to attend college. Scholarships are granted for school-related needs; loans cannot exceed \$2,500 annually.

**The Texas Guaranteed Loan Program** is a newly established state loan program replacing the Federally Insured Loan Program. Banks, credit unions, and other lending institutions will continue to be lenders and loans will be subsidized interest free to students until six months after they graduate or withdraw from school. After the six-month grace period, the student begins repayment at nine percent annual interest. It is hoped that more loan banks, credit unions, and other lenders will participate in lending to students under the new program.

**The Texas Public Education Grant (TPEG)** is awarded for tuition and other school-related costs. Students whose ACT reveals a need may apply for this grant.

**The Texas Public Education-State Student Incentive Grant (TPE-SSIG)** is for exceptionally needy students who, without this grant, would very likely be unable to attend college. The award is made annually or by semesters to students upon determination of need.

**Valedictorians** are awarded tuition scholarships if application is made the first semester after high school graduation.

**Institutional Scholarships** are awarded to recognize student achievement. The President's Outstanding Student Scholarship is awarded to students for high academic achievement. Both entering freshmen and sophomores are eligible to apply for this award. The Odessa College Career Advancement Scholarship recognizes career-oriented students who receive recommendations from their high school counselors. Odessa College also participates in the Permian Honor Scholarship Program and each year enrolls several recipients of this four year award. A min-

## **136 Costs**

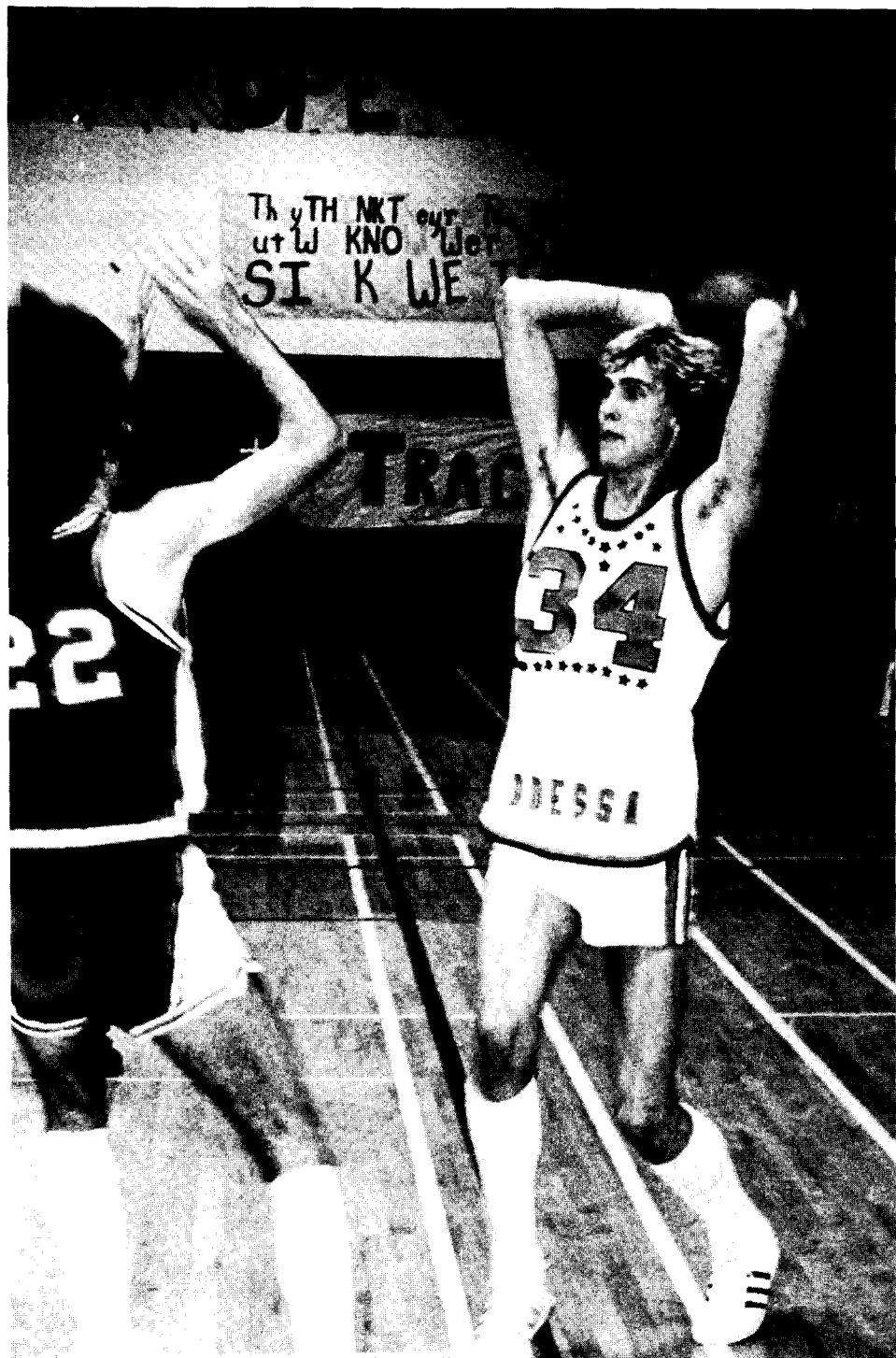
imum enrollment and completion of twelve semester hours is required for eligibility for these scholarships. While most scholarship programs have no deadlines, early application is advantageous.

Many organizations and individuals provide scholarships for students to attend Odessa College. These vary in size, frequently covering tuition, fees, and books.

Institutional scholarships are awarded primarily for excellence in sports and in fine arts activities. Students wishing to receive such an award should apply to the coach of basketball, golf, gymnastics, track, or tennis, and to the instructor of art, theatre, journalism, music, and speech.

**Vocational Rehabilitation** — The Texas Rehabilitation Commission offers assistance for tuition and non-refundable fees to students who have certain disabling conditions. Application should be made at the Texas Rehabilitation Commission, Odessa District Office, First National Bank Building, Suite 414, Odessa, Texas 79760. **The Comprehensive Employment and Training Act Program (CETA)** offers a wide variety of assistance to students who meet their eligibility criteria. CETA serves students enrolled in certain vocational areas. Interested applicants should contact the Odessa CETA office.

# 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 every student an opportunity to enhance perception of worth, while increasing the ability to cope within a changing society. The college hopes to provide every student an opportunity to examine thoroughly his potential and to offer opportunities for realizing that potential through the learning experiences of 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, behavior therapy, 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, overcoming shyness and loneliness, and learning communication and decision-making skills.

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 use a variety of resource materials in the Counseling Center. Periodically, special activities, programs, and structured group experiences will be offered as well.

The Testing Center is located in the east wing of the Fine Arts Building. Aptitude, 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 Educational 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 appointments.

The Vocational Evaluation Center is a regional resource created to meet community needs for comprehensive occupational testing and career exploration. Individual community members and clients referred from various service agencies complete extensive batteries of vocational tests and work samples in order to determine reasonable career alternatives, employability, and educational or training needs. For many persons, the Vocational Evaluation Center provides the first step toward the development of individual potential and self-sufficiency. The director of vocational evaluation can provide details regarding these highly specialized services and schedule appointments for individualized evaluations.

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.

### Student Housing

In addition to two athletic dormitories, the college does provide student housing facilities. Housing in the college's Parker-Downs Hall and a new apartment complex is available to Odessa College students. A housing listing is provided in the office of the Dean of Student Development. Dormitory regulations are distributed by the dormitory supervisor and posted in each dorm owned by the college. Contact the Office of Special Services for further housing information.

### Student Food Service

The Student Union at Odessa College serves short orders as well as balanced meals cafeteria style. 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 Campus Security Office in Parker-Downs Hall from 8 a.m. to noon and 1 p.m. to 5 p.m. weekdays during the fall and spring terms and hours to be announced Mondays through Thursdays during the summer. A permit is required for each vehicle (including motorcycles and mopeds) parked on the OC campus. Extra permits are available for 50 cents each. Full parking information can be obtained in the Campus Security Office or by calling extension 331.

### Security

The OC Security Office, located in Parker-Downs Hall, serves the student body of the college by helping to maintain the safety and security of each student and his possessions while 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

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, as specified by federal laws and regulations. The designated coordinator for college compliance with Section 504 of the Rehabilitation Act of 1973 is the director of special services.

Handicapped students should contact the Odessa College Counseling Center or the office of Special Services for information regarding services available. The college strives to provide a complete range of services for students with special needs including class arrangement, tutoring, personal counseling, health services, and reserved parking.

### Health Services

Health Services, a student-oriented pro-

gram of preventive medicine and health education, can be found 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. Student insurance is available. Diphtheria-tetanus immunizations, T.B. skin tests, and pregnancy testing are available.

Health Services seeks to establish sound health practices that will enhance each person's growth and development while at Odessa College and in the future.

### Children's Center

The Odessa College Children's Center opened in the fall of 1976 with 14 children enrolled and now provides daytime care for some 50-60 children of community residents. The Center is open to children who are six weeks to five years old. Hours are 7:30 a.m. to 5:30 p.m. Mondays through Fridays year-round, except regular college holidays. While providing a day care service for the community, the Children's Center also serves as a learning lab for students in OC's child development program.

### Student Life

An active student life program is encouraged at Odessa College and the impact reaches almost every student.

The college philosophy is that classroom learning is only part of a student's education. Almost every student feels some need to learn more about himself. The opportunity for a student to grow as an individual 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 faculty on an informal basis can provide insights and understanding for a student about society and can enrich the quality of life.

A Student Handbook is prepared annually to help explain the many opportunities available to students at the college.

Detailed descriptions and explanations of individual organizations and various activities are outlined in the Student Handbook.

### **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.

An effort is made by the college to provide for constructive use of leisure time. Information about a wide range of student extracurricular opportunities may be secured from the activities programmer.

### **Student Programming**

The supervisor of student programming provides a full schedule of campus-based events designed to be both educational and entertaining. These events are available to the student at no charge through the student activity fee. Information regarding specific events is available from the supervisor's office in Parker-Downs Hall and in the Special Services office.

Opportunities for students to participate in student activities include:

**Clubs and Organizations** — More than 12 student organizations are active on campus. Many of these groups are service organizations which are related to academic pursuits, such as nursing or data processing, while others are honoraries or 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 directions of the college on many issues, in addition to sponsoring projects for the welfare of the student body. Students may use the Student Congress to express opinions about the operation of the college based on individual needs. Students enrolled at Odessa College are encouraged to run for office as well as to vote for the 13 positions. Requirements for Congress 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 OC. Information regarding the intramural schedule can be obtained from the intramural office, located on the second floor of the SUB. Also available from the same office are numerous games for use in the SUB game room. Included are ping-pong, cards, backgammon, checkers, and chess.

**Student Publications** — The college has a student newspaper, "The Roundup." The publication is written and edited by students in the journalism classes. A faculty sponsor aids the students in production of the publication, which not only provides learning opportunities for mass communications students, but also serve as a medium through which students can express their creativity, ideas, opinions, and philosophies.

**Student Theatre** — An active drama program at Odessa College allows students to stage several productions each school year in the college theatre. The theatrical productions are open to the public and afford learning situations for students, while providing community entertainment.

**Forensics** — Odessa College forensics teams are nationally recognized. During the past 14 years, the forensics teams have placed among the top ten in national tournaments, which have included not only teams from community colleges, but from senior colleges and universities as well.

**Choir and Band** — Odessa College's A Cappella Choir and Madrigal Singers are well-known throughout the state for their musical abilities. The college also has an active band, "The OC Jazz Band," that performs regularly at many events. OC also sponsors a Community Jazz Ensemble for community members.

**Campus Radio Station** — The college-owned and operated FM radio station, KOCV, is an educational non-commercial station. The radio station is operated by students, under the direction of a faculty member.

**Art Shows** — In conjunction with the art department, students have the opportunity to display and see art work each year through student and traveling art exhibits.

### **Athletics**

Odessa College has earned a national

reputation for its outstanding athletic program. More than 165 of the college's athletes have won National Junior College All-American honors in basketball, gymnastics, golf, tennis, track, and baseball.

Currently the athletic program includes teams in men's and women's gymnastics, tennis and basketball, as well as men's teams in golf 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 1970. The Odessa College basketball team has played in the National Regional Tournament 24 of the last 30 years.

Odessa College instituted a women's basketball program in the fall of 1976. The team won the co-championship of the Western Junior College Athletic Conference in 1979.

**Golf** — The first National Junior College Golf Championship ever conducted was hosted by Odessa College in 1959. 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 15 of the last 22 years. OC has had 20 All Americans in golf.

**Gymnastics** — Since being organized in 1965, the Odessa College gymnastics team has won the National Junior College title eight times, including 1979. More than 94 Odessa College gymnasts have been named National Junior College All Americans since 1969. Two former Odessa College gymnasts have been selected to be

members of international teams.

A women's gymnastics program was started at OC in 1978-79 and the team won the national title its first year.

**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 and 1977 and 1979, as well as being runnerup for the team title in 1972 and 1975. In 1977 and 1978 an OC woman netter 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 in 1979, and 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** — More than 18 team championships have been won by the tracksters the past 11 years. In 1971, the Odessa College 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 the OC cindermen placed third at both the National Junior College Outdoor and Indoor meets. More than 49 members of the Odessa College track team have been named to the NJCAA All-American track team since 1965. The coach is a former world record holder in the 440 and 880 relay and was representative of the United States team in Moscow in 1958. He was coach of the U.S. track team at the 1979 World University Games.

# Academic Information



## Academic Guidelines

The primary goal at Odessa College is for every student to receive the best education possible. Whether the student intends to transfer to another institution after the completion of studies at Odessa College or whether the student intends to put learning to immediate use in the world of work, the student is assured that he will obtain quality education at Odessa College. The student will receive an education that will be meaningful in all areas of life.

Academic excellence is the focal point of the college's educational programs. Odessa College has gained national recognition for its quality instruction and outstanding faculty. Students transferring from Odessa College to other institutions build solid foundations for their educational pursuits and frequently do as well or better than those who go to senior colleges or universities from the freshman year.

Odessa College students who have completed occupational-technical programs also have exhibited outstanding proficiency with on-the-job skills. The college works 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 obtain practical educations combined with professional training in their respective skills.

The academic programs are reinforced by strong support services. A Learning Resources Center, which houses the library, learning center and instructional development department, provides rich resources to supplement classroom instruction. Faculty also use the learning center and instructional media program to enrich instruction. A variety of proven teaching methods is utilized.

To make the college even more accessible, several departments offer open-entry classes. These allow students to enroll in a course at almost any time during a long semester, rather than wait until a regular term begins. In addition, innovative instructional approaches are being used that allow a student to complete a three-semester-hour course in some subjects in only eight weeks. The college constantly is searching for ways to better serve stu-

dents without compromising instructional quality.

Each student's academic needs are considered important at Odessa College. Programs are planned for students who need basic instruction to raise their proficiency in a subject area, as well as for students who excel. The college has such unique facilities as the writing and reading laboratories, computer-assisted instruction center, and an audio-tutorial biology laboratory. Personal development courses also are available. Another important factor is a concerned faculty who want to help students succeed.

Odessa College believes there should be no compromise with quality instruction and academic excellence.

### Course Load

The normal course load that a full-time student may carry during a regular semester will vary with the courses in which he is enrolled. A student is classified as a full-time student when enrolled in twelve or more semester hours, but students will normally enroll in fifteen to eighteen hours each semester as outlined in their course of study. Students are not permitted to take more than five courses of three or more semester hours during a semester without written approval from the registrar.

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 session is fourteen 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 the individual circumstances and ability of the student. The normal load for an evening student who has full-time employment is six semester hours or two courses.

Students who are employed while attending classes or who have experienced previous difficulty in academic work should plan course loads in such a way that ample time will be given to all of these demands. Usually, two hours of student preparation

are necessary for each class-hour of time. Therefore, an average student should plan on investing nine hours of his time for each three-semester-hour course in which he enrolls. Students are encouraged to consult a college counselor to determine the best program possible.

### **Student Classification**

A student who has completed 24 semester hours or fewer will be classified as a freshman student. A student with more than 24 hours will be classified as a sophomore student.

Students are classified as full-time if enrolled in 12 or more semester hours, and part-time if enrolled in fewer than 12 semester hours.

### **Grades**

Grading is a measure of the student's ability to master specific objectives within a given course. A grade is based upon his level of performance in examinations, term papers, reports, class discussion, and the final course examination or project.

Grade Equated	Grade Points Per Semester Hour
A Excellent .....	.4
B Above average .....	.3
C Average .....	.2
D Passing, but poor .....	.1
I Incomplete .....	.0
F Failure .....	.0
— Audit (Not Taken for Credit) .....	.0
W Official Withdrawal before the end of the first twelve weeks ..	.0
WF Withdrawal while failing during seventh through twelfth week .....	.0
CR Advanced Standing (credit by examination) .....	.0

It is the obligation of the student to know his standing and rating in college classes during the semester and to secure these ratings before registering for the next semester. The student is expected at all times to be familiar with his scholastic status. The advisors and counselors will confer with students concerning unsatisfactory work during and at the end of the semester. The object of such conferences will be to determine the cause of unsatisfactory work, to advise the student for improvement, and to offer any assistance

which the college and faculty and staff of the college can give the student.

### **Grade Point Average and Semester Hours**

Grade Point Averages are computed on two bases: the Semester Grade Point Average and the Cumulative Grade Point Average. The Grade Point Average (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; the 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 — Probation and Suspension**

Scholastic Probation is a conditional enrollment status which allows the student to continue to enroll in Odessa College even though the student has failed to make satisfactory scholastic progress during preceding semesters. Scholastic Suspension is enforced scholastic withdrawal from Odessa College for one semester or a full calendar year as a result of failure to achieve satisfactory scholastic progress after having been placed on scholastic probation.

To remain in good scholastic standing, a student must make satisfactory progress by maintaining a minimum grade point average of 1.5. If it is evident from a student's record that the student is failing to maintain satisfactory progress, the student will be placed on Scholastic Probation. The student will then be allowed to continue to enroll on a conditional basis until the student's scholastic progress warrants removal from Scholastic Probation or placement on Scholastic Suspension.

In computing the grade point average of a student, all grades received for courses

attempted are used except the grades of "W" and "WF". See the information on "Grades" in this catalog to determine the number of grade points attached to letter grades "A", "B", "C", "D", "I", and "F".

It is the responsibility of each student to be aware of his scholastic status at all times by being familiar with the twelve points listed below.

#### Scholastic Probation

1. A student enrolled in nine or more hours per semester must pass a minimum of nine hours with a minimum grade point average of 1.5 for all courses and hours attempted that semester to avoid Scholastic Probation for the next semester.
2. A student enrolled in fewer than nine hours may continue to enroll, regardless of grade point average, until the student has attempted nine or more hours in successive semesters, excluding hours taken in summer school. When the student has attempted nine or more hours, the student must have a minimum grade point average of 1.5 on the hours accumulated and must have passed at least nine hours to avoid Scholastic Probation for the next semester.

#### Removal of Probation or Placement on Suspension

3. A student on Scholastic Probation who is enrolled in nine or more hours and who passes at least nine hours with a minimum grade point average of 1.5 for all hours attempted that semester will be removed from Scholastic Probation. If not, the student will be placed on Scholastic Suspension for the first long (sixteen-week) semester which follows and will not be eligible to enroll for that semester.
4. A student on scholastic probation who is enrolled in fewer than nine hours will remain on Scholastic Probation until the student has attempted nine or more hours in successive semesters. At that time, if the cumulative grade point average on the cumulative nine or more hours is 1.5, the student will be

removed from Scholastic Probation. If not, the student will be placed on Scholastic Suspension for the first long (sixteen-week) semester which follows and will not be eligible to enroll for that semester.

#### Summer School Enrollment and Continued Scholastic Probation

5. A student on Scholastic Suspension for the first time who enrolls in summer school and earns nine hours with a minimum cumulative grade point average of 1.5 during the twelve week period of summer school may enroll on Continued Scholastic Probation for the following semester. The student may apply to the Dean of Admissions for readmission. A student in good standing or a student on Scholastic Probation who enrolls in summer school and fails to make satisfactory progress is not penalized for the summer attempt.

#### Scholastic Suspension

6. A student placed on Scholastic Suspension is not eligible to enroll for the first long (sixteen-week) semester which follows. At the beginning of the first long (sixteen-week) semester following the semester of suspension the student is eligible to reenroll but must meet with the Dean of Admissions for readmission on Scholastic Probation.
7. If a student is suspended a second time, the Suspension will be for one full calendar year. Summer school may not be attended in an effort to qualify for Continued Scholastic Probation. After one year of suspension the student must petition, in writing, to the Dean of Admissions for readmission on Scholastic Probation.

#### Other Information Concerning Scholastic Probation and/or Suspension

8. Readmission to and/or Continued Scholastic Probation in the college does not guarantee admission to or continuance in specific programs.
9. A student will be notified of unsatis-

factory progress on the student grade report each semester by the message "Scholastic Warning" which will be printed under the grade point average for the semester. The warning may be for failure to obtain a grade point average of 1.5 for the semester or failure to pass nine hours if enrolled in nine or more hours.

10. When a student has received two consecutive reports noting "Scholastic Warning" the student should check with the Dean of Admissions.

#### **Transfer Students and Scholastic Probation/Suspension**

11. If a transfer student is not eligible to return to the last institution attended before applying to Odessa College, the student is not eligible to be admitted and enroll at O.C. unless the student appeals to the Dean of Admissions and meets all Odessa College scholastic standards.
12. If a transfer student is on Scholastic or Academic Probation at the last institution attended, the student must present an official transcript from that institution to the Dean of Admissions for evaluation. According to the grade point average recorded on the transfer transcript, the student may or may not be eligible to enroll.

#### **Incompletes**

The conditional grade "I" may not be given unless the student has made a passing grade in all work which has already been completed. It is not a substitute for a failing grade. The deferring of the work required must be approved by the instructor. If the instructor does not approve granting an extension of time, a complete grade will be given the student at the end of the semester. The incomplete work must be made up in the semester immediately following that in which the "I" was given. A grade of "I" that is not changed by the instructor will be counted as an "F". Students receiving an incomplete grade during the summer session will have until the end of the fall semester to remove the grade.

Students are not routinely notified by the

college when a grade change has been processed. The student should contact the instructor for this information, or should request a new copy of his college transcript.

#### **Withdrawal**

Students who leave Odessa College before the close of a semester or before the end of a class for which they are registered must follow official withdrawal procedures so that all records are left in proper order. The withdrawal procedure is initiated by the student in the Registrar's Office. Students are expected to appear in person to withdraw unless there are extenuating circumstances. Withdrawals by persons other than the student in question will be verified for the student's protection.

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 mid-winter 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. The student will then return the form to the registrar's office. Grades of "W" or "WF" are assigned through the twelfth week of classes in the long semesters. Students who withdraw after that time will be assigned a grade of "F".

The college reserves the right to withdraw a student from any one or all of his classes, if, in the judgment of the college officials, such withdrawal is in the best interest of the student or the student body-at-large.

#### **Class Attendance**

Students are expected to regularly attend all classes in which they are enrolled. Class attendance is the responsibility of the student. It is also the responsibility of the student to consult with the instructor when there is an absence from class.

Instructors will keep records of absences, and when, in the opinion of an instructor, a student has been excessively absent, a warning letter will be sent to the student with the dates and number of ab-

sences. The letter will include a date by which the student must contact the instructor to avoid the initiation of an automatic drop process. The instructor has the option of designating a grade of "W" or "WF" to be assigned at the time of the drop.

Students who have not attended class by the official reporting day for any given semester and have not notified the instructor or the registrar regarding the circumstances of their non-attendance, will automatically be dropped from class. No notation will be made on the student's permanent record of ever having registered for that class. No refunds will be made for students dropped in this manner.

### Schedule Changes

After the official registration date, students may change their schedule by completing proper forms in the Office of the Registrar.

### Advanced Standing and Credit By Examination

Odessa College will accept up to fifteen hours of advanced standing credit awarded by either the College-Level Program (CLEP) Subject Examinations or by approved Odessa College departmental examinations.

Odessa College is an Open Testing Center for CLEP and will administer these examinations to anyone making application, subject only to those restrictions established by the Educational Testing Service and the College Entrance Examination Board. Departmental examinations are administered in those areas in which CLEP examinations are not available.

Specific information about CLEP Examinations may be obtained in the Counseling Center. Department heads should be contacted regarding applications for advanced standing examinations.

Examinees should check with senior institutions of their choice concerning the acceptance of credit earned by advanced standing examinations. Transcripts will record credit that is given by examination but will not list a specific grade. Hours earned by examination will not be included in computing grade point average, scholastic hours, residence requirements for gradu-

ation, or credit load requirements for Social Security, or veterans' 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 expenses than in the traditional program.

To be eligible for the program the high school senior must be within four units or twelve quarter credits of graduation and have the recommendation of his high school counselor, his high school principal, and the approval of his parents. The student then may enroll in the regular manner at Odessa College.

A student in the Early Admissions Program may enroll in as many as two courses each semester. He will be expected to adhere to all policies of the college, as well as those of his respective high school, while in the program.

College credit earned under the program is held in escrow until the student completes his high school requirements and furnishes the college with a high school transcript affirming graduation. At that time all credit earned will be placed on his college permanent record.

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 Dean of Admissions or through participating high school counselors.

### Honors

A student who is enrolled in twelve hours or more during the semester and makes a grade of "A" in all courses is listed on the college's Summa Cum Laude Honor Roll. A full-time student who makes no grade lower than "B" is listed on the college's Cum Laude Honor Roll.

Part-time and Summer Session stu-

dents who are 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" will be listed on the Part-time Student or the Summer Session Cum Laude Honor Roll.

#### **Transcript of Record**

The transcript of record is an official copy of the student's permanent record. Copies will be supplied on written request. Students may instruct the Registrar's Office to mail official transcripts to colleges or universities to which the student may be applying, or to prospective employers, etc. The first copy of a transcript is provided at no cost to the student. A charge of one dollar will be made for all subsequent official copies.

To protect student records, Odessa College adheres to the conditions by which information about students can be released as set forth in The Family Educational Rights and Privacy Act of 1974, as amended.

#### **Transfer of Credit**

The counselors and advisors at Odessa College should be contacted before registration in order to provide maximum assistance to the student in planning a program.

All courses taken at Odessa College transfer to all other institutions at face value. No grades made at the college can be lowered by any other college. However, courses taken that are not required for graduation at the senior college will not apply and therefore should not be taken at this college.

Senior colleges vary in recognition of a grade of "D" in a course. Some senior institutions accept grades of "D's" 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 entering Odessa College, or before if possible, the student should select the senior institution to which he desires to transfer after leaving OC. He should be-

come familiar with the transfer requirements and then design a suitable course of study at Odessa College. OC counselors will assist students.

In consultation with the advisors from the senior college, applicability of grades and courses should be predetermined.

Generally speaking, senior colleges will not accept more than 66 semester credit hours in transfer. The student should avoid exceeding this number of hours. Senior colleges vary greatly in their practice regarding the allowance of credit for courses pursued at junior or community colleges.

No transcripts will be released by the college unless the student has cleared all of his records at the college.

#### **Technical/Vocational Occupational Programs**

Odessa College offers a wide variety of technical-occupational 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 are established only after studies verify that employment opportunities will exist at the time the student completes 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, business and public agencies which more and more are looking to the community colleges for skilled personnel.

Continuous liaison is maintained with prospective employers to assist in placement of graduates and to keep the training programs up-to-date with the 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.

Recommendations for adding new programs to the college offerings will be made periodically based on community studies which identify additional training needs that can be met by Odessa College.

Technical and vocational occupational courses carry college credit leading to an Associate in Applied Sciences Degree or a Certificate of Technology.

**Learning Resources Center**

The Learning Resources Center is a focal point for the entire college as it assists students and faculty in attaining their educational goals. Resources and materials in various formats are selected, produced, organized, circulated, and maintained to satisfy curricular requirements, stimulate cultural awareness, and promote study and research.

Some 60,000 books in open stacks, reference books, and reserve materials are available in the LRC. Four hundred current periodicals, newspapers, and pamphlets, numerous college catalogs, clippings, and government documents are maintained to satisfy both educational and recreational needs. Additionally, the LRC houses a variety of mediated programs designed to enhance the instructional curriculum. Fully equipped study carrels encourage student use of recordings, tapes, slides, filmstrips, filmloops, and other types of audio-visual materials. On-line computer terminals are available for students enrolled in any college courses which utilize computer-assisted instruction methods. A Career Center located in the LRC offers the student a current and factual collection of media, books and pamphlets on a wide variety of vocations, professions and career choices. These resources are available to acquaint interested individuals with the processes involved in career decision-making. Guidance in the use of the materials is coordinated through the college counseling services.

Research tours and subject seminars, stressing the use of the card catalog, the indexes, and the available reference materials, are conducted by members of the LRC staff. Also, the individual student may always seek personalized assistance from the professional resource personnel who staff the LRC.

Located within the LRC, the Department of Instructional Development works with the faculty and students to design and develop comprehensive instructional strategies and programs. These programs ensure that all Odessa College students are assisted and challenged through relevant learning experiences.

**Developmental Studies**

For those students who need extensive development of mathematics, writing, reading, and basic study skills, Odessa College offers a Developmental Studies program. A student may take basic English, basic mathematics, reading, and personal development in this program.

The courses are designed to help the student achieve the skills which may not have been gained before the student entered Odessa College. Prior to enrolling for courses in the Developmental Studies program, the student, using diagnostic tests which are offered through the counseling center, will be able to diagnose where he or she needs the most skill-building.

While enrolled in one or more of the program's courses, a student may request tutoring from other college students and professionals. All courses in the Developmental Studies program grant Odessa College credit ranging from two to three credit hours. If the student intends to transfer after attending OC, that student should check with the college or university which is his or her destination to determine whether or not the credit hours will transfer.

**Evening Classes**

Evening classes represent an integral part of the total educational program, offering courses comparable to those in the regular day program. Evening courses are offered primarily for individuals of the community who want to carry less than a full college course load, and a wide variety of courses is offered for both college credit and non-credit for those 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 to six weeks each; classes

are held both during the 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 the regularly scheduled semesters. A nine or ten-day Midwinter Interim Session is held following the close 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.

### **Adult and Continuing Education**

OC offers a wide variety of community interest and short-term, non-credit courses for those who want to broaden their educational experience, 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 are of shorter duration than the regular semester.

Almost any course that is of public interest can be organized if twelve students ask to be enrolled, provided that a competent instructor and suitable facilities are available. There are no entrance requirements for continuing education courses, and any individual who can profit from the course may enroll.

A list of community service courses may be obtained from the Associate Dean of Adult and Continuing Education.

### **Community Recreation**

Odessa College has developed a community recreation program, designed to serve area citizens of all ages, from children through senior citizens, with students grouped by age category. Included are special classes in tennis, gymnastics, exercise, aerobics, dance, jogging, and others. Persons enrolling sign up through

the adult and continuing education program, which offers special interest courses to community residents on a noncredit, flexible-entry basis.

### **Adult Basic Education**

Classes are offered to adults who have not completed their high school education. The classes range from level one instruction, during which adults learn to read and write, to classes that prepare adults to successfully complete the state-administered GED test. The classes are free and books are furnished. During a typical school year, enrollment in the adult basic education classes sponsored by Odessa College will be almost 2,000 students.

The five major subjects are math, English, social studies, natural science and literature. Morning, afternoon and evening classes are offered in numerous locations in Odessa, as well as on the Odessa College campus.

Odessa College sponsors adult basic education classes in Ector and other counties, including Andrews, Brewster, Culberson, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Ward and Winkler.

Literacy classes, English as a second language and junior high level studies are available. Classes have open registration, are self-paced and have individualized instruction.

In addition to GED test preparation classes, OC sponsors a competency-based program, in cooperation with public schools, to allow adults with less than high school educations opportunities to earn high school diplomas.

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 the student functions at less than a twelfth grade level, free admission to the class is allowed for remedial work.

For more information on class locations and times call the Director of Adult Basic Education, at Odessa College, 915-337-5381, Ext. 300.

### **Extension Centers**

The Regional Extension Center at Pyote

(RECAP) provides night classes leading to an Associate's Degree through part-time study. Registration is held in Pyote prior to registration on the main campus and will be announced through the Student Development Office.

Odessa College also offers many of its regular classes at extension centers located in Pecos, Monahans, Andrews, Kermit and McCamey. Registration is conducted in each city during the week prior to registration on campus. The exact time and date for each registration is carried through local news media. Information about Extension Centers can be obtained in the office of the Dean of Student Development.

#### **More Information**

For information about Odessa College, admission procedures, instructional programs, and counseling services contact the Counseling Center in the Student Union Building. The telephone number is 915-337-5381.

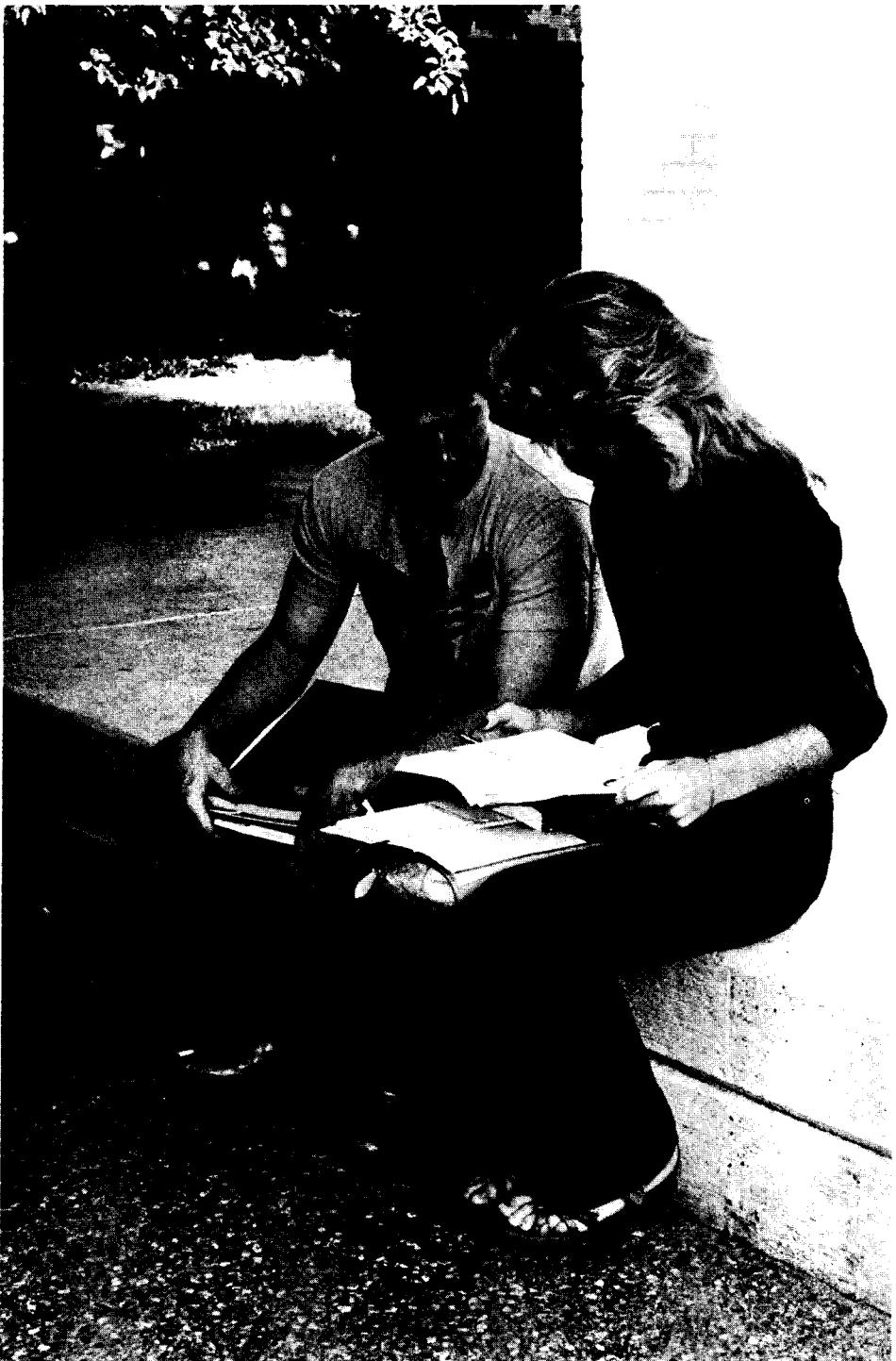
For admission to Odessa College, send application and transcripts to the Dean of Admissions, Odessa College, 201 W. University, Odessa, Texas 79762.

#### **Accreditation**

The quality of education at Odessa College is demonstrated by the number of agencies and associations that have given accreditation and membership privileges to the college. The college is approved or accredited by the 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, and Joint Review Committee on Education in Respiratory Therapy.

Odessa College is a member of the 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, Southern Association of Junior Colleges, Southern Association of Collegiate Registrars and Admissions Officers, Southwest Association of Student Financial Aid Administrators, Southwestern Business Administration Association, Texas Association of Student Financial Aid Administrators, Texas Association of Collegiate Registrars and Admission Officers, 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, Video Tape Network, and Western Junior College Athletic Conference.

# Degrees



## Degree Requirements

### Associate in Arts Degree

To qualify for the Associate in Arts Degree (A.A.), the student must complete the following:

English	2 years, 12 semester hours
Foreign Language or 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" in work taken at Odessa College.

Twelve of the last 18 hours, prior to the degree being granted, 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 twelve 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 the beginning of each semester.

### Associate in Science Degree

To qualify for the Associate in Science Degree (A.S.), the student must complete the following:

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" in work taken at Odessa College.

Twelve of the last 18 hours, prior to the degree being granted, 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 twelve 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 the beginning of each semester.

### Associate In Fine Arts Degree

To qualify for the Associate in Fine Arts Degree (A.F.A.), the student must complete the following:

English	2 years, 12 semester hours
Government	Govt 2301 and 2302
History	History 2301 and 2302 (Hist 2303 may be substi- tuted for either course)

## **154 Degrees**

Physical Education*	Two one-hour activity classes (except for approved substitutions)
Completion of an interdisciplinary core including 3 semester hours in Humanities 1310, Introduction to the Fine Arts, and 9 semester hours selected from the following courses:	
Th 1310	Introduction to the Theatre
Phot 1331	Basic Photography
Art 1300	Art Appreciation
Music 1328	Music Appreciation
PE 1146 and/or 1147 and/or 2148	Modern Dance
R/TV 1310	Survey of Radio and Television
Completion of 18 semester hours in one of the following fine arts fields: Dance; Music; Photography; Radio/TV; Theatre; Art.	
Completion of 6 semester hours from the following: Anth 2302; Relg 1301 or Relg 1303; Soc 1301; Phil 2301; Psy 1301.	
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" in work taken at Odessa College.	
Twelve of the last 18 hours, prior to the degree being granted, 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 twelve 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 the beginning of each semester.	

### **Associate in Applied Science Degree**

To qualify for the Associate in Applied Science Degree (A.A.S.), the student must complete the following:

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 semester hours or more, 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.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average "C" in work taken at Odessa College.

Twelve of the last 18 hours, prior to the degree being granted, must be done in residency. Discharge of all financial obligations to 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.

First-year students who have completed fewer than 16 hours and who enroll for twelve 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 the beginning of each semester.

### **Certificate of Completion**

To qualify for the Certificate of Completion, the student must complete the following:  
One year of English.

Two one-hour activity classes of physical education except for approved substitutions.  
Eighteen or more sophomore hours.

A minimum of 63 semester hours.

Twelve of the last eighteen hours, prior to the degree being granted, must be done in residency.

A minimum average of "C" (2.0) in all work. Transfer students must also have an average of "C" in work taken at Odessa College.

### **Certificates of Technology**

Certificates of Technology are awarded for completion of requirements with a minimum average of "C" in all work in certain occupational and technical curricula as prescribed in the Odessa College catalog or as approved by the Associate Dean for Occupational Programs.

### **Degree Planning and Application**

Students working toward a degree or certificate from Odessa College should consult a counselor or faculty advisor early in the student's academic career to insure that all required courses are being completed. Special degree plans should be completed well in advance of anticipated graduation by the student, along with aid of the appropriate department and division chairmen. A written copy of the plan will be filed in the Registrar's Office.

Students desiring a degree should apply in writing through the Registrar's Office at the beginning of the semester that graduation is anticipated. Odessa College does not hold general institutional graduation exercises. Students anticipating graduation should complete applications by November and February prior to graduation.

# Staff



## College Staff

### Board of Trustees 1981-82

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Bernhard T. W. Sedate, B.A., M.A. . . . .	Dean of Instructional Administration

### Division Chairmen

Joe C. Buice, B.A., M.A., M.A., Ph.D. . . . .	Humanities Division
Elizabeth K. Gillette, B.S., M.S., Ph.D. . . . .	Human Development Division
Don L. Huff, B.S., M.S. . . . .	Science and Health Occupations Division
Kenneth H. Hurst, B.S., M.S. . . . .	Occupational and Technical Division

### Administrative and Support Staff

#### Adult and Continuing Education

Peter E. Petersen, B.S., M.B.A. . . . .	Associate Dean of Adult and Continuing Education
Clarice Claiborne, B.A., M.Ed. . . . .	Director of Adult Basic Education
Shirley Goodman, B.A., M.S.W. . . . .	Head Teacher, Aging, MH/MR
Amy Hebestreit, B.A. . . . .	Assistant Director of Adult Basic Education
Lea Taylor . . . . .	Director of Community Services

#### Business Office

Horace McAdams . . . . .	Director of Bookstore
Beverly Parker . . . . .	Postmistress
Roxanna Patton, B.B.A. . . . .	Internal Auditor
Rochelle Pena, B.S.C. . . . .	Chief Accountant
Elma Smith . . . . .	Printer
Lee Ann Stevens, B.B.A. . . . .	Accountant

#### Children's Center

Olivia Sharp, B.S. . . . .	Director, Children's Center
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#### Data Processing

W. Frank Wells, B.B.A. . . . .	Director of Data Processing
Charles Everett, A.A. . . . .	Computer Programmer
Koty Krishna, B.E., M.B.I.S. . . . .	Assistant Director of Data Processing
Patrick Murphy . . . . .	Computer Center Programmer/Analyst

## **158 Staff**

### **Developmental Studies Program**

Clayton Alred, B.S., M.Ed. .... Director of Developmental Studies Program  
Lynn Whitson, B.A., M.A. .... Lab Coordinator of Developmental Studies Program

### **Informational Services**

Susan Rutherford, B.A. .... Assistant Director of Informational Services

### **Learning Resources Center**

Judith O. Fleming, B.A., M.L.S. .... Associate Dean of Learning Resources  
Peggy Caddell, B.S. .... Learning Resources Paraprofessional  
David Carson, B.A., M.S. .... Learning Resources Specialist  
Susan Elliott, B.S. .... Learning Resources Paraprofessional  
Martha Huff, B.A., M.S.L.S. .... Learning Resources Specialist  
Ned Pilcher, B.A., M.A. .... Director of Instructional Resources  
John R. Witmer, B.S., M.S. .... Learning Resources Specialist

### **Occupational Programs**

James R. Tarter, B.S., M.S., Ed.D. .... Associate Dean of Occupational Programs

### **Physical Plant**

Tom Reynolds, A.S. .... Director of Physical Facilities  
Everisto Cortez .... Controls Foreman  
Verlon Horn .... Assistant Director of Physical Facilities  
Danny Marble .... Mechanic Foreman  
Max White, B.S. .... Grounds Supervisor

### **President's Office**

Wanda Gregory .... Administrative Secretary

### **Student Development**

James Lewis, B.A., M.S. .... Assistant to the Dean of Student Development

### **Athletics**

Barry Rodenhaver, B.S., M.A. .... Director of Athletics/Golf Coach  
Susie Girard, B.S. .... Men's and Women's Tennis Coach  
Ken Hefner, B.A. .... Women's Basketball Coach  
Mark Kleemann, B.S. .... Assistant Men's Basketball Coach  
John Pellikan, B.A., M.E. .... Men's Gymnastics Coach  
James Segrest, B.S., M.Ed. .... Track Coach  
Bobby Shirk .... Women's Gymnastics Coach  
Ed Sunderland, B.S., M.S. .... Athletic Trainer  
Jim Yeakel, B.S., M.S. .... Men's Basketball Coach

### **Counseling**

Stephen Southern, A.B., M.S., Ed.D. .... Director of Counseling  
Janis C. Booth, B.A., M.S. .... Guidance Associate  
Philip Booth, B.A., M.S., Ed.D. .... Director of Testing  
Fred Gaither, B.A., M.A. .... Counselor  
Kay Maley, B.S., M.A. .... Counselor/Vocational Education Support Services  
Michael Raley, B.A. .... Director of Vocational Evaluation Center  
Nancy Raley, A.B. .... Research Associate  
Edwin A. Shipman, B.S., M.Ed., Ph.D. .... Vocational Counselor  
Jesse C. Speed, B.S., M.S. .... Vocational Evaluator  
Karon Topper, B.S. .... Counselor/Developmental Studies Program  
Clara L. Willis, B.S., M.Ed., Ph.D. .... Vocational Counselor

**Financial Aid**

Norine Bledsoe, B.A., M.A. .... Director of Financial Aid  
Glenn Davis, B.A. .... Assistant Director of Financial Aid

**Registration and Admissions**

Sue J. Blair, B.S.Ed., M.Ed. .... Registrar  
Sidney J. Holden, B.A., M.A. .... Dean of Admissions  
Arturo Leal, B.Mus. .... Veterans Recruiter/Coordinator

**Special Services**

Roy Hart, C.C., B.S., M.Ed., Ed.D. .... Director of Special Services  
Alfredo Fonseca .... Campus Security Chief  
Betty Hudson, B.S., M.A. .... Director of Intramurals  
Mark Kleemann, B.S. .... Student Programming Supervisor  
Patricia Manning, A.A.S., B.S.N., R.N. .... Director of Health Services  
David Sparks .... Campus Security Officer

**Department and Program Chairmen**

Anthropology ..... Edward Orton  
Art ..... Barry Phillips  
Astronomy ..... Robert Blake  
Automotive Mechanics/Auto Body Repair ..... Owen Monette  
Biology ..... Dr. Clyde Smith  
Building Trades ..... John Price  
Business Administration ..... Dr. B. B. Griffith  
Chemistry & Physical Science ..... Dr. Don Taylor  
Child Development ..... Mary Joyce Harding  
Communication & Theatre ..... Darlyne Ervin  
Cosmetology ..... Faye Morgan  
Diesel Mechanics ..... Steve Mapes  
Drafting ..... Kenneth Hurst  
Drama ..... Jane Ann Crum  
Economics ..... Dr. Dick Kennedy  
Educational Aide ..... Mary Joyce Harding  
Electricity & Electronics ..... Dr. George Willis  
Electronic Data Processing ..... Rayford Ball  
Emergency Medical Technology ..... Daniel Finley  
Engineering ..... Rayford Ball  
English ..... Dr. Betty Gillette  
Fashion Merchandising ..... Carole McCarter  
Fire Protection ..... Dr. Oliver Nordmarken  
Foreign Languages ..... Matt Rees  
Geology ..... Edward Orton  
Government ..... Dr. Dick Kennedy  
History ..... Dr. Dick Kennedy  
Humanities ..... Barry Phillips  
Industrial Instrumentation ..... Kenneth Hurst  
Industrial Supervision ..... Sid Streicher  
Journalism ..... John McCarroll  
Law Enforcement ..... Dr. Oliver Nordmarken  
Literature & Languages ..... Dr. Betty Gillette  
Machine Shop ..... Norman Robinson  
Maintenance Technology ..... Dr. Dick Tarter  
Mathematics ..... Dr. Charles Sweatt  
Medical Laboratory Technology ..... Joel Smith  
Mid-Management ..... Sid Streicher  
Music ..... Dr. Jack Hendrix

## **160 Staff**

Nursing, Odessa College Campus . . . . .	Ann Winn
Nursing, Kermit Vocational Program . . . . .	Norma Drennon
Nursing, Pecos Vocational Program . . . . .	Glenda Locker
Office Education . . . . .	Kay Rutherford
Operating Room Technology . . . . .	Val Jumper
Philosophy . . . . .	Truett Hilliard
Photography . . . . .	Bill Murchison
Physical Education . . . . .	L. E. McColloch
Physics . . . . .	Rayford Ball
Psychology, Sociology and Education . . . . .	Gordon E. Gillette
Radio . . . . .	Wally Jackson
Radiologic Technology . . . . .	Kay Flood
Reading . . . . .	Dr. Imogene Freer
Real Estate . . . . .	Ernestine Browning
Refrigeration & Air Conditioning . . . . .	Norman Witcher
Religion . . . . .	Dr. Dick Kennedy
Respiratory Therapy . . . . .	Bob Hertenstein
Social Sciences . . . . .	Dr. Dick Kennedy
Solar Energy . . . . .	Norman Witcher
Speech . . . . .	Darlyne Ervin
Television . . . . .	Tom Barnett
Theatre . . . . .	Jane Ann Crum
Welding . . . . .	Duane Nobles

## **Faculty**

Irma Aguilar . . . . .	Assistant Professor of Nursing
	B.S.N., West Texas State University; M.A., University of Texas of the Permian Basin
E. Maurice Alfred . . . . .	Associate Professor of Vocal Music
	B.S., Hardin-Simmons University; M.Mu.Ed., Texas Tech University; Ph.D., Texas Tech University
Clayton E. Alred . . . . .	Director of Developmental Studies Program
	B.S., Angelo State University; M.Ed., Sul Ross State University
Daniel Andrade . . . . .	Instructor of Respiratory Therapy
	A.A.S., Odessa College
David Lee Atherton . . . . .	Associate Professor of Auto Body
	B.A., University of Northern Iowa
Lois E. Ball . . . . .	Associate Professor of English
	B.A., Sul Ross State University; M.A., Southwest Texas State University
Rayford Ball . . . . .	Department Head of Electronic Data Processing, Engineering and Physics and Instructor of Electronic Data Processing and Physics
	B.S., University of Houston; M.A., University of Texas at Austin
Mina Bane . . . . .	Assistant Professor of Mathematics
	B.A., Baylor University; M.A., East Texas State University
Mary Kaye Barbour . . . . .	Instructor of Cosmetology
Mary W. Barker . . . . .	Assistant Professor of Psychology
	B.S., M.Ed., Sul Ross University
Thomas D. Barnett . . . . .	Associate Professor of Television and Journalism
	B.A., M.A., Texas Tech University
James K. Bates . . . . .	Associate Professor of Refrigeration and Air Conditioning and Solar Energy
	A.A.S., Odessa College
Robert Blake . . . . .	Director of Planetarium and Assistant Professor of Astronomy
	A.A., Pensacola Junior College; B.S., Northern Arizona University; M.A., Northern Arizona University
George W. Brewer . . . . .	Associate Professor of Mathematics
	B.S., Southwestern State College; M.S., Oklahoma State University

Rudolph A. Brewster . . . . . Professor of English  
B.A., Daniel Baker College; M.A., Southwest Texas State University; Ph.D., East Texas State University

Virginia Brown . . . . . Assistant Professor of Physical Education  
B.S., Baylor University; M.Ed., North Texas State University

Ernestine Browning . . . . . Instructor of Real Estate  
B.S., Southwest Texas State University

Joe C. Buice . . . . . Chairman, Humanities Division and Professor of English  
B.A., Baylor University; M.A., University of Colorado; M.A., University of Texas at Austin; Ph.D., East Texas State University

Bobby G. Butler . . . . . Associate Professor of Machine Technology  
A.A.S., Odessa College

Kris Challapalli . . . . . Medical Director of Medical Laboratory Technology Program  
M.D., B.S., Guntur Medical College, A.P., India

Vincent J. Coffey . . . . . Professor of Biology  
B.S., Norwich University; M.S., University of Iowa; Ph.D., University of Georgia

Stan Cohn . . . . . Lecturer of Respiratory Therapy (C.R.T.T.)

Dorothy F. Cook . . . . . Assistant Professor of Nursing  
A.A.S., Odessa College; B.S.N., West Texas State University; M.S.N., University of Galveston School of Nursing

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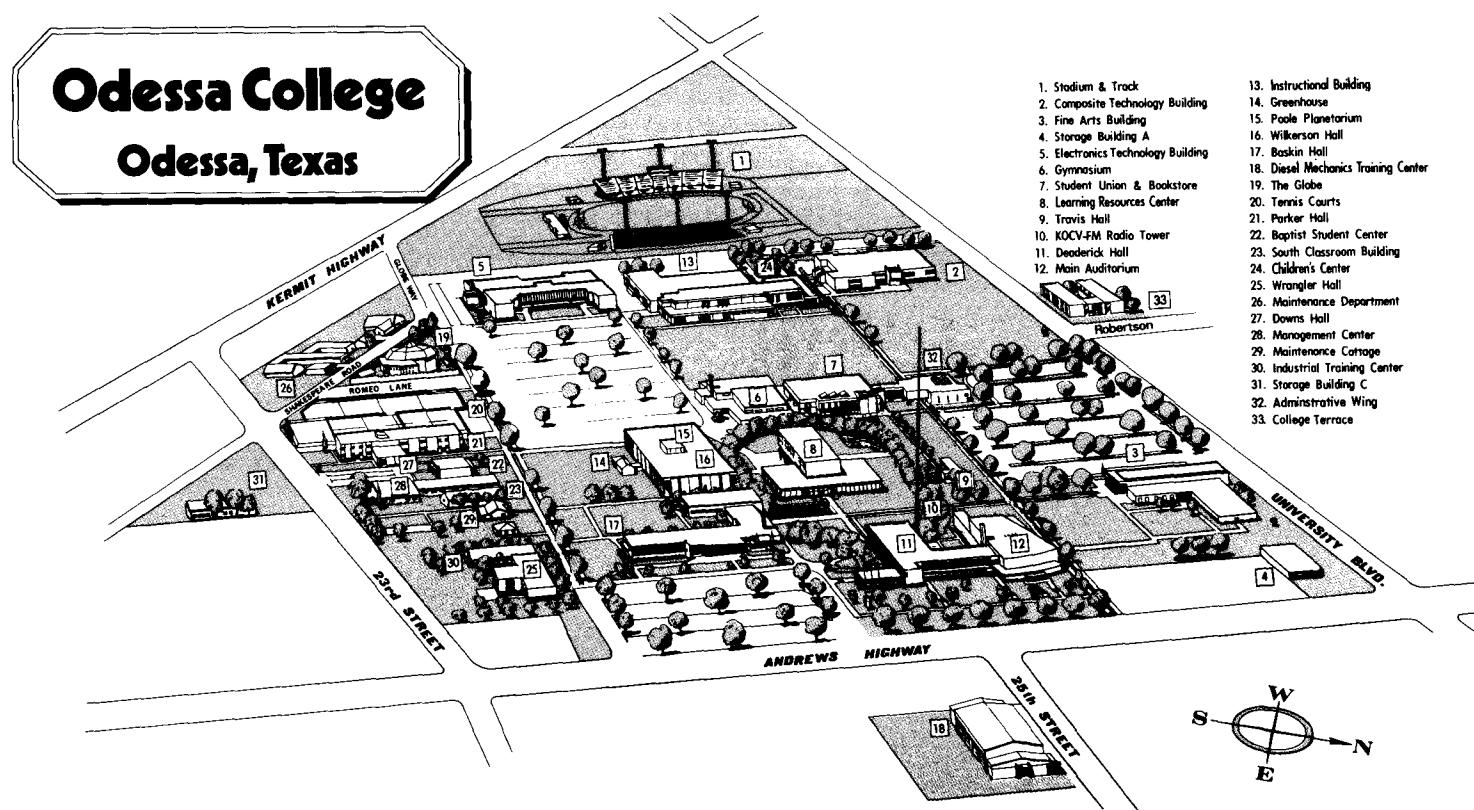
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